**Computer Applications and Trends in 2021** 

D. Angeline Ranjithamani

# **Computer Applications and Trends in 2021**

1<sup>st</sup> International Conference on Innovative Computational Intelligence (ICICI'21) May 7<sup>th</sup> 2021, Tamilnadu, India

Published by



AIRCC Publishing Corporation

# **Volume Editors**

D. Angeline Ranjithamani, E-mail: <u>angelinmca@francisxavier.ac.in</u>

A. Arul Amalraj, E-mail: arulamalraj@francisxavier.ac.in

This work is subject to copyright. All rights are reserved, whether whole or part of the material is concerned, specifically the rights of translation, reprinting, re-use of illustrations, recitation, broadcasting, reproduction on microfilms or in any other way, and storage in data banks. Duplication of this publication or parts thereof is permitted only under the provisions of the International Copyright Law and permission for use must always be obtained from Academy & Industry Research Collaboration Center. Violations are liable to prosecution under the International Copyright Law. Typesetting: Camera-ready by author, data conversion by N & N.

# Preface

International Conference on Innovative Computational Intelligence (ICICI'21) aims to bring together leading academicians, researchers and research scholars from India and abroad to share and exchange their research experiences and contributions on all aspects of Computational Intelligence incorporating innovation strategies. It also provides a premier interdisciplinary forum for researchers, practitioners and educators to present and discuss the most recent innovations, trends, concerns, practical challenges encountered and the solutions adopted in the □eld of Computational Intelligence. This conference aimed to expand its coverage in the areas of Computational Intelligence with Innovation, where talks by experts and presentation by researches will be incorporated in every session of this meeting to keep up the spirit of enthusiasm.

The ICICI Committee rigorously invited submissions for many months from researchers, scientists, engineers, students and practitioners related to the relevant themes and tracks of the workshop. This effort guaranteed submissions from an unparalleled number of internationally recognized top-level researchers. All the submissions underwent a strenuous peer review process which comprised expert reviewers. These reviewers were selected from a talented pool of Technical Committee members and external reviewers on the basis of their expertise. The papers were then reviewed based on their contributions, technical content, originality and clarity. The entire process, which includes the submission, review and acceptance processes, was done electronically.

The ICICI Committee brought the research scholars, academicians and PG Students to share their finding in virtual mode. We would like to thank the Management, GMD, Principal, organization staff, the members of the Technical Program Committees and external reviewers for their excellent and tireless work. We sincerely wish that all attendees benefited scientifically from the conference and wish them every success in their research.

D. Angeline Ranjithamani

General Chair	Organization
D. Angeline Ranjithamani	Francis Xavier Engineering College, Tirunelveli
Program Committee Members	
A. Arul Amalraj	Francis Xavier Engineering College, Tirunelveli
D. Stanley	Francis Xavier Engineering College, Tirunelveli
J. Abalin Luther	Francis Xavier Engineering College, Tirunelveli
N. Arunachalam	ACME Infotek, Tirunelveli

**Organized By** 



Department of Computer Applications Francis Xavier Engineering College Vannarpettai - 627003



# **Institution Innovation Council**

**Proceeding Publications Supported by:** 



Academy & Industry Research Collaboration Center (AIRCC)

# TABLE OF CONTENTS

# 1<sup>St</sup> International Conference on Innovative

# **Computational Intelligence**

# (ICICI'21)

Internet of Things (IOT) Based surgery with Innovative Combination of Artificial
Intelligence and Human Intelligence01-06
R.Samyuktha and Dr.B.Gayathri
Crop Quality Prediction Using MI And Neural
Networks07-12
Kanakaveti Narasimha Dheeraj, Goutham. R. and J Arthi. L
Distracted Driver Behaviour Recognition with Computer Vision using Deep
Convolutional Neural Network in Real World Application13-22
M. Ananthi and Bharathram. P Rahul Narayanan. L
Efficient Detection of phising hyperlinks using Machine Learning23-34
Anshumaan Mishra And Fancy
Feature Extraction and Classification of Segmented ECG Signals Based on Radial
Basis Function and Random Forest Methodology35-45
RexyJ and VelmaniP, Rajakumar T.C
Comparative analysis of trust establishment model to identify malicious nodes in
SIoT47-55
Anciline JeniferJ and Piramu PreethikaSK
Novel Approach to Optimize Water and Fertilizers in Agriculture using IoT57-64
D.Louisa Mary ,Dr.M.Ramakrishnan
Segmentation of visceral adipose tissue causing central obesity using deep
learning on abdominal MRI65-72
B Sudha Devi and Dr.D.S Misbha
Block Chain In Fake Product Identification System Using Qrcode73-80
Udhaya Nila and J. Abalin Luther Aathi Vignesh
Online Mca (Pok)81-90
M. Ahamed Fysal and P.Sahaya Jenitha S.Ganapathy Subramanian
Fx Infrastructure Complaint Management System91-102
Selvi, Sahaya Jenitha and Sivanesh
Self Attendance Using Otp In Android103-111
Lokesh, Sahaya Jenitha and Sivanesh
Fx Calories Calculator & Fitness Advisor113-120
N.Shahul Ashfar and J.Abalin Luther and L.Antro James
Womens Safety Mobile App121-128

N. Ramesh Kannan and S.Sujitha S,Ganapathy Subramanian	
Fx Media(Campus Social Media)	
Robin and Sahaya Jenitha and Santhosh	
Fx Event Organization	
Muthu Krishnan.S and Angeline Ranjithamani,D Deepa.C	
Scad Geo Spatial Web Solution	145-155
Roshini and D. Angeline Ranjithamani, Deepa	
Online Electrical Goods And Crew	157-168
S.PaulPushpa and D.Angeline Ranjithamani, S.Sowmiya	
E-Cards Download	169-180
K Rabiyathu Basaria and S Sujitha K Nambi Natchiar	
Personality Prediction Using Through Cv Analysis	181-192
Muthuselvi M, D. Angeline Ranjithamani and Abinaya V	
Vehicle Breakdown Assistance	193-202
NivethaM and Sujtha S, AbinayaV	
A Novel Online Approach For Jazzy Jewels	203-209
Subha J and Sujitha S, Subalakshmi K	
Data Integrity Protection In Cloud	211-218
Indira G and Sujitha S ,Subalakshmi K	
Pulling Data From Multiple Websites To Identify Best Deals On Auc	tion
Websites	219-224
GuruSharmila S Arul Amalraj A Subalakshmi K	
E-Voting With Hybrid Encryption Rsa Algorithm	225-231
V.Selva Bhuvaneshwari and D.Angeline Ranjithamani K,Aathi Vignesh	
Fx Healthy Physical	233-238
H.Mohamed Masood and J.Abalin Luther, R.Kejapriya	
Fx Job Recruitment	239-249
Padmanaban and S. Sujitha,M. Muppidathi@Priya	
Online Alma Development	251-257
K.Venkatesh Prabu and S.Sujitha, M.Muppidathi@Priya	
Defending Virtual Gross System From Software Gusty	259-267
A.Subash and P. Sahaya Jenitha, Allen Steve	
Online Campus Selection Process	
K.Parvathi and S.Sujitha, Allen steve	
Dawn Symbo	
N.Anna lakshmi and P.Sahaya Jenitha, T.Marivjayakumar	
Online Auction System	
S.Kokila and J.Abalin Luther ,T.Marivijayakumar	
Authentication Of Unused Medicine Domination For Ngos	
J.Esther Jenslin and P.Sahaya Jenitha, S.Sri Selva Meenakshi	
Automated Access Communication System	309-317

UppliammalS and Stanley D, S.Sowmiya	
Brain Tumor Detection Using Image Processing	319-325
Nithyasree C and Stanley D, Subalakshmi K	

# INTERNET OF THINGS (IOT) BASED SURGERY WITH INNOVATIVE COMBINATION OF ARTIFICIAL INTELLIGENCE AND HUMAN INTELLIGENCE

R.Samyuktha<sup>1</sup> and B.Gayathri<sup>2</sup>

<sup>1</sup> Bio Medical Department, Dhanalakshmi Srinivasan Institute of Technology, Tiruchirapalli, India

<sup>2</sup> AP Computer Science Department, Bishop Heber college, Tiruchirapalli, India

## ABSTRACT

While examining the historical backdrop of clinical procedure, we can understand that medical practitioner have/had created and refined instruments for complicated surgeries. Development in clinical progressions is on a standard with that saw in the sickness causing specialists and infections. Since ancient time, clinical practices were performed using obtrusive medical procedures without sedation, which resulted in high mortality and post-surgery complications. This led to the emergence of effective, safe and user friendly medical instruments and procedures with little to moderately death rate. At present obtrusive methodologies are negligibly practiced, but provides less twisted related complexities, fast organ work return, and more limited hospitalizations. The success of these methods has prompted for higher acknowledgment of picture guided surgeries. We present an Internet Of things (IOT) and Artificial Intelligence (AI) based model that includes a computer generated experience based (VR-based) User interface and some benefits and limitations. It can be done by Raspberry pi, android application and also done by Sap cloud system.

## **KEYWORDS**

Picture guided surgeries, Raspberry pi, Sap cloud system, IOT, AI1.

# **1. INTRODUCTION**

IOT is a recent technology where it will go all around the world and for sure will rule the medical field. It is a smart way communicating the patients in long distance. Still in some rural areas they don't have any hospitals and in lack of health care or we can say poor health care systems. In lack of health care system many children, pregnant women and older people are facing many problems in day to day life. IOT assumes a part in attaching these issues. If mimicking all wellbeing crude information under the idea of IOT it brings the idea of DOCTOR which is an analogue to ATM machine in medical services.

By the continuation of IOT health care system, it is further developed for surgery too. It is done by the robotic arm controlled by the nurse in place of doctors during surgery to help in picking and placing tasks.



Figure 1: IOT Healthcare

# **2. IMPLEMENTATION**

## Method 1: Using Android Application

With the help of Python, the android application controls the the robotic arm. Here accelerometer and gyroscope are used. In principle, the generated signals of the accelerometer and the whirl gig will be caught by an android application and shipped off to Raspberry pi to control the automated arm. For programming the robots for surgery, Raspberry pi is employed to the python script which receives the command and control the robot from the smart phone.



Figure 2: Remote surgery using mobile phone

### Method 2: Using Sap cloud system

Computer software supports the artificially created environment.We can also use headsets and other navigates along with virtual reality set up. Experience gained from the VR is not less than actual reality. For deep experience oculus VR system is used as part of proposal model. VR is connected to SAP IOT interface of cloud system.

In our proposed model SAP is more sufficient platform to build a surgical model. It could provide real time prediction during surgery. AI is computing paradigm. It is used to create automate intelligent process system.



Figure 3: Surgery based on SAP cloud system



Figure 4: Operation room using SAP cloud system

# **3. BENEFITS AND LIMITATION**

## Benefits

- IOT gives effective and safe surgical practices worldwide. e.g., from remote corners at instance.
- Reduces the cost of surgery and man power.
- Reduces many medical errors by showing the danger area in red colour and the operating area in blue colour via 3D dimensional display system.
- In fact it is very useful for the people in battlefields and space crafts.

# Limitations

- First, stake holders should develop a global network for remote surgery with AI.
- Secondly, we need a great financial support from government to make this real.
- Patient's health and privacy should be keenly addressed to check the patients remotely.
- Though, it reduces "medical error" it is wholly possible by maintaining the systems and robots regularly without fail.

# 4. DISCUSSION ON FUTURE WORK

Future work incorporates legitimate and moral issues, which are identified with patient's wellbeing security and their gathered individual delicate information in distant cloud workers and with many innovative artificial intelligence.

# **5.** CONCLUSION

By use of IOT medical procedure, surgery could be imagined. This will improve the security on surgery the ideal utilization of careful gadgets legitimate utilization of electro cautery and normalization of the surgeries.

## Reference

[1] https://www.slideshare.net/Venkat

Alagarsamy/iot-in-healthcare

[2]https://pubmed.ncbi.nlm.nih.gov/30671666/

[3]https://ieeexplore.ieee.org/document/8392580

[4]https://www.pantechsolutions.net/iot-connected-healthcare-applications

### **AUTHORS**

**R.Samyuktha**, Studying B.E., Bio-Medical Engineering in Dhanalakshmi Srinivasan Institute of Technology, Tiruchirapalli Tamilnadu,. Her Research Interest focuses on Bio-Medical Instrumentation and their applications.



**Dr.B.Gayathri**, Working as Asst., Professor in Bishop Heber College, Tiruchirapalli, Tamilnadu with work experience of Twelve years and Research experience of Seven years and With specialisation of Green Cloud Computing.

6 International Journal on Cybernetics & Informatics (IJCI) Vol. 10, No.1/2, May 2021

# CROP QUALITY PREDICTION USING ML AND NEURAL NETWORKS

Kanakaveti Narasimha Dheeraj<sup>1</sup> and Goutham. R. J<sup>2</sup> Arthi. L<sup>3</sup>

<sup>1,2,3</sup> Department of Information Technology, Sri Sairam Engineering College

# ABSTRACT

Agriculture is said to be the backbone of the economy. Farmers toil hard with different kinds of crops to make good and healthy food for the country. There are more existing systems but uses outdated machine-learning techniques based on RNN( Recurrent neural network) which makes the process slower and more time-consuming. Here We are proposing a new CNN(Convolutional neural network) based system which is fast and gives accurate results within seconds. CNN is power-efficient and is more suitable for real-time implementation. In this project, we use CNN algorithms which is very much better than the RNN algorithms used in the existing system. More parameters will be taken for the consideration of prediction in the proposed system. And we use Random Forest Regression, Multiple Linear Regression.

# **KEYWORDS**

Convolutional neural network, recurrent neural network, Random Forest Regression, Multiple Linear Regression.

# **1. INTRODUCTION**

Crops are grown for food and fiber. It is the important aspect of agriculture. Knowing what type of crop can be grown in a particular place is crucial for the growth of farmers and the economy, especially in countries like India. Crop production index is a measure of the production rate at a particular region. Having insights about it, can help in tremendous increase in production.

Machine learning models are implemented for prediction of crop production rate for the upcoming years. India is growing quick in population. The demand is high and can increase in coming back future. Hence, to confirm food security vertical development in agriculture is that they would like of the hour. By space regarding seventy-five-million-hour angle is rainfed and entirely depends on rains facing the vagaries of monsoon. For this a combined structural and method approach like selection origination, chemical management, integrated cropping, rain harvest home, economical irrigation techniques etc. would be needed.



Figure 1. Chart for net exports and total exports

# **2. LITERATURE SURVEY**

From the research article [3], the researcher express that large amount of data which is collected and stored for analysis. Making appropriate use of these data often leads to consider- able gains in efficiency and therefore economic advantages.

There are several applications of Data Mining techniques in the field of agriculture. The researchers implemented [4] KMeans algorithm to forecast the pollution in the atmosphere, the K Nearest Neighbour is applied [12] for simulating daily precipitations and other weather variables and different possi- ble changes of the weather scenarios are analyzed [14] using Support Vector Machines.

Soil profile descriptions were proposed [15] by the re- searcher for classifying soils in combination with GPS based technologies. They were applied K-Means approach for the soil classification. In a similar approach, crop classifications using hyper spectral data was carried out [1] by adopting one of the data mining approach i.e. Support Vector Machines

In a similar approach, crop classifications using hyper spectral data was carried out [1] by adopting one of the data mining approach i.e. Support Vector Machines. One of the researchers used [9] an intensified fuzzy cluster analysis for classifying plants, soil and residue regions of interest from GPS based colour images

#### **3. PROPOSED SYSTEM**

Agriculture using this information, Crop Production Index (CPI) for forthcoming years is likewise anticipated is the broadest type of human occupation where half of the total populace acquires its job. Farming Geography, managing the spatial association of yields and their fixation, gives a fascinating field with regards to which geographers can assume an indispensable job for the prosperity of the general public.

The procedure of monetary improvement involves exertion to bring efficiency up in the rural divisions that not just a little working power can deliver enough sustenance for whatever is left of the general public, yet additionally to discharge a major piece of its working hands to join the modern area. In this way raising rural profitability shapes a standout amongst the most.

The requirements specification is a technical specification of requirements for the software products. It is the first step in the requirements analysis process it lists the requirements of a particular software system including functional, performance, and security requirements. The

requirements also provide usage scenarios from a user, an operational, and an administrative perspective.

# 4. HARDWARE AND SOFTWARE SPECIFICATION

#### **Hardware Requirements**

- Hard disk 40GB and above
- Ram 4GB and above
- Processor i3 and above

#### **Software Requirements**

- Windows 7 and above
- Anaconda prompt
- Jupyter notebook IDE
- Python3.4

#### **System Architecture**

The overall block diagram of the system design. The image pre- processor and the image segmentation does the same task of segmenting the image to get a vivid soil portion from the image, as it may contain unwanted portions which may make the system to work with decreased efficiency

The system eventually aims at predicting the yield of crops based on the set of whether and yield data including geographical parameters.



Figure 2. . Architecture diagram

# **5. SAMPLE CODE**

```
def TopFiveWinners():
  current_month = datetime.now().month
  current_year = datetime.now().year
  current_rainfall = annual_rainfall[current_month - 1]
  prev_month = current_month - 1
  prev_rainfall = annual_rainfall[prev_month - 1]
  current_month_prediction = []
  prev_month_prediction = []
  change = []
  for i in commodity_list:
    current_predict = i.getPredictedValue([float(current_month), current_year, current_rainfall])
    current_month_prediction.append(current_predict)
    prev_predict = i.getPredictedValue([float(prev_month), current_year, prev_rainfall])
    prev month prediction.append(prev predict)
    change.append((((current_predict - prev_predict) * 100 / prev_predict),
commodity_list.index(i)))
  sorted_change = change
  sorted_change.sort(reverse=True)
  # print(sorted_change)
  to send = []
  for j in range(0, 5):
    perc, i = sorted change[j]
    name = commodity_list[i].getCropName().split('/')[1]
to_send.append([name, round((current_month_prediction[i] * base[name]) / 100, 2), round(perc,
                                              2)])
  print(to_send)
```

return to\_send

### Screenshots

0 ) () () E CE han E baryaka () ()	😧 12720.0.5.cc compt 📕 phopes: 16. 7604 Set Routly Fr. 📲 Mee Kober - G	i Soch (viller, 📕 magester 📕 mehring 📕 polities 📕 Newbilder	The Sole 👔 12 Analog Station.
lop Gainers(Cu	irrent trends)		Apr 21
tern Name	Price (per QE.)	Change	. #5990 2
latiover	10020	1705 🛦	Copra 1000.5
loyabean	CHRZ0	LENA	
tagi	<b>4</b> 1012.0	2755.4	Barley ₹1129.94
Moong	56523	2.411.	Unite
twar	11780.04	100.4	
Top Losers(Co	urrent trends)		
flem Name	Price (per QfL)	Change	
Niger	1902.5	-stars 💌	
Gues	13560	-572% 🐨	
	1001		



Figure 3. Project images

#### REFERENCE

- [1] Schalkoff R J. Artificial Neural Networks. Vol. 1. New York: McGraw-Hill, 1997.
- [2] Schmidhuber J. Deep learning in neural networks: An overview .Neural Networks, 2015; 61: 85–117.
- [3] Kamilaris A, Prenafeta-Boldú F X. Deep learning in agriculture: A survey. Computers and Electronics in Agriculture, 2018; 147: 70–90.
- [4] Simonyan K, Zisserman A. Very deep convolutional networks for large-scale image recognition. Cornell University Library, Available at: https://arxiv.org/abs/1409.1556
- [5] Simonyan K, Zisserman A. Two-stream convolutional networks for action recognition in videos. Advances in Neural Information Processing. Systems, 2014; 1-4: 568–576.
- [6] Razavian A S, Azizpour H, Sullivan J, Carlsson S. CNN features off-the-shelf: an astounding baseline for recognition. IEEE Conference on Computer Vision and Pattern Recognition Workshops (CVPRW), 2014.
- [7] Vincent P, Larochelle H, Bengio Y, Manzagol P A. Extracting and composing robust features with denoising autoencoders. In Proc. 25th Int.Conf. on Machine Learning, 2008; pp.1096–1103.

#### **AUTHORS**

**Kanakaveti narasimha dheeraj,** IV dept of information technolgy, Sai ram engineering college, Chennai-44.



# DISTRACTED DRIVER BEHAVIOUR RECOGNITION WITH COMPUTER VISION USING DEEP CONVOLUTIONAL NEURAL NETWORK IN REAL WORLD APPLICATION

M. Ananthi<sup>1</sup> and Bharathram. P<sup>2</sup> Rahul Narayanan. L<sup>3</sup>

 <sup>1</sup>AP,Department of Information Technology, Sri Sairam Engineering College.
 <sup>2</sup>Department of Information Technology, Sri Sairam Computer Engineering College.
 <sup>3</sup>Department of Information Technology, Sri Sairam Engineering College.

## ABSTRACT

Distraction of drivers while driving on roadways results in the death of 1.2 million people, approximately every year around the globe. Even though there are several improvements made in road and vehicle design, the total number of accidents is higher. In 2015, 3,477 people were dead and 3,91,000 were injured during motor vehicle crashes associating distracted drivers. Our paper is aimed to prevent and reduce the rate of motor vehicle accidents that are caused by human errors and distraction during driving. We study the different postures of the driver by means of the hand localization, skin segmentation and facial data. In our paper, we propose a reliable deep-learning CNN model that attains 92% accuracy.

# **KEYWORDS**

Deep learning, Convolutional Neural Networks, Spatial pooling, Image processing, Transfer learning.

# **1. INTRODUCTION**

According to the National Highway Traffic Safety Administration (NHTSA) report, 23% to 26% of road accidents are caused due to distraction of drivers. Driver distraction during driving can increase the risk of accidents by 4 to 6 times. It is noted that different distraction activities cause accidents with different rates of risk. Therefore, the study of driver distraction detection is of great magnitude. Due to the rapid development of deep learning neural networks, driver distraction detection has been an active research topic in the computer vision field in the recent years. Drivers do some other activities rather than focusing on driving which causes a lot of accidents.

The number of car accidents has increased because of distracted driving, since the last few years. 3,477 deaths and 391,000 injuries cases has been confirmed by NHTSA in 2015 due to distracted driving[9]. Presently, more companies are starting to work with a new system called (ADAS) Advanced Driver Assistance Systems by creating techniques to alert the driver when distraction activities occur. From this deep learning takes part of ADAS techniques.

In our paper, we explore the possibilities of training a system that can detect different postures of drivers being distracted. Drinking, texting, talking on phone, operating radio, etc are some of the common activities that the drivers indulge during driving. It is the prior responsibility of the automobile manufacturers to provide a system that prevents drivers from being distracted. Detecting distracted drivers from real time video feed from the dashboard camera itself is one of the key parts of this paper.

# **2. LITERATURE REVIEW**

In this section the recent trends and the related works related to the problem are reviewed. [7] An SVM-based model was induced to detect the use of mobile phone while driving vehicles. The dataset used consists of frontal face images of the driver.[6] Another SVM based model which used the dataset of driver images taken from highways traffic light cameras. This model uses facial data only. [3] Osman proposes a bi-level hierarchical classification methodology using machine learning to identify the different types of secondary tasks drivers are engaged in using their driving behaviour parameters. This method uses only three parameters to detect the driver fatigue so the overall accuracy ranges from 55% to 79% only.

[2]Akshada proposed a system that detects the drowsiness of the driver while driving in the roadways. This system uses the state of the eye and the facial data which includes Principal Component Analysis (PCA) and Eigen face approach. [5]Simonyan. K investigates with the convolutional network depth and the effect on its accuracy with the large-scale image recognition setting. And evaluation of ConvNets for increasing depth using an architecture with very small ( $3 \times 3$ ) filters.[10]Kurylyak proposes a cascade of classifiers based on Haarfeatures to detect the eyes closure and opening.[12] Jia Deng illustrates the ImageNet by recognition of objects, classification of images and object clustering for 3.2 million images in total. [1] Abdul proposed a system with vanilla CNN which locates the facial landmarks like mouth corners, nose, eyes. The epochs used for this system is set to 5 which is very low and attains an accuracy of 75% in test run.

[8] Ralph Mbouna analysed the driver alertness by using the state of eye and head position. The images were taken from the dashboard camera. Eye index, eye pupil, head position was taken as visual parameters. [11] Murphy-Trivedi model focused on the ability to focus on fine head pose and coarse head pose that are well suited for unconstrained environments. [4]Koesdwiady proposed a structure with Convolutional Neural Network system VGG19 which has accomplished a test accuracy of 94%.

### **3. PROPOSED SYSTEM**

Our paper instruments a classifier based on Convolutional Neural Networks to detect driver distraction and also detect the cause for the distraction. The direct video feed from the dashboard camera is obtained and the image is being extracted frame by frame. And the image obtained from the video is feed into the neural network and the corresponding category is recognized. In this paper, we also make an attempt to reduce the training time of the Convolutional Neural Networks while making sure that we do not diminish the accuracy of the classifier. In our attempt to reduce the training time, we experiment with the pre-trained weights that were obtained by training the Convolutional Neural Networks model on the ImageNet dataset.Refer figure 1.



Figure.1 – Architecture Flow Diagram

#### A. Driver Behaviour Classification

In this paper we use the dataset provided by StateFarm [16]. The dataset consists of 22424 images of people classifying either driving safely or indulging in any of the nine below mentioned behaviours. The images in the dataset are RGB images of 640x480 pixels. The dataset was separated into 80% and 20% for training and testing respectively. The major advantage of this dataset is it consists of subjects from different ethnic backgrounds for example., Asian, Western, African, etc. The dataset consists of 10 classes of behaviours out of which the first one corresponds to the category of safe driving, while the remaining classes represents distraction while driving. These classes are some of the most common distractions while driving and can lead to accidents, loss of property and life.

#### **B.** Image Augmentation

The StateFarm image dataset [16] was used for our experiment. In the State Farm distracted drivers' dataset each of the image is a RGB coloured image of 640x480 pixels. The input layer of the model VGG16 takes an input of an image of size 3x224x224. Therefore the first step was to normalize and resize each image to the size of 224x224 pixels. Convolutional neural network requires a variety of diversified dataset to train the model effectively and to produce the results with high accuracy. To combat this challenge, we used the technique of data augmentation. For each epoch a new set of images were generated by generating various alterations on each image.

CLASS	DESCRIPTION
Safe Driving	Safe driving is defined as the act of driving looking in the front with hands on the wheel while driving, as shown in Figure 1. And the driver should not be involved in any of the below activities.
Texting with Right hand when driving	This category defines the usage of mobile phone for texting using right hand of driver as shown in Figure 2.
Talking with Right hand on the phone	This category defines the act of using a mobile phone for making phone calls as shown in Figure 3.
Texting with Left hand when driving	This category defines the usage of mobile phone for texting using left hand of driver as shown in Figure 4.
Talking with Left hand on the phone	This category defines the act of using a mobile phone for making phone calls as shown in Figure 5.
Operating radio while driving	Operating radio is a category of distraction while driving. Figure 6 shows the mentioned act.
Drinking while driving	Drinking is also a category of distraction in which drivers frequently indulge in, as shown in Figure 7.
Reaching Behind while driving	In this category the driver reaches the back seat of the car by turning his/her back towards the steering wheel as shown in Figure 8.
Doing Hair or Makeup while driving	Correcting hair or doing makeup is another category of distraction. Figure 9 describes the above act.
Talking to passengers while driving	In this category the driver turns his face towards the passengers to speak with them as shown in Figure 10.

Table 1. Classification of distractions



Figure. 2. Classification of Driver postures

#### C. Convolutional Neural Network

The idea proposed by LeCun of using Convolutional neural network has made a serious impact on the field of image classification and image detection. The Convolutional neural network introduces a number of hidden layers added to the model, thereby reducing the dimensions of the image and enabling the model to extract the image features in reduced dimensional images. The conventional neural models consist of 2 modules namely feature extraction of images and classification module based on the classes. Due to the different separate modules of the model the extractor module is only able to extract a certain significant feature based on the algorithm and is not efficient to extract the discriminating and trivial features of the image under different categories. The classification module then uses these features to classify the images. Convolutional neural network possesses a multistage processing layers which are able to extract these discriminating and significant features and then these features are transferred to the classification module to get the category of classification based on the classes. The CNN models are implemented using Keras API with TensorFlow in the backend.

#### **D.** Image Pre-processing

The mean value of the RGB pixels over all pixels were subtracted from each pixel value. Excluding the mean value of the dataset serves to centre the data. The subtracting of mean is executed so that the training model is involved in multiple weights and the process of adding weights to the initial inputs in order to fire activation which then activates the back propagation with gradients to train the model. Each feature has a similar range that of the feature, to prevent the gradients from accessing out of range. Convolutional neural networks also involve in sharing the parameters; hence the input is scaled in similar range, avoiding which the sharing may not occur. It is due to the fact of each image having a large value of weights focussed and while the other part is filled with lesser weights.

#### E. Transfer Learning

VGG16 is a Deep Convolutional Networks for Large-Scale Image Recognition. The architecture of VGG16 can be seen in Figure 3. The input to the ConvNet is an image of size  $224 \times 224$  and is a RGB image. The image is then passed through layers of convolutional layers, where filters

with a very less receptive field of  $3 \times 3$  are used. The convolutional stride is fixed to 1 pixel of image. The spatial padding of convolution layer input is 1 pixel for  $3 \times 3$  thus preserving the spatial resolution. Five max-pooling layers carry out the spatial pooling, which then follow some of the convolutional layers and not passing through all the convolutional layers.



Figure.3. VGG16 Layered Net

# **4. EXPERIMENT RESULTS**

Once the training was completed, the test dataset was run through both the models and the results obtained were recorded. A detailed analysis of the results obtained is explained below in Table II.

A window size of 2 x 2 pixels is used for Max-pooling and stride size of 2 is used. The convolutional layers are fully connected by three layers, the first two layers have 4096 channels and the last layer executes 1000-way classification. All hidden layers are equipped with the rectification nonlinearity and the final layer is the SoftMax layer. Pre-trained weights which were obtained by training the VGG16 model on the ImageNet [10] database is used to initialize the weights in one of the models. Pre-trained weights that were obtained by training the VGG16 model on the ImageNet were used to initialize the weights of one of the models, in the other model, random initialization of weights is used. Hence the final layer was neglected and replaced with a fully connected SoftMax layer with 10 channels to perform the 10-way classifications. The remaining model was retained as it is. Although the original model had 1000 channels signifying the 1000 categories which were aimed to classify. Here only 10 classes are being targeted.

Scenario	Total Samples	Correct Predictions	Incorrect Predictions	Accuracy (%)
Safe Driving	622	619	3	99.52
Texting using Right Hand	565	565	0	100
Talking on phone using Right hand	579	578	1	99.83
Texting using Left Hand	587	580	1	100
Talking on phone using Left hand	581	572	6	99.83
Drinking	578	577	4	99.86
Operating the radio	501	500	1	99.80
Reaching Behind	581	577	4	99.31
Talking to Passenger	534	528	6	99.88
Hair and Makeup	478	476	2	99.58

Table 2. Depicts the accuracy obtained for each class

The model used with pre-trained weights required only very few epochs to converge, despite the model being a very deep model. ImageNet weights can also be used because of the large size which nearly contains around 1. 2 million images.

## **5.** CONCLUSION

Deep learning using Convolutional Neural Networks has been extensively used in image classification, image detection, etc. In this paper, we use VGG16 for detecting distracted drivers and also identifying the cause of their distraction using Convolutional Neural Networks. Thus, the results suggests that our system can be used to detect the driver state. The model not only identifies the basic distraction but also their cause of distraction automatically within the mentioned 10 classes. The mentioned system was shown to be efficient and workable with an accuracy of more than 99%. The proposed system can be used to effectively monitor the posture of the driver while he is driving. These systems when installed are useful in trying to prevent any accidents due to distraction from the driver by raising warnings whenever the driver gets distracted. A significant reduction in training time was achieved by diminishing the accuracy of our classification models. In future work as an extension, more categories of distraction classes can be brought in to the model. Even considering certain specific scenarios such as detecting drowsiness among drivers may also provide an opportunity to widen the scale of the work which were not targeted in the present work.

#### REFERENCES

- Abdul Jamsheed. V, Janet. B, U. Srinivalsu, "Real Time Detection of driver distraction using CNN", Proceedings of the Third International Conference on Smart Systems and Inventive Technology, (ICSSIT - 2020).
- [2] C. Akshada, D. Pramila, D. Ankita, et. al," Driver Drowsiness Detection and Alarm System", International Journal of Research in Electronics and Computer Engineering, IJRECE Vol. 7, Dec 2019.
- [3] A. Osman, Mustafa Hajij, Sherif Ishak, SogandKarbalaieali, "A Hierarchical Machine LearningClassification Approach for Secondary Task Identification from Observed Driving Behavior Data", Accident Analysis & Prevention – Elsevier. Vol-123, 2018.
- [4] Koesdwiady. A, Bedawi S.M, Karray. F, "End-to-End Deep Learning for Driver Distraction Recognition", Publishedat International Conference on Image Analysis and Recognition 2017.
- [5] Simonyan. K, and A. Zisserman," Very deep convolutional networks for large-scale image recognition", Published at ICLR 2015.
- [6] Y. Artan, R. P. Loce, O. Bulan, and P. Paul, "Driver cell phone usage detection from HOV/HOT NIR images", Proceedings of the 2014 IEEE Conference on Computer Vision and Pattern Recognition Workshops - CVPRW, June 2014.
- [7] R. A. Berri, A. G. Silva, R. S. Parpinelli, and R. Arthur, "A pattern recognition system for detecting use of mobile phones while driving", Proceedings of the 9th International Conference on Computer Vision Theory and Applications, VISAPP 2014, IEEE.
- [8] Ralph Mbouna, Seong G. Kong, "Visual analysis of eye state and head pose for driver alertness monitoring." IEEE transactions on intelligent transportation systems, 2013.
- [9] Hirshkowitz. M, "Fatigue, sleepiness, and safety: Definitions, assessment, methodology". Sleep Medicine Clinics, 2013, Vol.8(2):183–189.
- [10] Y. Kurylyak, F. Lamonaca, and G. Mirabelli, "Detection of the eye blinks for human's fatigue monitoring", IEEE International Symposium on Medical Measurements and Applications Proceedings - MeMeA, 2012.
- [11] Murphy-Chutorian, E., & Trivedi, M. M, "Head pose estimation in computer vision: A survey", IEEE transactions on pattern analysis and machine intelligence, 2009.
- [12]Jia Deng, Wei Dong, Richard. S and Li Fei-Fei, "ImageNet: A Large-Scale Hierarchical Image Database", IEEE Conference on Computer Vision and Pattern Recognition, 2009.
- [13] LeCun, et al. "Gradient-based learning applied to document recognition." Proceedings of the IEEE 86, Vol no. 11 2278-2324, 1998.
- [14] Chollet F, others. Keras [Internet]. GitHub; 2021. Available from: https://github. com/fchollet/keras
- [15] TensorFlow GitHub; 2021. Available from: https://github.com/tensorflow/tensorflow
- [16] State Farm Distracted Drivers Dataset, https://www.kaggle.com/c/state-farm-distracteddriverdetection/data

#### AUTHORS

**M. Ananthi** AP,Department of Information Technology, Sri Sairam Engineering College. <u>ananthi.it@sairam.edu.in</u>

**Bharathram. P** Department of Information Technology, Sri Sairam Computer Engineering College. <u>bharathpadmanaban2000@gmail.com</u>

Rahul Narayanan. L Department of Information Technology, Sri Sairam Engineering College. rahulatoff@gmail.com







# EFFICIENT DETECTION OF PHISHING HYPERLINKS USING MACHINE LEARNING

Anshumaan Mishra<sup>1</sup> And Fancy<sup>2</sup>

<sup>1</sup>Department of Computer Science Engineering, SRM Institute of Science and Technology, Kancheepuram,India.

<sup>2</sup> Department of Information Technology, SRM Institute of Science and Technology, Kancheepuram, India.

## ABSTRACT

Phishing is a type of Social Engineering cyber-attack, hackers use it to gain access to confidential credentials like bank account credentials details, details of their personal life like debit card details, social media credentials, etc. Phishing website links seem to seem just like the genuine ones and it's a tedious and troublesome task to differentiate among those websites. In this paper, features are extracted from a separate dataset of phishing and benign website URLs and then using the Machine Learning method we determine the phishing websites. We also rank the features based on the contribution of each feature used in determining the outcome of a URL link using built python libraries. Most of the phishing URLs use a large URL length when used for an attack. Hence, we proposed three machine learning models Random Forest, Support Vector Machine (SVM), Decision trees models for the efficient detection of phishing using fake URLs. The performance of the models is also compared among themselves using a confusion matrix to determine the highest performance. The implemented models have shown an accuracy of 84.81 (for Random Forest and SVM),83.96 (Decision tree)

## KEYWORDS

Machine Learning, social engineering, Random Forest, SVM, Decision Trees

# **1. INTRODUCTION**

The second-largest type of cyber-attacks is phishing attacks. They are mostly executed using Social Engineering. These attacks often lead to deception and manipulation of the victim leading them to leak their hidden data to the attacker. The usage of websites for tasks like shopping, banking, emailing is used via confidential credentials for different users. The attacker can clone these sites to create and create fake URLs that approximately mimic these types of website links. This link on choosing leads to an attacker-controlled webpage. In most cases these web pages look like professional and authorized ones, requesting individuals for sensitive data. They have many discernable differences when compared to a genuine webpage, which might be invisible to the victim who might not have sufficient technical background. As the second-largest attack in cyberspace, phishing detection or anti-phishing software have been deployed to counter the potential damage that can be done to the victims of this type of attack. There have been many frameworks that have been introduced earlier to combat the problem using machine learning.

# 2. RELATED WORK

This subsection shows previous work related to the topic. To begin with, old techniques like blacklisting are one of the simple ways to identify phishing websites but can't be used to find new phishing websites. It also takes a lot of time to use this method.

Current research in the detection of phishing links is classified into four groups which are the Visual Similarity-based approach, Heuristic Based approach, Fuzzy rule-based approach, Machine Learning approach.

## **A. Visual Similarity**

In this kind of approach, a phishing website is compared with a legitimate website on the grounds of visual appearance this includes analyzing the HTML tags, Images present on the suspected page, javascript version used, etc. Eric et al [1] used a similar approach where they used the signature of a suspected phishing website is obtained and compared with a legitimate website's signature. A signature of a web page was used to capture information encompassing the images and text content present on this web page. To be more specific, It is a set of attributes that represent different aspects of a website. To detect phishing sites, they use three features: text fragments, images embedded in the page, and the overall visual appearance of the web page as made by the browser. Although they receive a negligible false positive rate on the dataset, they used to consist of only 41 phishing pages which are way too small.

### **B.** Heuristics Based Approach

The heuristic-based approach is the second choice. This method combines different features extracted from the target pages to determine if it is a phishing or legitimate web page. The heuristic architecture of suspicious websites fits the feature set that is commonly used in phishing websites in this approach. CANTINA is a mechanism proposed by Zhang et al [2], which has proposed a framework called CANTINA which detects phishing pages by analyzing text content using the TF-IDF algorithm. However, the scheme's limitations are determined by the TF-IDF algorithm and the website's language.

## **C. Fuzzy Rule-based Approach**

Fuzzy logic techniques take advantage of linguistic variables to represent the main phishing characteristic indicators. Maher et al [3] used fuzzy logic to detect phishing websites based on six different criteria. They have made separate layers in their method with each layer containing one or more criteria, they also calculate the phishing rate using a formula. The disadvantage of this method is that it is unable to detect zero phishing pages.

## **D.** Machine learning-based approach

Machine learning is one of the latest approaches used by researchers to find out whether a website is a phishing site. Ankit et al [4] proposed an anti-phishing framework that uses hyperlink-specific characteristics of various machine learning algorithms. The fact that the features are built on the source code is a drawback of this strategy as the source code of the website is subject to change for malicious purposes. This could lead to an increase in false prediction.

#### **3. PROPOSED ARCHITECTURE**

In this section, we describe the proposed architecture of this paper



Fig-a. Showing the proposed architecture

#### A. Methodology

In this paper, we used two different datasets at the beginning, one dataset is obtained from Phish Tank [5] and the other is obtained from the Canadian Institute of Cybersecurity [6] which contains benign URLs. The main objective of our work is to find out malicious URLs using three different methods and compare their performance in predicting the same. We first extract eight features from phishing and benign URLs and later create a new dataset with those features as the column names and a label that shows 0 for genuine and 1 for phishing. We have used 5500 samples from each dataset to avoid imbalance in the new dataset we created. The features extracted are address bar-based.

#### **B.** Features Selected

• IP Address in URL:

IP Address in the URL Checks for the presence of IP address in the URL. URLs may have IP addresses instead of the domain name. If an IP address is used as an alternative to the domain name in the URL, we can be sure that someone is trying to steal personal information with this URL. If the domain part of the URL has an IP address, the value assigned to this feature is 1 (phishing) or else 0 (legitimate).

• "@" Symbol in URL:

"@" Symbol in URL Checks for the presence of the '@' symbol in the URL. Using the "@" symbol in the URL leads the browser to ignore everything preceding the "@" symbol and the real address often follows the "@" symbol.

If the URL has the '@' symbol, the value assigned to this feature is 1 (phishing) or else 0 (legitimate).

• Length of URL:

This feature helps in finding the length of a given URL. Phishers can use a long URL to hide the skeptical part in the address bar. In this project, a URL is labeled as phishing if it is longer than or equal to 54 characters, which is the threshold length. If the URL duration is greater than 54, the value assigned to this function is 1 (phishing) otherwise 0 (legitimate).

• Depth of URL:

Depth of URL Computes the depth of the URL. This feature calculates the number of sub-pages in the given URL based on the '/'. The value of the feature is numerical based on the URL. A given URL can have a lot of depth.

• Redirection "//" in URL:

This feature looks for the "//" symbol in a URL. If the URL route contains the character "//," the user will be redirected to another website. The "//" in the URL's position is discovered. We discovered that if the URL starts with "HTTP," the "//" should be placed at the sixth spot. If the URL uses "HTTPS," however, the "//" should be in the seventh position. If the "//" appears somewhere in the URL other than after the protocol, which is extremely rare, the value assigned to this attribute is 1 (phishing) or 0 (no phishing) (legitimate).

• "http/https" in Domain name:

HTTPS is the latest and the most secured version of HTTP. HTTPS is used on many modern-day websites. However, attackers might try to use this protocol to their advantage by tricking the user into believing that the attacker-controlled website is legitimate. If 'http/https' is present at the beginning of a URL then the number assigned to this feature is 1 as it is considered Phishy else it is assigned 0.

• Using URL Shortening Services "TinyURL"

Some services are present which shorten the length of the URL. These services are present on the 'World Wide Web. Using URL Shortening Services helps the attacker craft a URL to make the victim believe that the crafted URL is genuine. This is accomplished through an "HTTP Redirect" on a brief name, which links to the webpage that features a long URL. If the URL is using Shortening Services, the worth assigned to the present feature is 1 (phishing) alternatively 0 (legitimate).

• Prefix or Suffix "-" in Domain:

Prefix or Suffix "-" in Domain Checking the presence of '-' in the domain part of URL. The dash symbol is rarely used in legitimate URLs. Phishers tend to add prefixes or suffixes separated by (-) to the domain name so that users feel that they are dealing with a legitimate website. If the URL has the '-' symbol within the domain as a part of the URL, the worth assigned to the present feature is 1 (phishing) alternatively 0 (legitimate).

# **3. RESULTS AND CONCLUSION**

To evaluate our overall performance of our models we have compared them based on confusion matrix, Feature Ranking, and Accuracy

### A. Confusion Matrix

One of the best ways to identify the performance of a classifier is through a confusion matrix. To compare the performance of the models that were used we have used a confusion matrix to identify the

True Positive (TP): The number of URLs that have been marked as Phishing URLs.

False Negative (FN): The number of URLs that have been incorrectly determined to be Legitimate URLs.

True Negative (TN): The number of URLs that have been determined to be Legitimate URLs.

False Positive (FP): The number of URLs that have been mistakenly marked as Phishing URLs

Table	1.	Confusion	matrix

		Actual Values		
		Positive Negative		
Predicted Values	Positive	True Positive	False Positives	
	Negative	False Negative	True Negative	

Fig.	b.	Example	of	a	confusion	matrix
$\omega$						

Precision indicates how many of the cases that were correctly expected turned out to be positive.

It is calculated using this formula

Precision = 
$$\frac{TP}{TP+FP}$$

Recall indicates how many of the real positive cases our model was able to correctly predict.

It is calculated using this formula.
Recall = 
$$\frac{TP}{FN+TP}$$

#### F1-Measure or F score

F-Measure is a method for combining precision and recall into a single measure that captures both characteristics. The formula is as follows.

 $F - Measure = \frac{2 \times Precision \times Recall}{Precision + Recall}$ 



Fig-1 Random Forest Confusion Matrix



Fig-2 Support Vector Machine Confusion Matrix



DecisionTreeClassifier Classification Report

Fig-3 Decision Confusion Matrix



Fig-4. Random Forest Feature ranking Graph

## **B.** Feature Ranking

We have also ranked the eight features that were extracted to see the feature that is present in every phishing URL. This helps us understand the features that have contributed the most and the ones that contributed the least when a certain URL was tested.



Fig – 5. SVM Feature ranking Graph



Fig - 6. Decision Trees Feature Ranking Graph

In all the graph figures a score is present for each feature, this score helps in the identification of contribution provided by a certain feature used in evaluating the outcome, Higher the score larger the contribution, and a low score means low contribution. In Fig.4 the URL length feature has a very high score, the HTTP domain feature along with the IP address feature has the least score which tells us about their importance while determining the outcome of a URL. Fig. 5 and Fig. 6 show that feature 2 (URL length) followed by feature 7(Prefix-suffix) has provided an important contribution compared to other features. The score of features 1(presence of '@' symbol) is approximately similar in Fig 5 and 6, other features have not provided any contribution in Fig.5, however in Fig.6 feature 3 (URL Depth) has shown some contribution. Fig. 4 shows the importance of many features used in the model Features 5(http\_domain) and 0(Have\_IP) have shown the least importance in all three figures.

#### C. Accuracy

The accuracy score is used to provide the True positive percentage for test data. The accuracy for the three models was determined using this formula

Accuracy = 
$$\frac{TP+TN}{TP+FP+TN+FN}$$

Accuracy	Models				
Accuracy	Random Forest	SVM	Decision Trees		
	0.841	0.839	0.841		

Fig – 7. Table for the comparison of model performance

Random forest and Decision trees show similar performance while SVM shows the least performance.

In this paper, we have prepared a method to evaluate a set of malicious and benign URLs using feature extraction and three machine learning models. There are only two outcomes of this approach, phishing and benign. We extracted eight features based on the address bar of a given URL. These features have helped us in creating a dataset containing both phishing and benign URLs, we then used machine learning algorithms to determine whether a URL is malicious or benign. Furthermore, we discovered the most contributing features used in the identification process. The Random Forest model contributed nearly all the features unlike SVM, Decision Trees which have shown the contribution of 3 and 4 features. The URL length feature was the only feature providing the highest contribution in all three models. The accuracy table shows that SVM has the lowest performance, Random Forest and Decision trees have performed quite similarly.

#### REFERENCES

- [1] Medvet, Eric, Engin Kirda, and Christopher Kruegel. "Visual-similarity-based phishing detection." Proceedings of the 4th international conference on Security and privacy in communication networks. 2008.
- <sup>[2]</sup> Zhang, Yue, Jason I. Hong, and Lorrie F. Cranor. "Cantina: a content-based approach to detecting phishing web sites." Proceedings of the 16th international conference on World Wide Web. 2007.
- [3] Aburrous, Maher, et al. "Intelligent phishing website detection system using fuzzy techniques." 2008 3rd International Conference on Information and Communication Technologies: From Theory to Applications. IEEE, 2008.
- [4] Jain, Ankit Kumar, and Brij B. Gupta. "A machine learning-based approach for phishing detection using hyperlinks information." Journal of Ambient Intelligence and Humanized Computing 10.5 (2019): 2015-2028.
- [5] Phishing URLs Dataset available at https://www.phishtank.com
- [6] Dataset available at:https://www.unb.ca/cic/datasets/url-2016.htm

## AUTHORS

Mrs. Fancy is working as Assistant Professor in the Department of Computer Science Engineering, SRM Institute of Science and Technology



Anshumaan Mishra is doing CSE in the Department of Computer Science Engineering, SRM Institute of Science and Technology



# FEATURE EXTRACTION AND CLASSIFICATION OF SEGMENTED ECG SIGNALS BASED ON RADIAL BASIS FUNCTION AND RANDOM FOREST METHODOLOGY

RexyJ<sup>1</sup> and VelmaniP<sup>2</sup> Rajakumar T.C<sup>3</sup>

1Department of Computer Science, Manonmanium Sundaranar University

<sup>2</sup>Department of Computer Science, The M.D.T Hindu College

<sup>3</sup>Department of Computer Science, St. Xavier's College

#### **ABSTRACT**

Heart disease is the major cause of death ratio increase in this decade. Nowadays various people of different age sector undergo the high risk of heart problems and miss their precious life all of a sudden. Early detection of heart disease will save many people's life well in advance. Heart Diseases are predictable and they can be identified in earlier stage. First basic method to identify heart disease is ElectroCardioGram (ECG) which is the basic recording method of electrical activities of a functioning heart. ECG is the cheapest and painless method to detect the basic heart problems. This paper is an attempt to detect and classify heart beat signals which will serve as the basic step to predict basic and serious issues which may affect the functioning of the heart. The raw ECG signals are extracted and preprocessed to remove unwanted noises which will produce effective results. The preprocessed ECG signals are then are utilized to identify the heart beats which comprise of signals such as P,Q,R,S,T and U. After detecting the heart beats, they are segmented to extract the ECG Features. The temporal and spectral features are extracted from the segmented ECG signals for classification purpose. The extracted feature vectors are utilized to classify the signals. Radial Basis function and Random Forest method are commonly used classification methodologies; hence these two methodologies are applied to classify the ECG Signals into five basic classes. Massachusetts Institute of Technology-Beth Israel Hospital (MIT-BIH) Arrhythmia database and Noise Stress database are used for this implementation and the classes are identified based on the given dataset parameters. Performance metrics such as accuracy, specificity and sensitivity are computed to find out the best classification methodology among the applied two methodologies. This performance analysis provides a clear comparative view of both the existing methodologies and specifies that Radial Basis function well suits for the given segmented ECG signals and the extracted features. Hence this performance evaluation paves way for best classification algorithm selection or extension of the best methodology and it can be further optimized for better classification result. The implementation process has been carried out using Matlab software environment.

#### **KEYWORDS**

ECG, ECG Features, radial basis function, random forest method

## **1. INTRODUCTION**

The human heart is a core organ that carries oxygen and other nutrients to all the tissues of the whole body. Electrocardiogram (ECG) analysis is the most common and basic cardiac examination, which is a useful to detect cardiac abnormalities. An electrocardiogram is a graphical record of bioelectrical signal generated by the human body during cardiac cycle [1]. Early diagnosis leads to prevention and creates way to save precious life. One complete ECG signal consists of P-QRS-T waves. The ECG signals may be recorded in different situations; there are possibilities for noisy signal. The noise in the ECG signals must be filtered prior heat beat detection, segmentation and classification. To improve the performance for better de-noising of ECG signal, the lower and upper level boundary values of Butterworth and Chebyshev Type I are concatenated [2]. The retrieved raw ECG signals are preprocessed using a novel hybrid methodology called ButterChev which is a combination of Butterworth and Chebyshev Type II filters. The heart beats must be detected and segmented before extracting the features from the filtered signals. The ECG signal must be segmented in terms of beats and its different waveforms (P wave, QRS complex and T wave) prior to the feature extraction stage [3]. The extracted features will serve as the basic source for classification. Hybrid methodology of Pan-Tompkins and Hamilton-Tompkins algorithm is used to identify the heart beats and segment the signals.[4]. Features are important properties and structural components of input patterns that adds more value to the given input pattern. Feature Extraction. Feature extraction is the method of gathering discriminative information from a set of samples [5]. Temporal, spectral and fiducial features are the main features to be extracted from the segmented ECG signals. This feature extraction process leads to better interpretation and classification process. The extracted features vector serves as the primary input for the signal classification process. In classification process the signals are classified according to the classes determined by the selected datasets. Classification is a supervised pattern of dividing the signals and variety of algorithms play a vital role in classifying the ECG signals based on the extracted features. As RDF and RF are commonly used classification methodologies both the algorithms are applied. The scope of this paper is to identify the best classifier methodology among RBF and RF. Performance metrics such as accuracy, sensitivity and specificity are calculated to evaluate the performance of both the methodologies. Fig.1 depicts the architectural diagram of the complete implementation.



Fig. 1 Architectural Diagram

# **2. RELATED WORK**

ECG feature extraction and classification methodologies have been reviewed and analyzed. This section enlightens about various techniques proposed earlier and implemented for extracting ECG features and to classify the signals.

Prachi Lamba et al [6] reviewed various feature extraction and feature classification methods. Feature extraction methods such as DWT, PCA and LDA were reviewed. Classification methods such as SVM, RBF and KNN were reviewed and stated that DWT with combination of SM is best compared to other combinations.

Fatemeh Molaei Vaneghi at al [7] used Autoregressive (AR), Wavelet Transform (WT), Eigenvector, Fast Fourier Transform (FFT), Linear Prediction (LP), and Independent Component Analysis (ICA) methodologies and concluded that Eigenvector method gives better performance in frequency domain for the ECG feature extraction.

Wenliang Zhu et al [8] proposed to apply the SVM classification, after performing the combination of ECG morphology and segment feature extraction on the ECG signals. Morphological features and ECG segment features are extracted by using principal component analysis (PCA) and dynamic time warping (DTW). Support vector machine (SVM) is applied to the features and automatic diagnosis results are produced

Afseen Naaz et al [9] elucidated various techniques of extracting and selecting the vital features from the ECG signal in order to analyze the ECG signal automatically. It was found that the wavelet transform is one of the important tools for extracting out QRS complex and other features from the ECG signal.

Can Ye et al [10] proposed a new approach for heart-beat classification by combining morphological and dynamic features. Wavelet transform and independent component analysis (ICA)

are applied separately to each heartbeat to extract morphological features. After extracting the features, support vector machine classifier is utilized for the classification

K. Akilandeswari et al [11] used Walsh-Hadamard transformation (WHT) and Fast Fourier Transformation (FFT) to extract the required features from ECG signal. The extracted features are proposed for further classification.

Anoop Vylala et al [12] extracted spectral and statistical features from the wave components that yield the texture and the geometric nature of ECG. The classification is carried out using the Actor-Critic (AC) Neural Network that is trained using the Proposed Taylor-Sine Cosine Algorithm (Taylor-SCA).

Mohammed Belkheiri et al [13] implemented Radial Basis Function (RBF) artificial neural network to classify the preprocessed and ECG signals. ECG feature vectors composed of average amplitude values, DCT coefficients, DFT coefficients, and wavelet coefficients were used as input and it was found that an RBF which has one layer and the feature vector with 61 inputs, and 20 neurons produced the best performance

V.Mahesh et al [14] presents Random Forest for detecting cardiac arrhythmias. Heart Rate Variability (HRV) analysis and Discrete Wavelet Transform (DWT) are used to extract features from the ECG signals. The Random Forests classifier was provided with the combination of linear and nonlinear parameters derived as input. The proposed classifier showed satisfactory performances in discriminating the types of arrhythmia.

Emina Alickovic et al [15] proposed Random Forests (RF) classifier for ECG heartbeat signal classification. It is found that RF classifier achieves superior performances compared to other decision tree methods. It is elaborated that hybrid model with multi scale principal component analysis (MSPCA) de-noising, discrete wavelet transform(DWT) and RF classifier produces better performance with the area under the receiver operating characteristic(ROC) curve (AUC) and F-measure.

# **3. ECG SIGNAL PREPROCESSING**

ECG Signals are the primary input for detecting the heart beats and the extract the features for classification purpose. A noisy ECG signal may not result in effective performance metrics; hence the noises are filtered from the given raw ECG signals. Several IIR filters such as Butterworth, Chebyshev Type I, Chebyshev Type II and Elliptic are commonly used for de-noising ECG signals to retrieve sharp ECG signal waves. To improve the performance for better de-noising and peak detection of ECG signal , the lower and upper level boundary values of Butterworth and Chebyshev Type I are concatenated.[2]. A hybrid method called ButterChev which is a combination version of Butterworth and Chebyshev Type I is used for effective filtering process. Fig.2 depicts the given raw ECG signal and filtered and peak identified signal.



Fig.2 Raw ECG Signal & Filtered Signal with Peak detection

# 4. HEARTBEAT DETECTION AND ECG SIGNAL SEGMENTATION

The preprocessed ECG signal must be segmented and the heart beat must be identified before the feature extraction process. To fully automate the heartbeat classification method, an automatic heartbeat detection module is required [16]. ECG Signal Segmentation is the basic step to be followed before extracting useful features from the ECG Signal. The ECG signal must be segmented in terms of beats and its different waveforms (P wave, QRS complex and T wave) prior to the feature extraction stage. The high level signals P,R,T,U and low level signal Q and S are segmented and the segmented signals makes way for efficient feature extraction and classification process. Fig. 3 presents the segmented ECG Signals view.



Fig. 3 Segmented ECG Signals View

## 5. ECG FEATURE EXTRACTION AND CLASSIFICATION

#### A. ECG Signal Features

Features of an ECG Signal are segments and intervals between fiducial points such as RR interval, amplitude of P,R and T waves [17]. The signal analysis provides adequate information about cardiac diseases and hence it serves as efficient input for extracting features from the ECG signals. ECG Feature Extraction

Feature Extraction is the process of retrieving the main properties of the given ECG signal which plays a vital role for classification. The main purpose of the feature extraction process is to select and retain relevant information from original signal.Cardiac diagnostic related attributes are extracted using Feature Extraction Methodologies. There are several Feature Extraction methodologies such as Independent Component Analysis (ICA), Eigen Vector, Principal Component Analysis, Wavelet Transform, Linear Prediction and Auto regression [18].Principal Component Analysis methodology is used to extract ECG features. Temporal, spectral and fiducial features are extracted which will be used for classification purpose. There are several Feature Extracting methodologies. Extracted features are divided into two subsets based on gender.

#### **B. ECG Signal Classification**

Classification is the supervised learning which helps to analyze the extracted features. MIT-BIH Arrhythmia Database and subset MIT-BIT Noise Stress Database from physionet are used which includes 48 ECG recordings [19].

The extracted features are classified into five standard ANSI/AAMI classes such as (a) normal (N), (b) supraventricular ectopic (S), (c) fusion (F), (d) ventricular ectopic (V), and (e) unknown (Q) [20].As the database contains both male and female ECG records ,the classification process is analyzed based on Gender category as a parameter. Neural network, machine learning and decision tree based classification algorithms are available. Machine Learning and decision tree based classification algorithms exists, among them Radial Basis Function and Random Forest Classifier Algorithm are used for classification.

1) **Radial Basis Function Classifier:** Radial Basis Function classifier is used in many applications such as classification, regression and signal processing. TheRBF classifier is composed of three layers called input layer, hidden layer, and output layer. The RBF networks are different from other types of neuralnetworks mainly in the hidden neurons. Each hiddenneuron has a radial basis function which is a center symmet-ric nonlinear function with local distribution. The radial basisfunction consists of a center position and a width parameter[21]

2) **Random Forest Classifier:** The RF algorithms form a family of classification methods that rely on the combination of several decision trees[22].Random forest classifier rely on ensemble method. Each tree in the RF splits into as class prediction and the class with more similarity will serve as the model for prediction and classification. The main idea of RF is to build many classification trees based on some randomly selected features from randomly selected samples with bagging strategy and then to use the trees to vote for a given input vector to get a class label. RF is constructed by many base learners and each base learner is an independent binary tree adopting recursive partitioning[23].Random Forest Classifier well suits for muiti-class classification.

## 6. EXPERIMENTS AND RESULTS

Filtered ECG signals are received by applying ButerChev Filtering Method. Temporal, spectral and fiducial feature vector is generated with the help of PCA extracting methodology. Segmented signals are retrieved by applying hybrid version of Pan-Tompkins and Hamilton Tompkins algorithm. Having the retrieved feature vector as primary input the signals are classified using Radial basis function and Random Forest methodology. Performance metrics such as Accuracy, Specificity, and Sensitivity are calculated for measuring the performance of Radial Basis function and Random Forest methodology.

Where TP represents True Positive, TN represents True Negative, FP represents False Negative and FN represents False Negative,

TABLE I depicts the performance evaluation based on gender and overall dataset. The accuracy of the female ECG records based on RBF is 87.88 % and male ECG records is 86.04%. The overall accuracy rate of Radial Basis Function is 86.96%. The accuracy of the female ECG records based on Random Forest is 83.71 % and male ECG records is 81.52%. The overall accuracy rate of Random Forest methodology and Random Forest are 86.96% and 82.62% which reflects that RBF gives better accuracy than RF. The specificity of the female ECG records based on RBF is 94.49 % and male ECG records is 93.70%. The overall specificity rate of Radial Basis Function is 94.10%. The specificity of the female ECG records based on Random Forest are 94.10% and 94.36%. The overall specificity of RBF and RF differs slightly with .05% variation only. The sensitivity of the female ECG records based on Random Forest is 85.29 % and female records are 80.99%. The overall sensitivity of Random Forest methodology and Random Forest are 94.36% and 83.14%. Here the Radial Basis Function Performs well than Random Forest. So it clearly depicts that Radial Basis function well performs than Random Forest methodology.

Gender	Accuracy Ider %		Specif	icity%	Sensitivity%	
	RBF	BF RF		RF	RBF	RF
Male	87.88	83.71	94.49	94.42	93.50	85.29
Female	86.04	81.52	93.70	94.31	94.49	80.99
Overall	86.96	82.62	94.10	94.36	94.00	83.14

<b>T</b> 11 '	1	•	C
Table 1:	gender	w1se	performance

Fig.4 represents the Accuracy performance metrics and clearly depicts that RBF performs more accurately than RF methodology.Fig.5 represents Specificity metrics and here RF methodology slightly out performs than RBF. Both of the methodologies reflect more or less same level of specificity.Fig.6 represents Sensitivity metrics and specifies that RBF well performs than RF.Fig.7 represents the overall performance metrics which clearly depicts that RBF well performs than RF.











Fig.6 Performance Metrics: Sensitivity



Fig.7 Overall Performance

#### 7. CONCLUSION AND FUTURE WORK

This paper presents the ECG signal feature extraction and classification stage. This paper focuses on filtering the retrieved ECG signal using ButterChev Algorithm. After filtering the ECG signal heart beat is detected and the signals are segmented using hybrid approach of Pan& Tompkins and Hamilton & Tompkins methodology In this stage the high level signals P,R,T,U and low level signal Q and S are segmented. The segmented ECG signals are given as input for PCA Feature extraction methodology which extracts temporal, spectral and fiducial ECG features. This feature vector is applied to Radial Basis Function and Random Forest Methodology. The dataset is divided into two subsets for training and testing purpose. The signals are classified into five AAMI based classes. The accuracy, specificity and sensitivity of RBF and RF are 86.96%,94.1%,94%,82.62%,94.36% and 83.14%. This reveals that Radial Basis Function is more efficient that Random forest methodology. Further this signal classification can be extended by optimizing the classification process with the support of deep learning algorithms.

#### REFERENCES

- [1] N.Goldchlager,"Principles of clinical electrocardiography". Appleton & Lange, 13 th ed., Connecticut, USA, 1989.
- [2] J.Rexy, P.Velmani and T.C.Rajakumar,"Heart Beat Peak detection using signal filtering in ECG data ." International Journal of Advanced Technology and Engineering Exploration." (2019):12-24.
- [3] Rodolfo de Figueiredo Dalvi, Gabriel Tozatto Zago, Rodrigo Varejão Andreão, "Heartbeat classification system based on neural networks and dimensionality reduction.". (2016):318-326.
- [4] J.Rexy, P.Velmani and T.C.Rajakumar."A Novel Approach to Perform ECG Signal Identification and Segmentation Based On Pan- Tompkins And Hamilton-Tompkins Algorithm". International Journal of Pharmaceutical Research." (2021):Vol 13, Jssue 1.
- [5] P. Lamba and K. Rawal, "A survey of algorithms for feature extraction and feature classification methods," in Proc. Int. Conf. Autom., Comput. Technol. Manage. (ICACTM), Apr. 2019, pp. 338–341.
- [6] Prachi Lamba and Kirti Rawa,"A Survey of Algorithms for Feature Extraction and Feature Classification Methods", IEEE Xplore, 2019
- [7] Fatemeh Molaei Vaneghi, Maysam Oladazimi, F. Shiman, Afshan Kordi, M.J. Safari, F. Ibrahim," A Comparative Approach to ECG Feature Extraction Methods", 2 IEEE Computer Society,2012.
- [8] Wenliang Zhu, Xiaohe Chen, Yan Wang, Lirong Wang," Arrhythmia Recognition and Classification Using ECG Morphology and Segment Feature Analysis" ACM Transactions on Computational Biology and Bioinformatics, IEEE, 2018.

- [9] Afseen Naaz and Shikha Singh," Feature Extraction and Analysis of ECG signal for Cardiac Abnormalities-A Review", International Journal of Engineering Research & Technology (IJER, Vol. 3 Issue 11, November-2014.
- [10] Can Ye and Miguel Tavares Coimbra,"Heartbeat Classification Using Morphological and Dynamic Features of ECG Signals", IEEE Transactions On Biomedical Engineering, VOL. 59, NO. 10, October 2012.
- [11] K. Akilandeswari, R. Sathya, "Feature Extraction Of ECG Signals For Early Detection Of Heart Arrhythmia", International Journal of Advanced Research in Computer and Communication Engineering Vol. 3, Issue 12, December 2014.
- [12] Anoop Vylala ,Bipin Plakkottu Radhakrishnan," Spectral feature and optimization- based actor-critic neural network for arrhythmia classification using ECG signal" Journal Of Experimental & Theoretical Artificial Intelligence, 2019.
- [13] Mohammed Belkheiri, Zineb Douidi and Ahmed Belkheiri," ECG Beats Extraction and Classification Using Radial Basis Function Neural Networks", Proceedings of the Fourth International Conference on Signal and Image Processing 2012, Springer, 2013.
- [14] V.Mahesh, A.Kandaswamy, C.Vimal, B.Sathish," Random Forest Classifier Based ECG Arrhythmia Classification" International Journal of Healthcare Information Systems and Informatics, 5(2), 1-10, April-June 2010.
- [15] Emina Alickovic1 & Abdulhamit Subasi," Medical Decision Support System For Diagnosis Of Heartarrhythmia Using DWT And Random Forests Classifier" J Med System (2016), Springer.
- [16] Philip de Chazal, Richard B. Reilly," Automatic Classification of Heartbeats Using ECGMorphology and Heartbeat Interval Features". Ieee Transactions On Biomedical Engineering, Vol. 51, No. 7, July 2004.
- [17] Juie D. Peshave, Rajveer Shastr," Feature Extraction of ECG Signal", IEEE Advancing Technology for Humanity, 2014.
- [18] Sreelakshmi T G and Seethal Paul," An Accurate ECG Feature Extraction Method For Detecting Multiple Cardiovascular Diseases", International Journal of Innovative Science Engineering and Technology (IJISET), Vol 1,Issue 9.
- [19] Moody GB, Mark RG. "The impact of the MIT-BIH Arrhythmia Database". IEEE Eng in Med and Biol 20(3):45-50,2001.
- [20] N P. Joshi, Shweta A.Tambe1, P.S. Topannavar1,"Morphological & Dynamic Feature Based Heartbeat Classification" International Journal of Engineering Research and General Science Volume 2, Issue 3,April-May 2014
- [21] Jinna Lu, Hongping Hu, and Yanping Bai, "Radial Basis Function Neural Network Based on an Improved Exponential Decreasing Inertia Weight-Particle Swarm Optimization Algorithm for AQI Prediction" Hindawi Publishing Corporation Abstract and Applied Analysis Volume 2014, Article ID 178313
- [22] Nguyen C, Wang Y, Nguyen HN, "Random forest classifier combined with feature selection for breast cancer diagnosis and prognostic". J Biomed Sci Eng [Internet]. 2013;6(5):551–60.
- [23] Taiyong Li and Min Zhou," ECG Classification Using Wavelet Packet Entropy and Random Forests", MDBI - Entropy 2016.

AUTHORS

**RexyJ** Department of Computer Science, Manonmanium Sundaranar University

**VelmaniP** Department of Computer Science, The M.D.T Hindu College

**Rajakumar T.C** Department of Computer Science, St. Xavier's College







# COMPARATIVE ANALYSIS OF TRUST ESTABLISHMENT MODEL TO IDENTIFY MALICIOUS NODES IN SIOT

Anciline JeniferJ<sup>1</sup> and Piramu PreethikaSK<sup>2</sup>

## <sup>1</sup>Department of Computer Science, Vels Institute of Science, Technology & Advanced Studies (VISTAS)

<sup>2</sup>Department of Computer Science, Vels Institute of Science, Technology & Advanced Studies (VISTAS)

#### **ABSTRACT**

Internet of Things enables the user to interact with devices which merges with Social Internet of Things (SIoT). SIoT is a new model that allows various attractive application and promote sharing of information. This can establish objects in an independent way based on the social relationship. The major issue is how to construct the trusted model and to understand how the objects interact with SIoT. In order to overcome these challenges, trust establishment model among these devices has been required before originating communication. This paper describes collaborative methods for calculating trust based on the trust evaluation system. The collaboration among the nodes can be established using encoded and decoded packets whereas the encoded packet transmission illustrates the collaboration. The each node of reliability based on the transaction factors can be assigned and their trust values can be calculated. This paper described comparison between proposed Cooperative Trust (CT) models which can be observed initially it achieves 79% trust value than the existing trust model. This framework provides more security and reliability for SIoT in order to identify the malicious nodes.

# KEYWORDS

IoT devices, SIoT, security, malicious nodes, trust value, cooperation

# **1. INTRODUCTION**

In today's digital era of Information Communication Technology (ICT), computers, mobile and other connecting devices are becoming ubiquitous in nature. According to a study, total number of connecting devices present in the globe exceeds multiple times the total population of humans making it more than 4 devices per person on the globe. By 2021, more than 20 billion devices will be connected to internet and communicate each other when required making it pervasive in nature [1]. This pervasive nature of the devices makes communication very obvious and hence these devices are known as Internet of Things (IoT) devices. The primitive nature of IoT devices is that they are anywhere, everywhere making communication and computation ubiquitous in the ICT domain. IoT network is the inter-networking of physical devices, smart devices, electronic appliances, automobile vehicles and other electronic devices having software, sensors, actuators, and network connectivity

which enable these components to collect and exchange data over a network. IoT devices are transforming our ICT spectrum completely. In communication over IoT, there is vulnerability in the messages being communicated among the devices because of the higher heterogeneity level. The vulnerability over IoT contains lack of integrity, reliability and trustworthiness of heterogeneous devices. IoT network uses diversified devices, multiple communication channels and lack of standards and enabling protocols result in multiple security threats. In a diversified distributed environment such as IoT network verification, approval, non-repudiation and access control are the significant to establish protective communication. These devices establish secure channel before beginning of the communication. Among the communication devices, these secure channels can be entrenched after establishing trust. Trust establishment is necessary to ensure that the vulnerabilities present in these devices should be resolved and ongoing communication is secure. These vulnerabilities are resolved by fulfilling security requirements by employing designated security mechanisms. Among these security concerns, privacy remains a challenge in IoT network as it solely depends on nature and characteristics of the devices. Once the communication can be started in the device due to heterogeneity has not controlled by security and privacy concerns among the communicating devices to establish the trust is one of the main reasons before starting of the communication. This method of establishing trust among the communicating devices is an aspect of Trust Management in IoT devices. Trust can also be established among the communicating devices by negotiating on certain aspects which is called Trust Negotiation. Trust Negotiation and Trust Establishment together comes under Trust Management. One of the approaches towards establishing trust among IoT devices is by treating these IoT devices as SIoT devices [2]. In SIoT, it is possible to distinguish people and objects from each other. It allows objects to protect their privacy from humans with their own social networks. There is billions of traffic in the IoT system as objects communicate in the network with other objects in an independent way and in this environment, it can lead to malicious behavior [3]. Management of trustworthiness plays an important role. Without this administration, the trusted network will not be available. There are many advantages that SIoT offers which are navigability, trustworthiness and scalability. The aim of this paper is to construct a comparison between trust evaluation models for SIoT based on the behavior of objects to develop security using trustworthiness management.

The organization of the paper is as follows: Section 2 describes the trust in SIoT, Section 3 describes survey based on trust based SIoT framework, Section 4 describes proposed CT model evaluation, Section 5 discusses the performance evaluation for calculating trust values with the comparison of proposed CT model and existing model, Section 6 ends with conclusion.

#### 2. ROLE OF TRUST SOCIAL INTERNET OF THINGS

Trust in IoT communication plays an important role as the communication take place among multiple devices. Trust in human sociology refers to a degree of extent at which information can be shared explicitly without any constraint of privacy preservation. When initiating the communication, the degree of trust is much needed and the fulfillment of trust requirements is strictly associated among IoT devices of access control and identity management issues. In networking systems like SIoT, trust establishment model is an important characteristic. A human social relation is the general fundamental feature of trust which needs to be reviewed from trustor who gets correlated with the society while extending trust. There should be no neglect of social experiences, the subjective point of view of particular individuals, and society. This system also found out that in addition to the trustworthiness of a trustee, the tendency of the trustor and environmental factors like faults, threats and risks also contribute to the trust valuation as illustrated in Figure 1. This is evident due to trust only exists in

dangerous situations based on the trust which is vulnerable. In unique contexts, there are many meanings for trust that makes it difficult to construct a common notation of trust in computer science.

The trust model to adopt a generally accepted social science approach in order to define trust in the SIoT context, which considers trust as a belief that appears in various trust-related works [4].



Fig. 1. SIoT Environment based on trust

In computer science, a general concept of trust has been accepted as follows: In a trustee, the belief of trustor will achieve or provide trustor's expectation as trust goal for a certain period of time within a particular context is defined as trust. Trustors and trustees may be individuals, computers, systems, applications and services in the SIoT framework. The trust value may be absolute for instance 'probability' which measure as conviction for instance 'trust level'. The wide knowledge of trust goal to perform the action of trustee provides the trust for information. The objectives of the Trustor are intentionally considered for the trust target to contain specific criteria to perform well.

#### **3. LITERATURE REVIEW**

This focus on to build a reliable system based on the nature of devices provided by the SIoT users. They define their model into two type's namely subjective model and objective model [5]. The model is based on different type of relationship named as co-work object, parental object, co-location object, social object and ownership object relationship [6]. Proposed trust model uses recommendation, reputation and knowledge to calculate trust metric of every device. Their model measures both credibility namely, the trust value metrics of reputation and recommendation and knowledge properties based on trust value metrics of knowledge [7]. This paper proposes trust capabilities based on the trust management model that involve reference model of generic IoT for accomplishing trustworthiness management target. Moreover, the proposed Trust Information Management (TIM) platform is considered to involve trust information brokers, TIM system and trust agents aimed at providing stable interactions and trustworthy between individuals, physical things and virtual objects [8]. The middleware solution is providing an environment for enabling service composition and general set of services based on communication capabilities and abstraction of device functional designs are the major goals which may be identified [9]. The advantages of the proposed IoT framework are incorporating both smart object-based infrastructure and RFID which includes the implementation of an additional generic IoT architecture. The disadvantages are which does not have a solution based on flexibility, scalability and lower performance. SIoT network to manage in IoT

architecture for the way of communication between several things in which the way of people handle social relationships as reference architecture. This paper addresses certain existing problems of IoT design and proposes SIoT-couched solutions which can be used to minimize architectural variability as requirements for potential IoT designs [10]. Gamini Joshi et al. has proposed the framework of cooperative trust management in accordance with data of encoding and decoding which assist in assessing IoT network trust using data normalization and evaluation. However, this proposed framework is highly cognizant and delivers quick decision making in nodes trustworthiness. Hence, the overhead has reduced by 61% in node 60 and the Packet Delivery Ratio (PDR) of non-malicious node gets increased with 40% in the node 30. Thus, the model is scalable with more node which is prompt to be realistic and reliable [11]. Chen et al. proposed trust evaluation which act as a major feature in network securing from annoying nodes [12]. Similarly, Atzori et al. has proposed various trust model related to fuzzy, game theory, neural network and Bayesian statistics whereas the limited work is done through trust [13]. Mart et al. has introduced direct observation using watchdog method for detecting the self-nodes. The trust correctness has been affected through direct observation and the watchdog method is utilizing the essential memory buffer which accumulates for additional storage in memory limited IoT devices [14]. Oliviero et al. has proposed a free routing path from malicious node but it is not secure while focusing only at trust dissemination [15]. Ren et al. has suggested trust evaluation with neighbor's advice but which influence the complexness [16]. Namal et al. has utilized the cloud in trust evalution for reducing the difficulties and advance the security. This proposed model is considered with Trust as a Service (TaaS) for providing availability and reliability over network [17]. The disadvantage faced in this method if any service gets interrupted. Hammi et al. has proposed a blockchain approach for designing the trust bubble which is identified that mechanism is not flexible to real-time applications as vendor intervention is frequently essential for basic process [18]. Duan et al. has proposed a game-theory method which utilized the cooperation idea over nodes but its consideration is lack of security and the outcome has resulted with network overhead [19].

## 4. METHODOLOGY

In SIOT, social network and IoT give a new paradigm to IoT devices and hence the IoT network becomes SIoT network which includes humans and IoT devices. In SIoT network, devices have their private social networks which offer persons to execute rules on these devices to prevent their security and privacy issues leading to secure communication after establishing trust. Companies such as eBay, Amazon and Google have utilized the benefits of social relationship models for providing reliable and secured services using the metrics of trust and reputation with reference to SIoT devices. In SIoT network, trustworthiness of IoT devices is measured using several trust management models. Social network mainly builds upon users having like own or business interests, events, experiences or reallife connections. Growth of SIoT is also depending upon communicating model of the IoT devices to approve a social approach. In SIoT network, the devices are accomplished for building social relationships with others. The interactions among devices can ensure in their social network. In SIoT network, IoT devices start communication with each other after establishing trust using a trust management model. In social network, users are connected through each other over social connections including contacts, acquaintance, friends, relatives etc. These connections need not ensure that the users know each other personally and having greater friendship affinity, trustworthiness, reputation etc. The SIoT technological development has created the path for various organization services in several domains. Moreover, this development may assist the attacker in disturbing the trustworthy and reputation of network services. Hence, there is an essential requirement for securing the SIoT network from the malicious nodes and create them with non-threatening. Thus, the CT framework has been

proposed for using the cooperative concept in securing the network from malicious nodes whereas the proposed CT mechanism is illustrated in figure 2.



Fig. 2. Mechanism of proposed Cooperative Trust (CT) model

In order to determine the destination node (Y) is trustworthy, the source node (X) needs to send the request through its neighbor nodes such as Nd1, Nd2, Nd3, Nd4 and Nd5. These nodes have been utilized for forwarding the encoded and decoded packet to Y. Moreover, the process of this cooperative mechanism is illustrated below. The source node (X) have send the encoded packets to neighbor nodes which is then it is send to the respective Destination Node (Y). The send encoded packets are made to be decoded and reply is forwarded to the repository, then the respective node is determined to be Y. Therefore, the respective node Y is said to be cooperative else malicious or selfish. Thus, the aggregated trust reply from the repository is sent to node X that evaluate in decision making of X to determine the node Y is the trust node for communication.

The proposed CT model assist in evaluating the trust value has been modeled as triplet  $\mu = (M, N, Q)$ 

'i' node represents evaluating node for encoding the packets

'j' node represents evaluated node for decoding the packets

Where M = {Nd1, Nd2, Nd3, Nd4...Ndm } is the set of neighbor nodes of node j,

N = {n1, n2, n3... $n_n$  } is the set of positive reports received for evaluated node j from neighbor nodes.

 $Q = \{q1, q2, q3... | qq\}$  is the set of negative reports received for evaluated node j from neighbor nodes,

Algorithm for cooperative trust mechanism model: Step:1 Start with evaluating trust of node 'j' is ready for node 'i' Step:2 Then node I sends trust request to all the neighboring nodes of j Step:3 All the neighboring node will send the encoded packet to node 'j' Step:4 Node j decodes the packet and generate the report Rm=1 if decoded is successful else Rm = -1 if not packet sent to repository for aggregation.

*Step:5* The above step2, step3 and step4 can aggregated data which is normalized and the trust value is evaluated

*Step:6* If the trust value is above the threshold, the evaluated node is trusted and the communication is smooth otherwise risky communication.

# **5. PERFORMANCE EVALUATION**

Performance indices are used to measure the success of the system. Our model uses the following parameters as the performance indicator. The proposed approach can be evaluated in computing devices trust by the Contiki-2.7 Cooja simulator. Moreover, this research has implemented with RPL-UDP for determining an accurate network traffic flow and by considering some malicious nodes have interrupted the traffic of the network that usually troublesome the trustworthiness. Thus, the range value of trust is from 0 to 1 in which the "0" represent the minimum value and "1" represent the maximum value but the default value is the minimum value. Table 1 has illustrated the simulation parameter used for evaluation.

Parameter	Value
Simulation time	Max 300 sec
Number of nodes(neighboring)	Max 60
Number of malicious nodes	Max 40
Communication range	50m
Protocol	RPL-UDP
Initial trust value	1.5

TABLE 1: Mechanism of	proposed Co	operative Trust	(CT) model
	proposed co	operative ridde	(01)

**Trust Value** – The mutual relationship among the two nodes is trust whereas the communication type is generally decided based on the calculated trust value as per equation (3) which is illustrated in Table 2.

TABLE 2:	Type	of com	munication
----------	------	--------	------------

Value of Normalized Trust	Trust Type	Communication Type
0-0.50	Untrusted	Hazard communication
0.51-0.70	Medium trust	Risky communication
0.71-1.00	High trust	Trusted communication

53

The above mechanism is repeated for every node and nature of communication between trustor and trustee is established.

# 6. COMPARATIVE ANALYSIS OF THE PROPOSED MODEL BASED ON TRUST VALUES

There are several models that have been proposed in the trust domain such as Trust-Doe approach [20], Belief-based Trust Evaluation Mechanism (BTEM) approach [21] so on. During the analysis of Trust-Doe approach, malicious node present in the network can be detected but lack in accuracy detection which is limited only for collusion attack. In other hand, the BTEM approach is implemented and outperforms better than Trust-Doe approach. Thus, the BTEM has improved the network trust and handling capacity with various attack types namely DoS, bad-mouthing etc. It has detected based on the value of malicious path and its node. The highest value of path or node can be considered as trustworthy path or node whereas lowest value can be considered as follows. In the experimental results, the proposed model illustrates in table.3 achieves highest trust value evaluation for each transaction based on varying the malicious nodes, therefore security is considerably better for SIoT framework.

	Percentage of Trust Values			
Communication Nodes	Proposed	cooperative	trust	Existing system of BTEM (%)
	model (%)			
10	40			28
20	52			40
30	58			40
40	78			32

TABLE 3: Communication Nodes Vs Trust Values



Fig. 3. Comparative analysis of trust values based on communication nodes

Figure.3 has illustrated the percentage of trust value for the models with comparative analysis based on 40 communication nodes presents in the network. The figure 3 shown the network trust value related to presence of varying malicious node percentage. The trust value for proposed trust model is high for all communication nodes whereas the trust value gets increased based on the incremental of communication node. The node of 20 and 30 consists of same trust value percentage of 40% in existing model but the value of proposed trust model percentage is 52% and 58%. Finally, the communication node of 40 with the trust value of 32% in existing BTEM and for proposed trust model is 78%. Thus, the reliability and accuracy of proposed more is comparatively higher in proposed trust model than BTEM model.

## 7. CONCLUSION

In this study, present a model for calculating Trust evaluating model for IoT devices in SIoT network. In SIoT network, devices have their individual social networks which offer persons to execute rules on these devices to prevent their security and privacy issues. It also leads to secure communication after establishing trust, where trustworthiness of IoT devices are measured using reputation and trust metrics with reference to the devices. Our model is lightweight and deterministic in nature. This paper has introduced a comparative study of proposed CT model with existing model in accordance with data of both encoding and decoding which assist in assessing SIoT network trust by normalizing and evaluation of data. Moreover, the higher trust value present in the communication node is considered to be an accurate and better trusted path in the network whereas the lowest trust value present in the communication node is determined as an untrusted path of the network that may contain malicious nodes. Hence the proposed cooperative trust model provides highly secure than the existing framework. This performance can be increased and more appropriate in social network such as Facebook, LinkedIn, Twitter, Instagram etc. In future introduce a new method of encoding and decoding methods like Viterbi decoder will suited for SIoT.

#### REFERENCES

- Popular Internet of Things Forecast of 50 Billion Devices by 2020 Is Outdated [Internet]. [cited 2016 Aug 18]. Available from: https://spectrum.ieee.org/tech-talk/telecom/internet/popular-internet-of-thingsforecast-of-50-billion-devicesby-2020-is-outdated.J. Clerk Maxwell, A Treatise on Electricity and Magnetism, 3rd ed., vol. 2. Oxford: Clarendon, 1892, pp.68–73.
- [2] Chanchal Sharma, M. Afshar Alam and Aqeel Khalique, "A Novel Trust Establishment Model in SIoT Network based on Sociological Aspects of Users in Social Networking Services", Indian Journal of Science and Technology, Vol 12(17), DOI: 10.17485/ijst/2019/v12i17/143128, May 2019.
- [3] Priyadharshini.P and Ramya.J, "Security Improvement in Social IOT", International Journal of Advanced Research in Education & Technology, Vol. 3, Issue 2, 2016.R. Nicole, "Title of paper with only first word capitalized," J. Name Stand. Abbrev., in press.
- [4] Schoorman, F.D.; Mayer, R.C.; Davis, J.H. An integrative model of organizational trust: Past, present, and future. Acad. Manag. Rev. 2007, 32, 344–354.
- [5] Nguyen Binh Truong, Hyunwoo Lee, Bob Askwith and Gyu Myoung Lee, "Toward a Trust Evaluation Mechanism in the Social Internet of Things", Sensors 2017, 17, 1346; doi:10.3390/s17061346.
- [6] Nitti M, Girau R, Atzori L, "Trustworthiness management in the social Internet of Things", IEEE Transactions on Knowledge and Data Engineering, 2014, 26:1253–66. https://doi.org/10.1109/TKDE.2013.105.
- B.Truong, N., Um, T.W., Lee, G.M, "A reputation and knowledge based trust service platform for trustworthy social Internet of Things", 2016, Available from: https://www.semanticscholar.org/paper/A-Reputationand- Knowledge-Based-Trust-Service-for-Truong/6960e85 5b20262c49d492b32d31f0fd6c20a46f5.
- [8] Tai-Won Um, Eunhee Lee, Gyu Myoung Lee and Yongik Yoon, "Design and Implementation of a Trust Information Management Platform for Social Internet of Things Environments", Sensors 2019, 19, 4707; doi:10.3390/s19214707.
- [9] E. A. K. amd, N. D. Tselikas, and A. C. Boucouvalas, "Integrating RFIDs and smart objects into a unified Internet of things architecture," Adv. Internet Things, vol. 1, no. 1, pp. 5–12, 2011.

- [10] [10] David Goad and Uri Gal, "IoT Design Challenges and the Social IoT Solution", Twenty-third Americas Conference on Information Systems, Boston, 2017.
- [11] Gamini Joshi, Vidushi Sharma, "A Cooperative Approach for Implementation of Trust for IoT Networks", International Journal of Advanced Science and Technology Vol. 29, No. 03, 2020, pp. 9228 – 9237.
- [12] Al-Hamadi, H., Chen, I.R., "Trust-Based Decision Making for Health IoT Systems", IEEE Internet of Things Journal. 4, 1408–1419, 2017. https://doi.org/10.1109/JIOT.2017.2736446.
- [13] Atzori, L., Iera, A., Morabito, G., Nitti, M, "The Social Internet of Things (SIoT) When social networks meet the Internet of Things: Concept, architecture and network characterization", Computer Networks. 56, 3594–3608, 2012. https://doi.org/10.1016/j.comnet.2012.07.010.
- [14] Marti, S., Giuli, T.J., Lai, K., Baker, M, "Mitigating routing misbehavior in mobile ad hoc networks", In: Proceedings of the 6th annual international conference on Mobile computing and networking - MobiCom '00. pp. 255–265. ACM Press, New York, New York, USA, 2000. https://doi.org/10.1145/345910.345955.
- [15] Oliviero, F., Romano, S. Pietro, "A Reputation-Based Metric for Secure Routing in Wireless Mesh Networks", In: IEEE GLOBECOM 2008 - 2008 IEEE Global Telecommunications Conference. pp. 1–5. IEEE, 2008. https://doi.org/10.1109/GLOCOM.2008.ECP.374.
- [16] Ren, Y., Boukerche, A, "Performance Analysis of Trust-Based Node Evaluation Schemes in Wireless and Mobile Ad Hoc Networks", In: 2009 IEEE International Conference on Communications. pp. 1–5. IEEE, 2009. https://doi.org/10.1109/icc.2009.5305933.
- [17] Namal, S., Gamaarachchi, H., MyoungLee, G., Um, T.-W, "Autonomic trust management in cloud-based and highly dynamic IoT applications", In: 2015 ITU Kaleidoscope: Trust in the Information Society (K-2015). pp. 1–8. IEEE, 2015. https://doi.org/10.1109/Kaleidoscope.2015.7383635.
- [18] Hammi, M.T., Hammi, B., Bellot, P., Serhrouchni, A, "Bubbles of Trust: A decentralized blockchainbased authentication system for IoT. Computers & Security", vol-78, pp-126–142, 2018. https://doi.org/10.1016/j.cose.2018.06.004.
- [19] Duan, J., Gao, D., Yang, D., Foh, C.H., Chen, H.-H, "An Energy-Aware Trust Derivation Scheme With Game Theoretic Approach in Wireless Sensor Networks for IoT Applications", IEEE Internet of Things Journal. Vol-1, pp-58–69, 2014. https://doi.org/10.1109/JIOT.2014.2314132.
- [20] Nie Shuzhi, "A novel trust model of dynamic optimization based on entropy"[Journal]. [s.l.] : Springer Nature, 2017.
- [21] Raja Waseem Anwar Anazida Zainal ,Fatma Outay, "BTEM: Belief based trust evaluation mechanism for Wireless Sensor", [Journal] // Future Generation Computer Systems. - 2019.

# A NOVEL APPROACH TO OPTIMIZE WATER AND FERTILIZERS IN AGRICULTURE USING IOT

D.Louisa Mary<sup>1</sup>, Dr.M.Ramakrishnan<sup>2</sup>

<sup>1</sup>Assistant Professor Department of Computer Application, St.John's College, Palayamkottai, Tirunelveli, Tamil Nadu.

<sup>2</sup> Professor & Head, Department of Computer Application, Madurai Kamarajar University, Madurai, Tamil Nadu.

#### **ABSTRACT**

This paper presents a new method for supplying nutrients to the farm. This novel method uses IoT and Wireless Sensor Network in Farming. Soil Moisture sensor and humidity sensor monitor the soil properties. These results are updated to the IoT Server. Based on the values for humidity of the soil, drip irrigation to the plant is on/off through solenoid valve. In addition this paper concentrates on quantitative analysis of requirement of nutrients for the plant to avoid overdose or insufficiency of them. This work trains the machine using precision agriculture for supplying required nutrient to the plant using solenoid on/off valve through drip irrigation. It also alerts the user by sending SMS (Short Messaging Service) through GSM to the user on fertigation date and pesticides spraying date. This will be very helpful for the farmers to remember the fertigation date in their various activities. The limitation of this work is that the fertilizers used will only be liquid in state. This technology can also be improved to a large level agricultural production.

## **KEYWORDS**

Iot, Wireless Sensor Network, Sensor, Drip Irrigation, Fertigation, Liquid Fertilizers

## **1. INTRODUCTION**

The population rate is increasing in an exponential way in India. The Rainfall is also not adequate every year. So India suffers water scarcity every year. In this present scenario it is a very challenging task to do agriculture manually like sowing, digging and irrigating and to meet out the needs of food for the increased population. Hence, adequate modifications are required in agricultural field to increase the productivity and to maintain the quality with minimum water.

Smart farming is a good alternate hi-tech system to meet the needs of food in a better way for growing population. Wireless Sensor Network (WSN) and Internet of Things(IoT), as one of the exciting new fields of research, has great promise in addressing the emerging needs of the food in agriculture area and give more productivity and good avenues. Using this technology the process for agriculture is automated. Various Sensors pertaining to Soil moisture, temperature and humidity provide the necessary parameters about the soil and submit the same to the IoT Server based on which decision is made for drip irrigation. Thus water usage minimization is achieved.

Supplementing Fertilizers is also found to be very essential to increase the yield up to 25 to 50 percent. [16] Proper supplying of fertilizer discourages weed growth also. The correct quantity of

nitrogen, Phosphorous, potassium used for plant growth, fruit and flowers and strong stems and also fight against diseases [17].

So required soil nutrients(NPK) are supplied to the land automatically on time in this proposed work with less human intervention with the help of WSN and IOT.

## **2. Related Work**

Researches of Carrnige Mellon University worked on plant nursery using Wireless Sensor Technology [9]. Wireless Sensor Network based poly house monitoring system is explained in [10] which accurately finds out environment temperature, humidity, CO2 level and sufficiency of light also. This poly house control technology provides automatic adjustment of poly house. In [11] authors have proposed development of WSN based detection of above mentioned parameters for agriculture using Zig Bee protocol and GPS technology. In some projects such as [12] authors have designed and implemented an approach in the development of crops monitoring system in real time to increase production of rice plants. Later on use of IoT has been proposed in [13].

In [1] a system is proposed for soil monitoring and fertigation in which Nitrogen(N), Phosphorous(P), potassium (K) values are determined by comparing the solution with color chart. In [2], NPK Kit is used to test soil and dispense the fertilizer required. Using IoT & Wireless Moisture Sensor Network (WMSN) feedback control method in greenhouse crop irrigation was proposed in [3].

Patil and Kale in [4] developed Android application to collect real time data and alerts through short Messaging Service(SMS). A paper using fuzzy rules to cultivate vegetables in terrace proposed in [5]. Ahmed et al. [6] experimented and explain the need of the correct mixture of fertilizer(NPK) on the lower chrysanthemum. An IoT system for tomato growing stages using deep learning model is explained in [14]. In [15] S. K. Y. Donzia , H.-K. Kim and H. J. Hwang proposed a framework for precision agriculture using IoT Gateway. In [8] we presented a smart farming system which applies drip irrigation and alert the user on date to spread fertilizers and pesticides.

## **3. PROPOSED SYSTEM DESIGN**

Our Proposed work is illustrated in fig.2. This system is developed with Arduino Uno open source Microcontroller board based on the Microchip ATmega328P microcontroller with a CPU Microchip AVR (8-bit), Memory SRAM, and Flash, EEPROM memory for storage purpose It uses the following components

#### **3.1.** Components

Soil Moisture Sensor is used to measure the volumetric water content of soil and humidity sensors measures the moisture content and send that information to the IoT Server.

RTC - (Real Time Clock) ds1307 RTC is used to monitor time and maintain calendar. In this work the Real time clock is on when the seed is planted and the seed planting date is stored in EEPROM of Arduino which will be useful for calculating the supply of nutrients(fertilizers) and pesticides to the plant on time.

GSM –SIM800A based GSM/GPRS with dual frequency 900/1800MHz is used in this work . GSM(Global System for Mobile Communication) is used to send alert messages to the user to supply fertilizers and pesticides on time.

Relay and Solenoid valve: The required nutrient is applied to the field along with drip irrigation through the solenoid valve automatic switching ON/OFF and Relay control



Fig-1 Arduino uno with RTC and GSM Relay connection

Arduino receives input from Soil Moisture sensor, humidity sensor, Real Time Clock(RTC) and produces the results to GSM , IoT Server.



Fig-2 Overall Architecture

#### 3.2. Proposed Method

#### **3.2.1.** Drip Irrigation

Temperature sensor and Soil moisture sensor gets the values from the field and it is sent to the IoT server for analyzing. if the Soil moisture values are less than the expected threshold value, solenoid valve automatically opens and the plants are drip irrigated. Here the threshold value for soil moisture is considered as 50 percentage approximately.

#### 3.2.2. Notifying fertilizer date and Pesticides date

Seed planting date is stored in memory if the current date is the fertilizer supplying date or pesticides spraying date then the machine were trained to alert the farmer by sending SMS(short messaging service) through GSM(Global System for Mobile Communications). The Circuit diagram for alerting the user is described below.



Fig.3: Circuit Diagram for alerting the user on fertilizer date[8]

#### 3.2.3. Algorithm for calculating the Nutrient to the Soil

After getting the Nutrient details(NPK) about the soil from the lab the following steps are used for calculating the time needed to automatically apply the required nutrient to the soil through drip irrigation

Let the Quantity of Nutrient in Soil= X Kg/hectare

- 1. Optimum Level=(threshold\_value) Kg /ha
- 2. Needed = (threshold\_value X)/ha;

- 3. Area of the actual land(A) = A1 hectare
- 4. The Nutrient needed for the actual land (Need\_actual) = Needed \* A;
- 5. Flow Rate in one nozzle = F1/min;
- 6. Number of Nozzles for A =N1;
- 7. Total Flow Rate(TFR)= N1 \* F1;
- 8. Nutrient (N) Mixing Composition =NF %
- 9. Volume of Nutrient dispersed per minute(V) = (NF/100)\* TFR ;
- 10. One litre of Fertilizer contain(FN) =Nutrient in Kg;
  - 10.1. Weigh Fertilizers supplied per minute (W) = V \* FN;
  - 10.2. Time Needed to spray the required nutrient(t) =  $((1/W) * Need_actual) / minute$

11. Repeat all the above steps for all nutrients which are applied to the farm through drip and find the time needed for them to spray.

12. After the time is calculated for all nutrients, compare all the time and find the maximum time used by the nutrient to spray in the farm.

13. Taking Maximum time as nutrient spraying time and adjust the solenoid valve using the below calculation for the remaining nutrient and apply them to the farm simultaneously using drip irrigation.

13.1. Let N1,N2,N3 be the time taken in minutes by the Nutrient1,Nutrient2,Nutrient3 and maximum time is Max .

13.2. Solenoid valve for Nutrient1, Nutrient2, Nutrient3 is adjusted as N1/Max, N2/Max, N3/Max minutes

14. Finally Solenoid valve automatically switched off when the time is over.

15. End

## 4. RESULTS AND DISCUSSIONS

Soil Moisture Sensor and humidity sensor senses the moisture contents of the field and send the details to the Server. If the Moisture content values are less than the threshold value, solenoid valve automatically opens and start drip irrigation. Through RTC seed sowing date is stored in EEPROM and from that detail nutrient spraying date and pesticides date are calculated. It sends an SMS to the user on that calculated date through GSM.



Fig.4. Drip Irrigation [7]



Fig.5. Serial Monitor output for alerting the user[8]

Fig.4 shows that the plants are drip irrigated and Fig.5 shows serial monitor output of arduino which shows that GSM is sending SMS alerts to the user for applying fertilizers. In between time the farmers collect the soil and test the nutrient percentage in the Lab. When he/she gets the SMS, He/She supply the required nutrient to the soil through drip irrigation.

The Threshold value for N,P,K is fixed which is taken from Tamil Nadu AgriculturalPortal.

Nutrient	Low	Medium	High
Available Nitrogen(N)	<240Kg/ha	240-480 Kg/ha	>480 Kg/ha
Available Phosphorus(P) Available Potassium(K)	<11.0Kg/ha <110 Kg/ha	11-22 Kg/ha 110-280 Kg/ha	> 22 Kg/ha >280 Kg/ha

Table 1: Nutrient Value [16]

Taking threshold value for the Nitrogen(N), Phosphorus(P) and Potassium(K) as 480,Kg,22g, 280 Kg respectively from the above table which was taken from tamil nadu agricultural portal and apply this value in the algorithm given in section 3 and supplied to the farm through drip.

Arduino automatically calculates the needed nutrients and how much time is needed to spray the needed nutrients .

Nutrient Name	Nutrient fertilizer Mixing composition(%)	Volume of Nutrient dispersed /minute	one litre of fertilizer contained nutrients in kg	Weigh Fertilizer supplied in kg	Time needed to spray in min
Nitrogen(N)	5	30 litres	0.5	15	6
Phosphorus(P)	3	18 litres	0.5	1.8	2
Potassium(K)	5	30 litres	0.5	15	3

Table 2: The results obtained from the proposed algorithm

Here Nutrient fertilizer mixing composition (%) and fertilizer contained nutrient in one litre values are arbitrarily taken.

Here the maximum time is 6 minutes for Nitrogen fertilizer. Solenoid valve for nitrogen will open 6 minutes and solenoid valve for Phosphorous and Potassium is adjusted to (2/6)=3 minutes and (3/6)=2 minutes . (based on the step 10 in the above procedure)

Hence the total time needed for the above fertilizers(NPK) to spray is 6 minutes .

# **5.** Scope of the Work

In future more parameters can be monitored and controlled. Soil Moisture threshold value will be calculated using fuzzy logic method. Instead of testing NPK of soil in the lab, sensors can be used to detect NPK value and automatically takes the required nutrient quantity from the tank. This system can also use android application. Detection of insecticides can also be added in our future work.

# **6.** CONCLUSION

This system applies the drip irrigation to the plant automatically. And also it informs the user to spray the fertilizers, pesticides on time. It calculates the required quantity of nutrient to the soil and supply it through the drip irrigation which saves more water and produce more yield. All the data will be sent to the server for monitoring and analyzing purpose.

#### REFERENCES

- SR. Raut, H. Varma, C. Mulla and Vijaya Rahul Pawar Soil Monitoring, Fertigation, and Irrigation System Using IoT for Agricultural Application Springer Nature Singapore Pte. Ltd. 2018 Y.-C. Hu et al. (eds.), Intelligent Communication and Computational Technologies, Lecture Notes in Networks and Systems 19.
- [2] Dr. A. D. Shaligram, Nishant Singh, "NPK Measurement in Soil & Automatic Soil Fertilizer Dispensing Robot", International Journal of Engineering Research & Technology (IJERT) Vol.3, Issue 7, July. 2014.
- [3] Ibrahim Mat, Mohamed Rawidean Mohd Kassim, Ahmad Nizar Harun, Ismail Mat Yusoff MIMOS, IoT in Precision Agriculture Applications Using Wireless Moisture Sensor Network, Ministry of Science ,Technology and Innovation, Kuala Lumpur, MALAYSIA 2016 IEEE Conference on Open Systems (ICOS), October 10-12, 2016, Langkawi, Malaysia
- [4] Prof. K. A. Patil, Prof. N. R. Kale A Model for Smart Agriculture Using IoT, 2016 International Conference on Global Trends in Signal Processing, Information Computing and Communication
- [5] V. Pandiyaraju\*, P. Shunmuga Perumal, A. Kannan and L. Sai Ramesh," SMART TERRACE GARDENING WITH INTELLIGENT ROOF CONTROL ALGORITHM FOR WATER CONSERVATION Pak. J. Agri. Sci., Vol. 54(2), 451-455; 2017 ISSN (Print) 0552-9034, ISSN (Online) 2076-0906
- [6] R. Ahmed, M.J. Hussain, S. Ahmed, M.R. Karim1 and M.A. Siddiky," Effect of N, P and K fertilizer on the flower yield of Chrysanthemum" A Scientific Journal of Krishi Foundation, The Agriculturists 15(1): 58-67 (2017) ISSN 2304-7321 (Online), ISSN 1729-5211 (Print)
- [7] D.Louisa Mary, Dr.M.Ramakrishnan 2019, IOT BASED MONITORING SYSTEM IN HOME AGRICULTURE Journal of Emerging Technologies and Innovative Research 2019 JETIR June 2019, Volume 6, Issue 6 DOI : http://doi.one/10.1729/Journal.22262.
- [8] Louisa Mary, Dr.M.Ramakrishnan, Abraham N R Singh 2020, Performance of Smart Farming through Drip Irrigation and Managing of Fertilizers and Pesticides through IoT and GSM International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249 – 8958, Volume-9 Issue-3, February, 2020
- [9] Junaid ahmed zubairi, "Application of modern high performance networks" Bentham science publishers Ltd. 2009, pg. 120-129.
- [10] Yongxian Song, Juanli Ma, Xianjin Zhang, Yuan Feng, "Design of Wireless Sensor Network-Based Greenhouse Environment monitoring and Automatic Control System", JOURNAL OF NETWORKS, VOL. 7, NO. 5, MAY 2012.
- [11] G.V.Satyanarayana, SD.Mazaruddin, "Wireless Sensor Based Remote Monitoring System for Agriculture using ZigBee and GPS", Conference on Advances in Communication and Control Systems 2013.
- [12] N.Sakthipriya, "An Effective Method for Crop Monitoring Using Wireless Sensor Network", Middle East Journal of Scientific Research 20(9):1127-1132, 2014 ISSN 1990-9233.
- [13] Alexandros Kaloxylos "Farm management systems and the Future Internet era", Computer and Electronics in Agriculture 89(2012)130144.
- [14] Nuttakarn Kitpo ; Yosuke Kugai ; Masahiro Inoue ; Taketoshi Yokemura ; Shinichi Satomura,"Internet of Things for Greenhouse Monitoring System Using Deep Learning and Bot Notification Services", 2019 IEEE International Conference on Consumer Electronics (ICCE)
- [15] Symphorien Karl Yoki Donzia, Haeng-Kon Kim and Ha Jin Hwang," A Software Model for Precision Agriculture Framework Based on Smart Farming System and Application of IoT Gateway", Springer International Publishing AG, part of Springer Nature 2019 R. Lee (ed.),Computational Science/Intelligence & Applied Informatics, Studies in Computational Intelligence 787, https://doi.org/10.1007/978-3-319-96806-3\_4
- [16] http://agritech.tnau.ac.in/agriculture/agri\_soil\_soilratingchart.html
- [17] https://web.extension.illinois.edu/firstgarden/basics/feedme\_03.cfm
- [18] Jan Holler, VlasiosTsiatsis, Catherine Mulligan, Stefan Avesand, Stamatis Karnouskos, David Boyle, "From Machine-to-Machine to the Internet of Things: Introduction to a New Age of Intelligence", 1st Edition, Academic Press, 2014. (ISBN-13: 978-0124076846)

#### AUTHORS

**D.Louisa Mary** Assistant Professor of Computer Science, St John's College, Palayamkottai has been teaching computer science for the past 13 years. To her credit she has M.Tech degree along with M.CA., M.Phil. She has also qualified SET. Her area of interest is Applications of computers in agriculture.

**Dr.M.Ramakrishnan** is the Head of the Department of Computer Applications Madurai Kamaraj University, Madurai. He has so far produced fifteen PhD's and he has published many papers in reputed journals. He published two books in Computer Science. His area of research is Network Security.



64

# SEGMENTATION OF VISCERAL ADIPOSE TISSUE CAUSING CENTRAL OBESITY USING DEEP LEARNING ON ABDOMINAL MRI

B Sudha Devi<sup>1</sup> and Dr.D.S Misbha<sup>2</sup>

# <sup>1</sup>Department of Computer Science, Nesamony Memorial Christian College, Marthandam, India

# <sup>2</sup> AP, Department of Computer Science, Nesamony Memorial Christian College, Marthandam, India

#### ABSTRACT

In recent years, obesity is highly prevalent and is related with increased risk of many diseases. The distribution of abdominal adipose tissue plays a major role to assess central obesity. The basic objective of this study is to develop a novel method for automatic segmentation of visceral adipose tissue(VAT) and subcutaneous adipose tissue(SAT) from abdominal Magnetic resonance imaging(MRI) slices which is implemented in two steps. First, clustering of image is done to classify MR image into adipose tissue and non-adipose tissue. Second, after clustering the image, segmentation is done to separate VAT and SAT by a convolutional deep neural network. Sixty five MR images have been used in this study where deep learning techniquet have been adopted for the segmentation of VAT and SAT. The proposed and the manual measurements produced the Dice scores of 0.97 and 0.96 for SAT and VAT respectively. The experimental results show that the deep learning method produces better segmentation results with high accuracy.

#### **Keywords**

*Obesity, Visceral adipose tissue (VAT), subcutaneous adipose tissue (SAT), Magnetic resonance imaging (MRI), deep learning* 

# **1. INTRODUCTION**

Visceral adipose tissue and subcutaneous adipose tissue are the two types of abdominal adipose tissues seen in humans. Subcutaneous adipose tissue is the fat that is stored beneath the skin where as visceral adipose tissue is the fat that is deposited between the internal organs in the abdominal cavity. Too much of any body fat is bad for our health. But compared to subcutaneous fat, visceral fat is more likely to raise the risk for serious medical issues like Alzheimer's disease, type 2 diabetes, cardiovascular diseases, musculoskeletal disorders, some cancers and high cholesterol. The excess amount of VAT in the human body is known as obesity. Although Body mass index (BMI), waist circumference and waist-hip ratio (WHR) has been used as a traditional measure of obesity, the results are approximate in obese and underweight individuals. Also, these measurements do not differentiate SAT and VAT [1]. At present, obesity can be determined by the amount of VAT in the abdominal region [2]. Apart from the traditional measures such as BMI and waist-hip ratio, other methods like bioelectrical impedance, dual energy X-ray absorptiometry, CT and MRI based techniques were used to measure abdominal fat. Recently, imaging modalities like CT and MRI are widely used to assess abdominal adipose tissue. The quantification of VAT

from CT and MRI is considered to be more accurate and consistent measure of the distribution of body fat. On the other hand, CT is exposed to high radiation and so rarely used. MRI can measure SAT and VAT without any side effects. As a result, several unsupervised methods for the segmentation of adipose tissue are being developed. There are several studies that provides evidences on the accuracy of automated segmentation and quantification using deep learning. Different models like fully convolutional network (FCN), U-net neural network model, augmented active shape model and multi-atlas segmentation model uses different algorithms for the segmentation process[3].

# **2. Related works**

CT and MRI images are commonly used to segment adipose tissue. Deep learning using convolutional neural networks have recently gained importance in the literature for solving problems in a variety of fields, including image recognition, classification, and segmentation. Deep learning algorithms depend on large cohorts of training data to extract important features from the targets for new predictions.

Hui et al. [4] proposed an MRI based approach for segmenting VAT and SAT using spoke template and intensity based filtering. Sadananthan et al.[5] proposed a graph theoretic segmentation algorithm to segment VAT and SAT from MR images. A three-level convolutional neural network was suggested by Wang et al.[6] for the segmentation of SAT and VAT.

Deep learning concept was used by Weston et al. [7] to perform abdominal VAT and SAT segmentation. Langner et al. [8] proposed a three channel U-Net architecture for the segmentation of SAT and VAT using abdominal MR images of humans. Ning Shen et al. [9] presented a quantification of subcutaneous and visceral adipose tissue from MRI based on machine learning. Young Jae Kim [10] proposed a method using separation mask to detect SAT and VAT quantities from CT images. For the segmentation of VAT and SAT on CT images, Grainger et al.[11] used the deep learning concept based on the U-Net architecture. Most of the MRI based adipose tissue segmentation algorithms concentrates on raw features like intensity, shape and location other than the intrinsic features of tissues. Fuzzy c-means algorithms [12] and K-means clustering algorithms [13] groups the pixels by considering the intensity features. Currently, multi-echo Dixon technique is also used for the assessment of adipose tissue. In this technique, to derive chemical shift-separated water and fat images from multiple source images acquired at different echo times a spectral model is used. To segment VAT and SAT in the abdominal region using DIXON MRI images, Estrada et al.[14] proposed a deep learning pipeline.

In this study, we introduce a novel method for VAT segmentation using fuzzy c-means algorithm and convolutional deep neural network that results in high performance and accuracy.

#### **3. PROPOSED METHODOLOGY**

Convolutional neural network is a class of deep neural network applied to analyze visual imagery in medical applications. As the deep learning method is independent of hand

crafted features, it is able to learn the features from the image data that cannot be extracted by the image analyst. In this proposed work, segmentation of VAT and SAT was done by the U-Net architecture which is a convolutional deep neural network. The overall representation of the proposed CNN is shown in figure 1.



Figure 1. Flow diagram of the proposed CNN based segmentation method

In the first step, clustering is done to classify the MR image into adipose and non-adipose tissues. This is done using fuzzy c-means (FCM) algorithm as it is highly efficient and does not require any previous information. During the iterations of FCM, the energy function that is to be minimized is defined as

$$P(x,c) = \sum_{i=1}^{K} \sum_{n=1}^{N} |x_i - c_n|^2$$

where K represents the total number of voxels of the MR image, N is the number of clusters (Here N=2),  $x_i$  is the voxel intensity and  $c_n$  is the center intensity of the n<sup>th</sup> cluster. For the above function, iterative optimization was done with the updation of fuzzy cluster membership of each voxel and the center of each cluster. When the centers and the membership of the cluster were stabilized, or the allowed iteration was reached, the continuing iteration will be stopped. Figure 2 displays the result of clustering of an MR image. The grey color indicates adipose tissue and the black color indicates non-adipose tissue.



Figure 2. a) Original MRI slice b) Classification of adipose and non-adipose tissue using FCM clustering

In the second step, U-Net, a convolutional deep neural network was employed for the segmentation of VAT. The architectural design of U-Net consists of several cascading layers of learnable convolutional filters. The organization of the system includes five downsampling and five up-sampling layers, that minimized the input image resolution of 512 x 512 to a 16 x 16 x 196 representation which is upsampled into a 512 x 512 x 6 output. A hyperbolic-tangent activation function(tanh), that normalized the values to the range of -1 to +1, follows each step with two successive 3x3 convolutions. This is followed by max-pooling whose kernel size is 2 x 2 pixels. In the next half of the network, a 2 x2 nearest-neighbor interpolation performs the upsampling operations which is followed by two convolutional layers. The output of the convolutional kernel from the encoding step of the network is concatenated with each corresponding decoding step, which helps to preserve the detail of the original image. The final layer consisted of a convolution with a 1 x 1 x 2 kernel which is followed by a sigmoid function, that provides an output score for both tissue types. The final segmentation is accomplished through the selection of tissue type with the highest score for each pixel. The U-Net deep learning model is combined with fuzzy c-means algorithm to classify adipose tissue and segment VAT. The segmentation results after clustering an MRI slice is shown in figure 3.



Figure 3. a) Segmentation result in which green coloured area indicates VAT, red coloured area indicates SAT and blue coloured area indicates non-adipose tissue b) Final segmented output from original MRI slice-pink coloured area represents VAT and blue coloured area represents SAT.

### **4. EXPERIMENTAL RESULTS**

The cohort for this study includes 65 non-contrast MRI datasets collected for standard CAC scoring. These datasets were collected randomly from the prospective EISNER trial obtained at NIMS Medical Center. The patient population included asymptomatic subjects without any previous history of coronary artery disease but with cardiovascular risk factors. The population is shown in Table 1. There were no scans left because of low image quality in image or artefacts.. The total number of transverse slices per scan was 55, and each axial slice had a dimension of  $512\times512$  pixels of 0.684 mm × 0.684 mm. To implement this proposed model, a workstation with Dual Intel Xeon Processor E5-2630 v2 (Six-Core HT, 2.6GHz Turbo, 15 MB), 4 GB NVIDIA Quadro K5000, 1x8GB DDR3, 1TB 7200RPM SATA, and Windows 10 Pro workstation is used as a platform. Python 3.7 and open source machine learning libraries such as TensorFlow 1.13.1, Keras 2.2.4, and Scikit-learn 0.20.3 have been used to develop its working model.

Table 1. Subject Characteristics

Subjects	65
Male	40
Female	25
Age (years)	35 to 65
Diabetes	10
Hypercholesterolemia	40

The segmentation results produced by the proposed model were compared against the results generated by manual segmentation method. The performance was validated using Dice score and Jaccard score metrics. Let L and M indicate the manual segmentations and the CNN based segmentations respectively, then, Dice score is defined as,

 $DC = \frac{2|L \cap M|}{|L| + |M|}$ Jaccard score is defined as,  $JC = \frac{|L \cap M|}{|L \cup M|}$ 

The convolutional deep neural network based segmentation method shows good correlation with manual segmentation. Table 2 shows the results of the proposed CNN and manual method. It can be seen from the table that the proposed method produced high Dice score value(VAT-0.96 and SAT- 0.97). The Jaccard scores of VAT and SAT are 0.95 and 0.96 respectively which is also high compared to manual segmentation. Figure displays the graphical representations of the performance evaluation results.

Table 2.	Performance	evaluation	of manual	segmentation	and pr	oposed	CNN

Evaluation	VAT	SAT	VAT	SAT
method	Dice score	Dice score	Jaccard score	Jaccard
				score
Manual	0.95	0.95	0.93	0.95
method				
Proposed CNN	0.96	0.97	0.95	0.96
*				



Figure. 5. Segmentation performance of manual segmentation and proposed CNN

### **5.** CONCLUSION

The proposed deep learning method segments the visceral adipose tissue and subcutaneous adipose tissue from MR images of the abdomen with high accuracy. The performance is also high compared to manual segmentation. By segregating VAT and SAT, this work helps the clinicians to access central obesity and the risks associated with it. This can be further extended to handle the datasets with less training time.

#### REFERENCES

- [1] D. Wald, B. Teucher, J. Dinkel, R. Kaaks, S. Delorme, H. Boeing, K. Seidensaal, H. Meinzer, T. Heimann, Automatic quantification of subcutaneous and visceral adipose tissue from whole-body magnetic resonance images suitable for large cohort studies, J. Magn. Reson. Imaging. 36 (2012) 1421–1434. https://doi.org/10.1002/jmri.23775.
- [2] S. Hussein, U. Bagci, A. Green, A. Watane, D. Reiter, X. Chen, G.Z. Papadakis, B. Wood, A. Cypess, M. Osman, Automatic Segmentation and Quantification of White and Brown Adipose Tissues from PET/CT Scans, IEEE Trans. Med. Imaging. 36 (2017) 734–744. https://doi.org/10.1109/TMI.2016.2636188.
- [3] H.J. Park, Y. Shin, J. Park, H. Kim, I.S. Lee, D.-W. Seo, J. Huh, T.Y. Lee, T. Park, J. Lee, K.W. Kim, Development and Validation of a Deep Learning System for Segmentation of Abdominal Muscle and Fat on Computed Tomography, Korean J Radiol. 21 (2020) 88. https://doi.org/10.3348/kjr.2019.0470.
- [4] S.C.N. Hui, T. Zhang, L. Shi, D. Wang, C.-B. Ip, W.C.W. Chu, Automated segmentation of abdominal subcutaneous adipose tissue and visceral adipose tissue in obese adolescent in MRI, Magnetic Resonance Imaging. 45 (2018) 97–104. https://doi.org/10.1016/j.mri.2017.09.016.
- [5] S.A. Sadananthan, B. Prakash, M.K.-S. Leow, C.M. Khoo, H. Chou, K. Venkataraman, E.Y.H. Khoo, Y.S. Lee, P.D. Gluckman, E.S. Tai, S.S. Velan, Automated segmentation of visceral and subcutaneous (deep and superficial) adipose tissues in normal and overweight men: Automated Segmentation of Adipose Tissue, J. Magn. Reson. Imaging. 41 (2015) 924–934. https://doi.org/10.1002/jmri.24655.
- [6] Z. Wang, Y. Meng, F. Weng, Y. Chen, F. Lu, X. Liu, M. Hou, J. Zhang, An Effective CNN Method for Fully Automated Segmenting Subcutaneous and Visceral Adipose Tissue on CT Scans, Ann Biomed Eng. 48 (2020) 312–328. https://doi.org/10.1007/s10439-019-02349-3.
- [7] A.D. Weston, P. Korfiatis, T.L. Kline, K.A. Philbrick, P. Kostandy, T. Sakinis, M. Sugimoto, N. Takahashi, B.J. Erickson, Automated Abdominal Segmentation of CT Scans for Body Composition Analysis Using Deep Learning, Radiology. 290 (2019) 669–679. https://doi.org/10.1148/radiol.2018181432.
- [8] T. Langner, A. Hedström, K. Mörwald, D. Weghuber, A. Forslund, P. Bergsten, H. Ahlström, J. Kullberg, Fully convolutional networks for automated segmentation of abdominal adipose tissue depots in multicenter water–fat MRI, Magn. Reson. Med. 81 (2019) 2736–2745. https://doi.org/10.1002/mrm.27550.
- [9] N. Shen, X. Li, S. Zheng, L. Zhang, Y. Fu, X. Liu, M. Li, J. Li, S. Guo, H. Zhang, Automated and accurate quantification of subcutaneous and visceral adipose tissue from magnetic resonance imaging based on machine learning, Magnetic Resonance Imaging. 64 (2019) 28–36. https://doi.org/10.1016/j.mri.2019.04.007.
- [10] Y.J. Kim, J.W. Park, J.W. Kim, C.-S. Park, J.P.S. Gonzalez, S.H. Lee, K.G. Kim, J.H. Oh, Computerized Automated Quantification of Subcutaneous and Visceral Adipose Tissue From Computed Tomography Scans: Development and Validation Study, JMIR Med Inform. 4 (2016) e2. https://doi.org/10.2196/medinform.4923.

- [11] A.T. Grainger, A. Krishnaraj, M.H. Quinones, N.J. Tustison, S. Epstein, D. Fuller, A. Jha, K.L. Allman, W. Shi, Deep Learning-based Quantification of Abdominal Subcutaneous and Visceral Fat Volume on CT Images, Academic Radiology. (2020) S1076633220304268. https://doi.org/10.1016/j.acra.2020.07.010.
- [12] A. Zhou, H. Murillo, Q. Peng, Novel segmentation method for abdominal fat quantification by MRI, J. Magn. Reson. Imaging. 34 (2011) 852–860. https://doi.org/10.1002/jmri.22673.
- [13] G. Thörmer, H.H. Bertram, N. Garnov, V. Peter, T. Schütz, E. Shang, M. Blüher, T. Kahn, H. Busse, Software for automated MRI-based quantification of abdominal fat and preliminary evaluation in morbidly obese patients, J. Magn. Reson. Imaging. 37 (2013) 1144–1150. https://doi.org/10.1002/jmri.23890.
- [14] S. Estrada, R. Lu, S. Conjeti, X. Orozco-Ruiz, J. Panos-Willuhn, M.M.B. Breteler, M. Reuter, FatSegNet: A fully automated deep learning pipeline for adipose tissue segmentation on abdominal dixon MRI, Magn Reson Med. 83 (2020) 1471–1483. https://doi.org/10.1002/mrm.28022.

#### AUTHORS

**Sudha Devi B** Research Scholar, , Dept. of Computer Science, Nesamony Memorial Christian College, Marthandam, Tamil Nadu, India.



THOR 1: SUDHA DEVI B Rearch Scholar

#### **Dr.D.S Misbha**

Assistant Professor, Dept. of Computer Applications, Nesamony Memorial Christian College, Marthandam, Tamil Nadu, India.



AUTHOR 2: Dr.D.S.MISBHA Assisten Professor

# BLOCK CHAIN IN FAKE PRODUCT IDENTIFICATION SYSTEM USING QRCODE

Udhaya Nila<sup>1</sup> and Abalin Luther<sup>2</sup> Aathi Vignesh<sup>3</sup>

<sup>1</sup>Department of Computer Application, Francis Xavier Engineering College

<sup>2</sup>AP,Department of Computer Application, Francis Xavier Engineering College

<sup>2</sup>Department of Computer Application, Francis Xavier Engineering College

#### ABSTRACT

Every popular brand has fake manufacturers selling a counterfeited item at cheaper rates. Mostly counterfeiting medicine are selling to customer. For these factors combined with block chain technology can lead to an efficient comprehensive approach to reduce counterfeiting. Pharmaceutical organizations face many challenges regarding counterfeit medicines. Detecting fault medicines so that it will save public life. To discover the consciousness of the fake medication issue which requires an expanding security level for the appropriation of lawful pharmaceutical items. Manufacturing to user can be recorded, and the user is assured that the scans weren't faked. The fake products can be identified by using QR code and it handles the product data

#### Keywords

component, formatting, style, styling, insert (key words)

# **1. INTRODUCTION**

This Medicine counterfeiting is a serious worldwide issue, involving networks of manufacture and distribution that are an integral part of industrialized organized crime. Using a block chain technology this medicine information will be secured. If at any stage counterfeit medicine is introduced into the system, it will be detected immediately, and its further penetration will be stopped. This paper aims to address the issue of drug safety using block chain and encrypted QR (quick response) code security. Results show that the system thus formed is computationally intensive but offers a reliable solution to the menace of fake medicines

# **2. PROBLEM STATEMENT**

The growth in medical industry is immense but also it has been developed in production of counterfeit drugs. The market cost of pharmaceutical counterfeiting has reached billions of dollars annually. In most existing the fake medicines have been found using Bar codes by alphanumeric. Bar codes can be scanned in a line. In order to have a good medical industry, need to prevent from fake drugs. The objective of the system is to identify the counterfeit drugs. This can be accomplished by adding up data about the medicine into its QR code

# • Architectural Diagram



Figure-1 Architecture Diagram

# **3. EXPERIMENTS AND RESULTS**

#### Module

#### A. Manufacturer

Manufacturer will register and login to the system by using valid credentials. Then manufacturer can add the products in its database. They also generate the QR code in the products.

#### **B.** Supplier

Supplier will register and login to the system by using valid username and password. Supplier will view the product list and if want they can place the order of that drugs by scanning the QR code

#### C. Pharmacist

Pharmacist will also register and login to the system with valid credentials. Pharmacist view the patients request and also view the available products list and if want then they can place the order of that drugs by scanning the QR code

#### D. User

User will register and login to the system using valid username and password. User place its order buy the drugs and at last logout from the system.

## **OUTPUT SCREEN**



Figure- 2 Create Medicine

Q. Biret	-				
• -		-			and a same of an in the state
•		1			-
•				龖	e-statute and a lost
•		-	-		
		COLO.	-		- INI-AL

Figure-3 Manage Medicine

1 mm		
+ + C Blackstrationsproperty and and		
a the second sec		
		CONTRACTOR CONTRACTOR
	Regile New	-
	Tana I	Tolog a spectra product
	Per	Topstat
	Since Tranks	NUMBER OF THE OWNER
	feet it	ten ingenetion
	lane d	
		Super
		INDER 22

Figure-4 Adding Supplier



Figure-5 Admin Login

					in the second	
÷.,	COLUMN ADDR		-			-
			-			
	_			and the second		
		a sada site and same				
		-				-
		17 tone report		and the second s		_
		Chi al'an Inge	Are .	and the second s	Construction of the local division of the lo	_
		Constanting of	104	100001	100000	
	52.5	T DOWN THE OWNER	70/200	10000-000	and and the	
	22.2	The second street street street	10,000	1000000	Statistics of	

Figure-6 Manage Supplier



Figure-7 User Login



#### Figure-8 Order



Figure-9 Check QRcode

#### **PERFORMANCE ANALYSIS**

The existing and proposed system are analysed. The problem identified existing is system is the growth in medical industry is immense but also it has been developed in production of counterfeit drugs and proposed system gadget may be used in pharmaceutical industry to track the tablets from its manufacturing until its delivery to patient.Nearly 70% performance has been increased.

# **4.** CONCLUSION

The Fake product identification system is developed using python and My SQL. This web application provides awareness of counterfeit drugs to the user. QRcode are used to identify the fake product. Manufacturer will generate a QRcode for each product. Then through the web site the user can buy the medicine using QRcode. If the medicine is fake it will generate a fake identification.

# **5.FUTURE ENHANCEMENT**

In future we implement this in android application. Manufacturer can identify the location while the customer who check the QRcode that the result is fake. If the user result.

#### REFERENCE

- [1]Jen-Hung Tseng, Yen-Chih Liao, Bin Chong and Shih-wei Liao, "Governance on the Drug Supply Chain via Gcoin Blockchain", International Journal of Environment Research and Public Health, MDPI, 2018.
- [2]Andrew O'Hagan, April Garlington, "Counterfeit drugs and the online pharmaceutical trade, a threat to public safety", Forensic Research Criminology International Journal, Volume 6 Issue 3 2018.
- [3]Xiaoguang Liu, Ziqing Wang, ChunhuaJin, Fagen Li, And Gaoping Li, "A Block chain-based Medical Data Sharing and Protection Scheme", IEEE Access (Volume: 7), 2019.
- [4] A. K. Jha, D. Doolan, D. Grandt, T. Scott, and D. W. Bates, "The use of health information technology in seven nations," Int. J. Med. Inform., vol. 77, no. 12, pp. 848–854, 2008
- [5] X. Qi, B. S. Emmanuel, O. Kwame, G. Jianbin, D. Xiaojiang And G.Mohsen, "MeDShare: Trust-Less Medical Data Sharing Among Cloud Service Providers via Blockchain," IEEE Access, 2017.
- [6] G. S. Birkhead, M. Klompas, and N. R. Shah, "Uses of electronic health records for public health surveillance to advance public health," Annu. Rev. Public Health, vol. 36, pp. 345–359, Mar. 2015
- [7] P. T. S. Liu, "Medical record system using blockchain, big data and tokenization," in Proc. 18th Int. Conf. Inf. Commun. Secur. (ICICS), vol. 9977.
- Singapore, Nov./Dec. 2016, pp. 254261.
- [[8] X. Yue, H. Wang, D. Jin, M. Li, andW. Jiang, "Healthcare data gateways: Found healthcare intelligence on blockchain with novel privacy risk control," J. Med. Syst., vol. 40, p. 218, Oct. 2016.
- [9] W. Raghupathi and V. Raghupathi, "Big data analytics in healthcare: Promise and potential," Health Inf. Sci. Syst., vol. 2, no. 1, p. 3, 2014.
- [10] Wilson JM, Kinghorn R. The Global Risk of Product Counterfeiting: Facilitators of the Criminal Opportunity. Michigan State University Centre for Anti-Counterfeiting and Product Protection; 2015.

#### AUTHORS

Ms. T. Udhaya Nila doing final year MCA in Francis Xavier Engineering College

**Mrs. J. Abalin Luther** is working as Assistant Professor in the Department of Computer Applications, Francis Xavier Engineering College. She is having teaching experience of 5+ years. Her area of interest is Wireless Sensor networks

Mr. K. Aathi Vignesh doing first year MCA in Francis Xavier Engineering College





# ONLINE MCA (POK)

# M. Ahamed Fysal<sup>1</sup> and P.Sahaya Jenitha<sup>2</sup> S.Ganapathy Subramanian<sup>3</sup>

<sup>1</sup>Department of Computer Application, Francis Xavier Engineering College

# <sup>2</sup> AP Department of Computer Application, Francis Xavier Engineering College

<sup>3</sup>Department of Computer Application, Francis Xavier Engineering College

#### ABSTRACT

The purpose of the project only for students knowledge. Students using the username & password to login the website .These project have some new features. In this blog, Daily morning uploading top 5 technological news and entrepreneurs motivational videos, Technical videos, Technological Q&A, Alumni projects with them the contacts, user can get marks and daily timetables. The newly joined students knows about MCA Rank holder, cultural, symposium and students can express their opinions and can say theirneeds. The students can knows about the In-campus drives and alumni placements. This document is meant for describing all the features and procedures that were followed while developing the system. This document specially mentions the details of the project how it was developed, the primary requirement, as well as various features and functionalities of the project and the procedures followed in achieving these objectives. The purpose of the project only for student knowledge. When students comes to website. They will learn one thing about technology. Its prominent intensity of this project .Students using the username & password to login the website .These project have some new features. In this blog, Daily morning uploading 5 technological news and entrepreneurs motivational videos, technical videos, technologic Q&A, Alumni project and download the project with zip file. The newly joined students knows about MCA cultural, symposium and students can express their opinions and can say their needs. The student can knows about the alumni placements details and contact with their social media.

#### **KEYWORDS**

E-Learning System, Alumni Network Analysis, Campus Social Networking System

#### **1. INTRODUCTION**

This project based on PHP Laravel. Its most scalability & reduce code, Large community, rapidly create a web application and websites . Its have some additional features like videos, projects, alumni placements etc. The technological news is advantages of students and they improved their knowledge. This project is meant for describing all the features and procedures that were followed while developing the system. This document specially mentions the details of the project how it was developed, the primary requirement, as well as various features and functionalities of the project and the procedures followed in achieving these objectives. The purpose of the project only for student knowledge. When students comes to website. They will learn one thing about technology. Its prominent intensity of this project .Students using the username & password to login the website .These project have some new features. In this blog, Daily morning uploading 5 technological news and entrepreneurs motivational videos, Technical videos, Technological Q&A, Alumni project and download the project with zip file. The newly joined students knows

about MCA cultural, symposium and students can express their opinions and can say their needs. The student can knows about the alumni placements details and contact with their social media.

#### **Research and Design of Web-based E-Learning System**

The paper combines the course with experience, creatively develops an E-Learning system based on web, and puts the basic theories of E-Learning and technical development into practice synthetically.

#### Alumni Network Analysis

Data on alumni has been used to estimate quality and impact of educational institutions. Tabular data about individuals' starting salaries, employment rate, and donation have been used to determine averages and comparisons.

#### **Design and Implementation of Campus Social Networking System**

New campus social networking system for users, which is tightly integrated with the reality environment of campus and users' real activity. It will not only achieve the basic communication function but also provide a unified platform for the teaching, researching, management and many other aspects of cultural life to teachers and students in campus. It is also an effective support for the information construction of university.

# Provision of the Social Media Service Framework based on the locality/sociality relations

The paper introduces a methodology to provide the Social Media Service Framework (SMSF) in order to overcome the limitations of the traditional SNS services and to support the fundamental semantic web technologies including locality and sociality relationship management, active information and knowledge sharing schemes, digital community management, social user management based on ontology system.

The second section discuss about the literature review and continued by problem statements. The fourth section gives the experiments and results followed by the conclusion and future enhancement.

# 2. PROBLEM STATEMENT

#### Architecture Diagram

The Existing system only have some features like disciplinary section, timetable, department detail. Students can view their time tables. Students can't learn about technology. View their college cultural and facility. The student can't able to say their feedback. The Elearning students learn only for a suggested subjects. The youtube is a sentiment analysis is distract our mindset and divert your purpose. Students can only view their alumni placements and not able to contact with their alumni. They only get the news from the college or department. But the students aren't hear about tech news. In this proposed have more set of features like News, Motivational videos for motivate the students, students can say their needs, placement details and one main thing. Its only for MCA department. Students can view tech news, tech videos and gives their feedback. The students can view their alumni placements and directly contact with them. So they easy to get the job ideas. Students can view their alumni projects and download the zip file and

project documentation and see the video of the project how is working. Students comments the videos what types of tech they needs. Daily morning Q/A for students quiz knowledge.



Figure :1Architecture Diagram

# **3. EXPERIMENTS AND RESULTS**

#### Modules

The project "Online MCA(pok)" consists 5 modules for this knowledge system

1)User & admin login 2)Tech News 3)Tech videos 4)Biopad 5)Alumni Projects 6)Alumni placements 7)Tech Questions 8)Chatbot 9)Student results

#### 1) User & admin Login

This module was build to manage the user registration, user authentication, Admin interface, user login and successful logout from the web application. The user details are enrolled into the database with a registration form. After logout of the user, the web application redirects to the Home page.

#### 2) Tech News

The student can read the daily tech news and comments , like or dislike. The admin can read the user comments

#### 3) Tech videos

The student can view the daily tech videos and comments , like or dislike.

#### 4) BioPOD

The BioPOD used to translate the content in a native language which was preferred by the users. And admin can able to upload data in the voice mode.

#### 5) Alumni

The student can see the alumni projects and download with zip file.then get project details with pdf.

#### 6) Alumni placements

The student see the alumni placements and contact with them, Then students easily know MNC companies and college campus drive details.

#### 7) Tech Questions

The students can attend the daily tech Q/A.

#### 8) Chatbot

A chatbot is a computer program that's designed to simulate human conversation. Users just like they would converse with another person. Chatbots interpret the words given to them by a person and provide a pre-set answer"

#### 9) Student results

The students can easily get the semester results and timetable even parents also get the result to this site.

#### **Data Connection**

Laravel makes connecting with databases and running queries extremely simple. The database configuration file is app/config/database.php. In this file you may define all of your database

84

connections, as well as specify which connection should be used by default. Examples for all of the supported database systems are provided in this file.

Connections correspond to Sessions in SQL standard terminology. A client connects to the MySQL Server and stays connected until it does a disconnect. The MySQL Clients send connection requests to the MySQL Server. A connection request is simply a TCP-IP connect message sent to port 3306 on the server host machine.

#### **Output Screen**



Figure :2 Home Page

Steve Jobs Biography

steve-jobsSteve Jobs (Feb 24, 1955 – October 5, 2011) was an American businessman and inventor who played a key role in the success of Apple computers and the development of revolutionary new technology such as the iPod, iPad and MacBook.

Early Life

Steve Jobs was born in San Francisco, 1955, to two university students Joanne Schieble and Syrian-born John Jandali. They were both unmarried at the time, and Steven was given up for adoption.

Steven was adopted by Paul and Clara Jobs, whom he always considered to be his real parents. Steven's father, Paul, encouraged him to experiment with electronics in their garage. This led to a lifelong interest in electronics and design.

Jobs attended a local school in California and later enrolled at Reed College, Portland X Oregon. His education was characterised by excellent test results and potential. But, Chabat struggled with formal education and his teachers reported he was a handful to teachers

Figure: 3 Biography



Figure :4 Chat Box



Figure: 5 Contact



Figure:6 Profile





# Figure :7Login Page

in the second se	orbiez i	neuerner. V 🖉 ei sunereb	v 🕅 venueri mineri ni v 👼 ne smitnismitikeli v 👘 renere kulteri v 🕅 renere kulteri v 🚳 reneresenterili	<u> </u>	
$\rightarrow$	C	① localhost:8000/admin		4	B :
Apps.	G	(1) WhatsApp (2) 127/0.0.1/8000/user	edit 📑 Resume - Google D		



Figure :8 Admin Login



Figure :9 Student Login



Figure :10 SignUp Page

#### **PERFORMANCE ANALYSIS**

The existing and proposed system are analysed. The problems can be easily rectified with this concept. Nearly 70% of the performance has been increased.

#### **4.**CONCLUSION

This was our project of System Design about "ONLINE MCA (POK)" developed as web application based on Php programming language. The Development of this system takes a lot of efforts from us. We think this system gave a lot of satisfaction to all of us. Though every task is never said to be perfect in this development field even more improvement may be possible in this application. We learned so many things and gained a lot of knowledge about development field.

# **5. FUTURE ENHANCEMENT**

In future personalize experiences by providing recommendations based on individual preferences. Reduce screen interactions and time taken for checkout. Collect reviews and feedback. Provide users with the ease and convenience as against the time-consuming task of typing long feedbacks. In future, plan to implement the chats in our web application. The students directly chat with the professors. In future live video will be placed in this project.

#### REFERENCES

- [1] Design and Implementation of College Student Information Management System Based on Web Services TANG Yu-fang'ZHANG Yong-sheng School of Information Science & Engineering, Shandong Normal University, Jinan, 250014, China tangyufang2322@126.com; zys@sanlian.com.cn.
- [2] Social Media Enhanced Studying and Learning in Higher Education Kirsi Silius, Thumas Miilumäki, Jukka Huhtamäki, Teemo Tebest, Joonas Meriläinen, Seppo Pohjolainen Hypermedia Laboratory Tampere University of Technology Tampere, Finland kirsi.silius@tut.fi, thumas.miilumaki@tut.fi, jukka.huhtamaki@tut.fi, teemo.tebest@tut.fi, joonas.merilainen@tut.fi, seppo.pohjolainen@tut.fi
- [3] Zhi-gang YUE, You-we JIN, "Thedevelopment and design of the student management system based on the network environment", 2010 International Conference on Multimedia Communications, 978-0-7695-4136-5/10 2010 IEEE.
- [4] R. B. Guin, S. Chakrabarti, C. Tarafdar, and S. Mandal, "A smart architectural concept for the making of a university education system using cloud computing paradigm," in Proc. 2011 World Congress on Information and Communication Technologies, Mumbai, 2011, pp.48-52

[5] College Student Management System Design Using Computer Aided System Liangqiu MENG Wuhan University of Technology; Wuhan, 430070 ,China; Guangxi University of Nationalities ;Nanning, 530006,China mengliangqiu2015@sina.com

#### AUTHORS

**M. Ahamed Fysal** doing final year MCA in Francis Xavier Engineering College



**S.Ganapathy Subramanian** doing first year MCA in Francis Xavier Engineering College







# FX INFRASTRUCTURE COMPLAINT MANAGEMENT SYSTEM

Selvi<sup>1</sup>, Sahaya Jenitha<sup>2</sup> and Sivanesh<sup>3</sup>

<sup>1</sup>Department of Computer Application, Francis Xavier Engineering College

# <sup>2</sup>AP,Department of Computer Application, Francis Xavier Engineering College

<sup>3</sup> Department of Computer Application, Francis Xavier Engineering College

#### ABSTRACT

The FX Infrastructure Complaint Management System is a web application which focuses on an activity or function, which is based on management of infrastructure of institutions. In this web application user select faulty accessories and report it to the admin with particular complaint. It maintains a database of all the information that are recorded and received. It helps the college to maintain all the accessories safely. The admin get this information, Admin can perform quick action to repair infrastructure of college. Also according to students and teachers complaint he quickly know the location of accessories as classroom, cantine, library, bathroom etc. This web application is mainly focus on the maintenance of college infrastructure management.

#### **KEYWORDS**

Admin, ASP, Web application,

#### **1. INTRODUCTION**

This project is aimed at developing an online web application for the College Management System for the FX Engineering College. The System is an online web application that can be accessed throughout the organization and outside as well with proper login provided. This system can be used as an web application for the college to manage the infrastructure complaint from the student and staffs. The main objective of this Complaint Management system is to focus on the issues related to internal system. Complaint Management system is a platform independent application, so this web application can be accessed anywhere in the system. This is also developed for reduces the communication cost between the staffs and to provide the efficient service to their staffs.

The system need to provide the services to the user who is accessing this system from the collected information and this system gathering Call Registration about the issues to provide services. This system which could enhance the day to day activities of the business with efficiency and correctness. Once the call Registered by the staff/user, it should be assigned to service engineers and update the calls as quickly as possible. There are various modules involved in the system. The second section discuss about the literature review and continued by problem statements. The fourth section gives the experiments and results followed by the conclusion and future enhancement

# **2. LITERATURE SURVEY**

Online Infrastructure besides being a basic human need is vital for raising the standard of life, providing gainful employment, removal of regional backwardness, thereby ensuring overall development and well being of a country. It is therefore the need of the hour to review the literature carried out by different complaints, Students/Staffs are also can talk to do their own Complaints.

Mary rowe (1980-1990),

The concept of an integrated conflict management system was originated and developed by Mary Rowe, in numerous articles in the 1980s and 1990s. She saw the need to offer options for complaints and therefore a linked system of choices within an institution system. Many authors extended the work of Berenbeim,Rowe, and Rowe and Baker, on the topic of internal complaint systems. They included: Douglas M. McCabe, William J. Ury, Jeanne M. Brett, and Stephen B. Goldberg. Cathy Costantinon and Cristina S Merchant, and Karl A. Slaikeu and Ralph H. Hasson extensively explored issues of designing conflict management systems.

Jaenne M.Brett(2010)

The concept of an integrated conflict management system was conceived and developed by Mary Rowe, in numerous articles in the 1980s and 1990s. She saw the need to offer options for complainants and therefore a linked system of choices within an organizational system. The idea of a systems approach has endured well. In recent years however, there has been discussion as to whether conflict should be "managed" by the organization—or whether the goal is to understand, deal with and learn from conflict.

David Lipsky(2012)

There is also concern about practical and theoretical issues in "integrating" a system, with some observers preferring the idea of "coordinating" a conflict system. However 2012 research by David Lipsky et al., suggests that an increasing number of corporations see themselves as having "integrated conflict management systems," or "ICMS." David Lipsky et al., suggests that an increasing number of corporations see themselves as having "integrated conflict management systems," or "ICMS." David Lipsky et al., suggests that an increasing number of corporations see themselves as having "integrated conflict management systems," or "ICMS." David Lipsky et al., suggests that an increasing number of corporations see themselves as having "integrated conflict management systems," or "ICMS."

Neelain 2012,

M.Sc: University of Neelain Faculty of Graduate Department of Information TechnologyDecember2012.Lecturer in King Khalid University – College of Science and Artsm Department of Information Technology. Khalid 2011-2014,

Faculty of Computer Science And Information Technology Department of Management Information System September 2009 M.Sc: University of Neelain Faculty of Graduate Department of Information System December 2011 PHD in information system (under study) : University of Neelain Faculty of Graduate Lecturer in Neelain University – Faculty of Computer Science And InformationTechnology – Department of Management Information Systems DEC 2011 to AUG 2014. Lecturer in King Khalid University .

Mary Rowe 2014

Faculty of Administrative and Financial – Department of Management Information Systems AUG 2014 until now . current research interests is management information systems , information systems , systems development , web design.

# **3. PROBLEM STATEMENT**

#### A. Architecture Diagram



Figure-1 Architecture Diagram

#### **B.** Existing System

FX Infrastructure Complaint Management System" working manually or computerized in a building. Therefore all types works are maintain in building. So maintain all the maintaining procedure very difficult. The computerization of FX Infrastructure Complaint Management System is an integrated package developed as the College Management System in ASP .Net. This package follows the standards and norms of collage. As opposed to the manual system of working of College Management System.

#### C. Proposed System

The main scope of this web application for managing the complaints, track the complaints easily just using one web application. We can use this web application in various places such as companies, schools, colleges, hospitals, libraries and in many more places. For placing their complaints regarding some issue and send it to the respective person who will handle this and find solutions for this complaints. After sending complaint user also can view status of their complaint either it will get solved or in a running condition. This process normally we will use for solving complaints. So according to this our web application is helpful in any area for solving complaints.

# 4. EXPERIMENTS AND RESULTS

#### **A. Module Description**

#### 1.Admin

Admin can view all the complaints in the web application. Admin can also update the status of complaint according to the work done. So, students and teacher can track their complaint.

#### 2.Staff:

Staff can write their complaint and send it to the admin on the message with the place and name of the accessory.

#### 3.Student:

Student can also write their complaint and send it to the admin on the message with the place and name of the accessory.

#### 4.Add Staff:

This module is used to add/register the staffs details in that web application. It is done by Admin.

#### 5.Add Student:

This module is used to add/register the students details in that web application. It is done by Staff.

#### 6.Complaint Management:

This module is manage the complaint which were done by the staffs and students. This Request is related to the college infrastructure.

#### 7. View Staff/Student List:

In this Module Admin and Staff can view their added Staff/Student List.

#### 8.Add Complaint:

In this module Complaint were posted by Staff / Student ,which were viewed by admin.

#### 9. View Status:

In this module users (Admin/Student) can view their response status send by the admin.

#### 10.Report Generation:

After giving response report will generated in which all the data are included whom the complaint and request is done.

### 11.Data Collection:

The administrative user interface concentrates on the consistent information that is practically, part of the organizational activities and which needs proper authentication for the data collection. The interfaces help the administrations with all the transactional states like Data insertion, Data deletion and Data updating along with the extensive data search capabilities. The operational or generic user interface helps the users upon the system in transactions through the existing data and required services. The operational user interface also helps the ordinary users in managing their own information helps the ordinary users in managing their own information in a customized manner as per the assisted flexibilities.

#### About Project:

The major inputs and outputs and major functions of the system are follows: In this Web application First we need to login, it has three pages like Admin, Student and Staff. Admin can choose.

# **B.** Output Screen

🔞 Francis Xavier Engineering Calle; 🗴 🕇	- 0	×
← → C △ ▲ localhost-44352/Login/Login.aspx	@ 🖈 🖪 🗯 🚳	:
🛗 Apps 😰 python 📀 New Tab 🏛 Cisco Networking A 🏥 python intrance 📀 my course 📀 last step 性 TCS iON Digital Lea G Gmail 💶 YouTube 💐 Maps 👔 FXCA	AMS 📲 E Campus - TechM	39
Francis Xavier Engineering College(Autonomous Institution), Vannarpettai-Tir		
Your ID		
Password		
OAdmin OStaff OStudent		
Login		
কার্য দি ও জ © Copyright <b>SCAD</b> . All Rights Reserved		

Figure B 2.1 Login Page



Figure B 2.2 Admin Home Page



Figure B.2.3 Staff Home Page



Figure-2. Students Home Page

Stan Dotaits
Name
Gender
Selected
Staff ID
Department
selected

Figure -3 Staff Registration Page

	Francis	s Xavier Engir	neering Colk	ege(Auton <sub>Home</sub>	Add Stoff	Stoff Details ~	Student Details ~	View Complaint ~	Report
						MCA			
S_No	Name	Gender	Staff_id	Department	Phone_	MBA			Password
12	DIVYA S	Female	9876750	CSE	9765360	M.E	8.mca@franci	sxavler.ac.in	
35	Nithya G	Female	10005	CSE	8753568	CSE	099@gmail.co	m	LTk7drmy
17	MUTHU SELVI M	Female	99001	CSE	930457;	MECH	399@gmail.co	m	9kFrfloty
						CIVIL			
						000			
						ECE			
				© Copy	e i i i i	ights Reserved			



Savier Engine	ering College(Autono <sub>Homo</sub>	Add Student	Student Details ~	Add Complaint	View Status	1
	Student I	Details				١
	Mare a					I
	Name					I
	Gender					I
	Selected					I
	Student ID					I
	Descarrow					ł
	Department					
	selected					
	Phone Number					
	·					. *

Figure -5 Student Registration Page

	Engine Province	ering College(/	Autonomous	i Institu <sub>Home</sub> Add	Stoff Stoff Details ~	Student Details ~	View Complaint ~	Report
S_No	Name	Gender	Staff_id	Department	Phone_No	MBA		Passy
18	MUTHU SELVI M	Female	987860	M.E	9304572769	ME	Loom	eSTFri
31	BASARIYA S	Female	80002	M.E	9786554389	CSE	1	kxTU
						MECH		
						CIVIL		
					_	EEE		
						ECE		
				© Copyright SC	AD. All Rights Reserved			

Figure-6 View Student Details



Figure -7 Add Complaint

Complient_id	Name	Staff_Id	Department	Place	Accessories	Subject	Upload_img	Descriptio	Response
1	SELVI S	883256	MCA	Class Room	Fan	Request to repair Light	Files/fan.jpg	in our class to repair to	room fan was repair for 2 daysplz take ste
2	Varshini N	80012	MECH	Admistration Room	AC	Ac repair	Files/fan1.jpg	Fan repair i	upto 3 daysplz kindly repair that

/focahost44)52Administelf complaint imprtases



1	Siva Ram K	872567	CSE	Lab	System	rec to St rep sys St	udent Response aff Response	we ha	Student Respons repair	Compa se u2-17 u	uenes qui	ckly <sup>Respons</sup>
3	SELVI S	6001	ECE	Auditorium	Speaker	Speaker repair	r Files/2.jpg	Sound Audible	not	2021- v 02-24 c	ve solve queries qui	Respons
5	Yoga B	1004	MCA	Class Room	Projector	Ac repair	Files/exp 1.PNG	hjjh		2021- 03-12	Repair shor	tly Respons
6	Yoga B	1004	selected	Wash Room	Pipe Connection	Fan repair	Files/fan.jpg	plz rep	air	2021- 03-12	Repair shor	tly Respons

Figure -9 View Student/Staff Complaint


Figure -10 View Status

<ul> <li>€ Francis Havier</li> <li>€ → C Q</li> <li>⊞ Apps</li> <li>B ph</li> </ul>	Ingineering Col e Tocal thon O Trees Vannar	h; x + het4352/k te ≐Co pettai-Tii	tnin/Stu_Report.asp a Nationsking A runelveli,	ix E giften intrance Horme Ar	⊘ mystevner ( 3d Stoff St	3 lei rep 👌 aff Details ~	103 iON Digital Lea-	ⓒ Gmai 🧧 NorTute 🦉 M tails ~ View Complai	् क्र क हा राजवार जू (Can nt v Reports v	- 0 > D > 0 1 pos-3eM ×
				<b>.</b>	3-2021			Search All		
					Student (	Complair	nt Reports			
Complaint_k	d Name S	Student_Id	Department	Place	Accessories	Subject	Upload_img	Description	date add_summar	y post
1	Siva Ram K	872567	CSE	Lab	System	request to repair system	Files/comp.jpg	we have some technical problemkindly req to repair that.	2021- we solve 02-17 queries quick	Responsed
3	SELVI S	6001	ECE	Auditorium	Speaker	Speaker repair	Files/2.jpg	Sound not Audible	2021- we solve 02-24 queries quick	y Responsed
5	Yoga B	1004	MCA	Class Room	Projector	Ac repair	Files/exp 1.PNG	hjih	2021- 03-12 Repair short	y Responsed
6	Yoga B	1004	selected 	Wash Room	Pipe Connection	Fan repair	Files/fan.jpg	plz repair	2021- 03-12 Repair short	y Responsed

Figure -11 View Complaints Report

Object Explorer     ● ♥ × \$       Connect • ♥ ♥ ● ♥ ▲ ▲       ● DESKTOP-MFVBRRMASSQLSERVER ●       ● Dabases       ● Dabases Dabases       ● Dabases Dabases       ● Dabases Dagams       ● Tabase       ● Dabases Dagams       ● Tabase       ● External Tables       ● External Tables       ● External Tables       ● External Tables       ● External Tables	<mark>QLQ.</mark> F	reny1.sq / SELECT FROM	- DEFVBR3K/Selvi6 * Script for Sele TOP (1000) [5_NC ,[0ame] ,[Gender] ,[Staff_id] ,[Department] ,[Denartment] ,[Email_Id] ,[Email_Id] [fx].[dbo].[reg]	2)) -= × ctTopNF ]	lows com	mand from	SSNS *****	•/		4
III dbo.reg     III dbo.Staff_Complaint     III dbo.Staff_Complaint     III dbo.Stud_Complaint     IIII dbo.Stud.complaint     IIII dbo.studreg	100 %	+ < lesuits	Messages							• •
E Evternal Recourcer		S_No	Name	Gender	Staff_id	Department	Phone_No	Email_Id	Password	
	1	57	SELVI S	Female	1001	MCA	8471365144	selvisivaraj585@gmail.com	SXP9K7LY	
🕀 🛑 Programmability	2	58	Yoga B	Female	1002	MBA	8672336778	yoga21111998@gmail.com	n9PK84v7	
🗉 🧰 Service Broker	3	59	Prabha N	Female	1003	MECH	9329469346	prabhaneerathilingam8991@gmail.com	hmRk1cAe	
🗉 📹 Storage	4	60	S SELVI SIVARAJAN	Female	1009	ECE	8526417994	selvisivaraj585@gmail.com	H6PoicUR	
🗉 📕 Security	5	61	jenitha	Female	14	MCA	354655	jeni.p@gmail.com	KtGdnjLE	
🗉 💼 Security	6	62	Jentha	Female	5655	MCA	9600335655	jenitha.p@gmail.com	D2TLgqvO	
🗉 💼 Server Objects	7	63	Jenitha	Female	5655	MCA	9600335655	jenitha.p@gmail.com	Yhg7zd1y	
🕀 💼 Replication	8	64	rose many	Female	105	MCA	8940119179	roseroshini13699@gmail.com	lewRok4E	
PolyBase     Always On High Availability     Management     Integration Services Catalogs										

Figure -12 Database for Staff Details

SQLQuery2.sql - DESKTOP-MFVBR3R\MS       File     Edit       View     Query       Project     Too       O     Image: Project       Image: Project     Too	SQLSER bls W Jew Que	VER01.fx findow ery	(DESKTOF Help 때 때 때	P-MFVBR3 ລີເລີຍ  ຢ	R\Selvi (54)) 氏	- Microsoft S	QL Server Man	agement Studio	- 🗊 🗡	<b>≜</b> ⊵ - <sub>+</sub>	Quick L
8 T 7 IX - P	LACCO		V AO E		00 B.			24   W <del>-</del>			
Object Explorer 👻 🖣 🗙	SQLQ	uery2.sq	I - DEFVI	BR3R\Selv	i(54)) +⊨ ×	SQLQuery1	.sql - DEFVBF	(3R\Selvi (62))			-
Connect 👻 🌹 🌹 🍸 🗮 🝸 🖒 🚸		/****	* Scrip	t for S	electTopNF	lows comman	id from SSMS	******/			+
B DESKTOP-MEVBR3R\MSSOLSERVER		SELEC	[Name]	000) [5	_wo ]						<u></u>
🖃 🛑 Databases			. [Gende	r1							
🛞 📕 System Databases			,[Stude	nt_id]							
🗉 📁 Database Snapshots			,[Depar	tment]							
🖂 🗑 fx			, [Phone	_No]							
💿 📁 Database Diagrams			,[Email	_Id]							
😑 🗰 Tables		FRO	,[Passw [fy] [	dhol [c	tudregl						
🛞 💼 System Tables				000].[5	cour cB1						
😠 💼 FileTables											
🕢 💼 External Tables											
🗉 📕 Graph Tables											
🕢 🎹 dbo.reg											
											-
Image: Barrier Barr	100 %										
dbo.studreg		Results	Di Monto	-							
Tiews		C Me	Mama	Cander	Output 14	Desertment	Dhana Ma	Court 14	Deserved		
External Resources	1	41	Nonino -	Mala	102	MCA	0040110170	utiou122 upin@ampil.com	N/7Po 2bt		
Synonyms	2	42	Year P	Fomple	1004	ECC	0000110170	was 21111992@amail.com	auPMo1711		
Programmability	2	42	loga b	Male	2222	MCA	2545675	sebausianaban @franciscumias an in	Los Dr VNM		
Service Broker	3	43	rian	male	2322	MCA	3343675	sanayajeninap en anoskavier.ac.in	KGIPHTINM		
🗈 🖬 Storage											
Security											
E Security											
Replication											
PolyBase											
Always On High Availability											
Management											
Integration Services Catalogs											
<	0 Q	uery exe	cuted suce	cessfully.			DESKTOP-	MFVBR3R\MSSQLSERVER   DESK	TOP-MFVBR3F	R\Selvi   fx   00:00:00	3 rows

Figure-13 Database for Students Details

### C. Performance Analysis

The existing and proposed system are analysed. The problem identified is It takes soo much of time to rectify any issues about infrastructure of our organization. but .Nearly 70% performance has been increased by using this complaint system. Which make the infrastructure of our organization better.

### **5.** CONCLUSION

The system has the benefits of easy access because it is be developed as a platform independent web application, so the admin can maintain a proper contact with their users, which may be access any where. All communications between the Admin/user and administrator has done through the online, so this communication cost also be reduced.

### **6. FUTURE ENHANCEMENT**

This system is found tested and examined for its successful processing. Future change in the environment or processing can be easily adopted by having simple change in coding. It is very user friendly, cost effective, feature rich and it provides very high level of security. In Future, A facility information through SMS. In this project Live chat between Admin and User can be done in the future

#### REFERENCES

- [1] Boshoff, C. and J. Allen (2000). "The Influence of Selected Antecedents on Frontline Staff's Perceptions of Service Recovery Performance." International Journal of Service Industry Management 11(1):63-90.
- [2] BS 8600:1999 Complaints Management Systems Guide to Design and Implementation. England, British Standards Institute.Chung -Herrera, B. G., N. Gold schmidt, et al. (2004). "Customer and Employee Views of CriticalService.
- [3] Aditi Mhapsekar "Voice enabled Android application for vehicular complaint system using GPS and GSMSMS technology," in World Congress on Information and Communication Technologies, 2012, pp.520-524.

- [4] Aaditeshwar Seth, Abhishek Katyal, Rohit Bhatia, Dinesh Kapoor, Balachandran C, Vidya Venkat, Aparna Moitra, Sayonee Chatterjee, Mayank Shivam, Z. Koradia, Praveen Naidu, "Application of Mobile Phones and Social Media to Improve Grievance Redressal in Public Services", m4dposition.
- [5] Aditi Mhapsekar "Voice enabled Android application for vehicular complaint system using GPS and GSMSMS technology," in World Congress onInformation and Communication Technologies,2012,pp.520-524.
- [6] D.D. Lewis, "Feature Selection And Feature Extraction For Text Categorization," Proc. Workshop Speech And Natural Language, Pp. 212-217,1992.
- [7] E.F. Combarro, E. Montan<sup>~</sup> E'S, I. Dı'Az, J. Ranilla, And R. Mones, "Introducing A Family Of Linear Measures For Feature Selection In Text Categorization," Ieee Trans. Knowledge And Data Eng., Vol. 17, No. 9, Pp.1223-1232, Sept.2005.
- [8] Zurah Binti Abu, Fadilah Ezlina Binti Shahbudin, Mastura Binti Mansor, Nurul Zahirah Binti Abd Rahim, Nur Aqilah Binti Norwahi, "Improving user complaint management system and satisfaction level via reader-friendly linguistic features", International Symposium on Mathematical Sciences and Computing Research (iSMSC), 2015.
- [9] J. Breitsohl, M. Khammash and G. Griffiths, "E-business complaint management: perceptions and perspectives of online credibility", Journal of nterprise Information Management, vol. 23, no. 5, pp. 653-660, 2010.
- [10] Ramana Kumar Madupalli Amit Poddar, "Problematic customers and customer service employee retaliation", Journal of Services Marketing, vol. 28, no. 3, pp. 244-255, 2014.

### AUTHORS

S.Selvi doing final year MCA in Francis Xavier Engineering College



Sahaya Jenitha' Department of Computer Applications, Francis Xavier

M.Sivanesh doing first year MCA in Francis Xavier Engineering College







## SELF ATTENDANCE USING OTP IN ANDROID

Lokesh<sup>1</sup>, Sahaya Jenitha<sup>2</sup> and Sivanesh<sup>3</sup>

<sup>1</sup>Department of Computer Application, Francis Xavier Engineering College

<sup>2</sup>AP,Department of Computer Application, Francis Xavier Engineering College

<sup>3</sup> Department of Computer Application, Francis Xavier Engineering College

### **ABSTRACT**

A Attendance is very important for every organizations, Attendance taking has evolved with better solutions from the time it was invented, from paper based to Computer based System using so many new technologies that can make it better faster and accurate. In our proposed system we make use of Self attendance using OTP. In this system there are 3 Main users; Admin responsible to add class, subjects, teachers and students; second teacher who will take the attendance and the third Student who can mark him/her as present and see their previous attendance records. The process goes like this, the teacher select the class for attendance a OTP is generated which will last for 60 seconds, the OTP need to be entered in the Student's app and mark him/her as present, once the OTP is expired the teacher can make the necessary changes in the attendance sheet and submit the attendance.

### KEYWORDS

Network Protocols, Wireless Network, Mobile Network, Virus, Worms & Trojon

### **1. INTRODUCTION**

Attendance is very important for every organizations, Attendance taking has evolved with better solutions from the time it was invented, from paper based to Computer based System using so many new technologies that can make it better faster and accurate. In our proposed system we make use of Self attendance using OTP. In this system there are 3 Main users; Admin responsible to add class, subjects, teachers and students; second teacher who will take the attendance and the third Student who can mark him/her as present and see their previous attendance records. The process goes like this, the teacher select the class for attendance a OTP is generated which will last for 60 seconds, the OTP need to be entered in the Student's app and mark him/her as present, once the OTP is expired the teacher can make the necessary changes in the attendance sheet and submit the attendance.

Taking attendance with android based system makes faster and better. In this all can make use of self attendance using OTP. The respective staff generate an OTP which lasts for 30 sec attendance very important for every organizations, Attendance taking has evolved with better solutions from the time was invented, from paper based to Computer based System using so many new technologies that can make better faster and accurate. In our proposed system we use of Self attendance using OTP. In this system there are 3 Main users; Admin responsible to add class, subjects, teachers and students; second teacher will take the attendance and the third

Student who can mark him/her as present and see their previous attendance records. The process goes like this teacher select the class for attendance a OTP is generated which will last for 60 seconds, OTP need to be entered in the Student's app and mark him/her as present, once OTP is expired the teacher can make the necessary changes in the attendance sheet and submit the attendance.

The second section discuss about the literature review and continued by problem statements. The fourth section gives the experiments and results followed by the conclusion and future enhancement

### **2. LITERATURE SURVEY**

K. Akhila1 and B. Prathyusha (2013),

A Education system in India has been changing widely in last 10 years due to the development of the technology. Smart class, E-learning, Video conferencing are some of them. The core idea of this paper is to implement some of the emerging technologies like mobile computing and near field communications and advances in behavioral science studies to make a better educational system. This paper will be implemented in application as two parts. A secure framework for implementing different educational service mobile applications like, mobile attendance, mobile marks register etc by using Android and java applications. The second part will leverage Near Field Communication technologies and gamification behavior approach to incorporate game mechanics into activity oriented learning systems. To update the all data through web server by using GPRS technology.Indian Institute of Education, Pune.(2006)

Monika Singh (2017),

The main objective of this paper is to carry out some of the emerging technologies like mobile computing, Information and Communication Technology and advances in behavioural science studies to enhance and enriched the current educational system scenario, since the educational technology in India has been get modernizing in the recent past years due to the development and penetration of Information and Technology. The mobile based technology has been chosen for this study as well as for the project. The methodology of this work is to developed an android based mobile application attendance management system where attendance can be recorded via mobile devices using "php" and "MySQL" server .This developed software stores ,retrieves and deliver the information about the student information such as present or absent through mobile device in the provided server database. The final result of this project are very useful for the educational organizations to keep ,track and maintain the database of students.

Dhinam Kumar Sarker(2016),

In the system the teacher can call the student by their name or identity number of the student which the student can respond or can pass the attendance sheets to login. To overcome this process this represents the attendance system prototype. The radio frequency identification and the process of getting integrated system of reliable attendance management system is been developed in the programming language to monitor the attendance system.

### M. PavanKumar(2017),

Our project is an efficient and user friendly Android mobile application for an Attendance Monitoring. The application will be installed on the user's (in this case teacher's) smart phone. It intends to provide an interface to the teacher who will require minimal details to input for

104

marking of attendance of a particular class of students. Apart from that, the application would support strong user authentication and quick transmission of data via the web service. Another noticeable feature of the entire application would be that no data would be stored on the user device in any form whatsoever. The application thus build would also help to avoid the chance of a proxy as the application would be handled by the teacher only.

### Amrutha(2020),

We have seen over the years that the process of manual attendance has been carried out across almost all educational institutions. The process is not only time consuming but also sometimes inefficient resulting in the false marking of attendance. Today, we need not maintain pen and paper based attendance registers. Following this thought, we have proposed an attendance monitoring system based on the concept of web services which is implemented as an Android mobile application that communicates with the database residing on a remote server. The mobile application would require connecting to the database using either General Packet Radio Service(GPRS) or Wi-Fi technology. This paper discusses the proposed system, overview of the design, the various modules of the system and its implementation.

### **3. PROBLEM STATEMENT**

### A. Architecture Diagram



### Figure-1 Architecture Diagram

### **B.** Existing System

- User login in and make the attendance which is not used securely.
- Anyone can able to login and mark on the attendance.
- Physical taking attendance are available in present days.
- Wastage of time.

### **C. Proposed System**

• This application allow the user to mark attendance based on the OTP.

- The student needs to login and and enter the OTP received.
- In this system on using OTP malpractice is avoided by verification
- User can able to view attendance Percentage on Monthly wise.

### 4. EXPERIMENTS AND RESULTS

### **A. Module Description**

The system comprises of 3 major modules with their sub-modules as follows: 1. Admin: (Web Application)

- Login: Need to enter login credentials into web interface by the admin or the authorized person.
- Add/View Course:Can add a new course into the system and also can view it.
- Add/View Subject: Can add a new subject to the equivalent course into the system and also can view it.
- Add/View Student: Can register new student details into the system and also can view it.
- Attandance Report: System allows admin to generate student defaulters list

2. Teacher: (Android)

- Login: Here, teacher need to enter the login credentials into android app in order to mark the attendance.
- Generate OTP:Teacher will generate an OTP which will be visible for 60 seconds and take attendance
- View Attendance: Teacher will be able to view student attendance of students.

3. Student: (Android)

- Login: Here, both Parent as well as student can login using the student
- L;roll no. or with an email id.
- Mark Attendance:Once OTP is generated by the teacher, students can input the OTP in their application to get their attendance marked.
- View Attendance: Here, student itself can view the attendance.

### **B.** Output Screen



Figure-2 DashBoard



Figure -3 Register and Login Page



Figure-4 Add Staff and Student



Figure-5 View members

	a odarzani Canenzani Canenzani	ed istant		Weell A Burlin	OF L, PRESALANZS	
grade			E Code III	Spin Debugni () 4	•• L) (L) • • • • • • • •	
T Del Anna	SQ □ Pixel + ≥ 30 + +			Q. Ø -	(** 5(\$e0)	
🕨 🖿 caches 🛛 💈					AndroidAttenuencoyusent	
M codeStyles			lidel			
<ul> <li>Moranes</li> <li>Moranes</li> </ul>		Declared Attri				
► be app		▼ Layout			WELCOME	
Ra Android-Attendence-App-metter.im	<u> </u>	lavout width	fill parent		the second se	
6 gtignon		lepost height	fill starterst			
A mode and		waibility				
a JarRepositories.aml		Aviantity				
		* Transforms				
modules.ml					Start	
and nurConfigurations and						
Y In an						
Enc.						
AP build.gradie						La la
<ul> <li>Fund</li> <li>Encoded</li> </ul>	14					
► IIII gradie						
🦉 gristinbutes			<u> </u>			
🛍 app-debug.apk			<u> </u>		4 0 1	
D station					O Gradie build finished at 3 m 13 a 605 me.	

Figure-6 Front Page





### **C.** Performance Analysis

The existing and proposed system are analysed. The problem identified is User login in and make the attendance which is not used securely. Anyone can able to login and mark on the attendance and Wastage of time but .Nearly 70% performance has been increased by using the OTP system. Which make more accurate attendance

### **5.** CONCLUSION

This system is a new age, verified, well tested, promising, cost effective and technologically sound. That marks a bar for a cheat free Attendance system making cheating unappealing and

easily detectable. Attendance system as build under this research has cleared out discrepancy in storage of data and also false attendance pattern. This attendance system has reduced all the time taking manual work that the lecturer had to go through before starting the lecture.

### **6. FUTURE ENHANCEMENT**

After In future, this application can be featured comment boxes or group chat, so that students who hesitate to ask doubts in the classroom, may is etheir doubts in the web application. Also, assignments can be posted by lecturer and the work of students can be monitored frequently via the application. Assessments like Quiz, learning agility test, etc., can be established in the application.

#### REFERENCES

- Somasundaram, V., Kannan. M, Sriram, V., 2016, "Mobile based Attendance Management System", Indian Journal of Science and Technology, 9 (35), pp. 1-4.
- [2] Rakhi Joshi, Shete, V., Somani, S. B., 2015, "Android Based Smart Learning and Attendance Management System", International Journal of Advanced Research in Computer and Communication Engineering, 4 (6), pp.
- [3] Akhila, K., Prathyusha, B., PavanKumar, M., Amrutha, M., 2013, "A Novel Approach Of Mobile Based Student Attendance Tracking System Using Android Application", International Journal of Engineering Research & Technology (IJERT).
- [4] Avinaash Ram, S.P., Albert Mayan, J., 2015, "Mobile attendance management and employee registration", ARPN Journal of Engineering and Applied Sciences, 10 (8).
- [5] Talukder Mohammad Salah Uddin, F. A., Allayear, S. M. Das, N. C., 2014, "A location based time and attendance system", International Journal of Computer Theory and Engineering, 6 (1).
- [6] Riya, L., Suruchi, G., Harshil, J., Harish N., 2015, "Bluetooth smart based attendance management system", International Conference on Advanced Computing Technologies and Applications, Procedia Computer Science.
- [7] Jessenth E.P., Mura
- [8] L;lidharan, M.R, Srikanth, S., Ramesh, E., Prabhu, S., 2014, "Android application for student activity register", IJREAT International Journal of Research in Engineering & Advanced Technology, 2 (2).

### AUTHORS

S.Lokesh doing final year MCA in Francis Xavier Engineering College

Sahaya Jenitha<sup>,</sup> Department of Computer Applications, Francis Xavier Engineering College. Her area of intrest is Wireless Sensor Networks

M.Sivanesh doing first year MCA in Francis Xavier Engineering College







# Fx CALORIES CALCULATOR & FITNESS ADVISOR

N.Shahul Ashfar<sup>1</sup> and J.Abalin Lurther<sup>2</sup> and L.Antro James<sup>3</sup>

<sup>1</sup>Department of Computer Applications, Francis Xavier Engineering College

### <sup>2</sup>AP, Department of Computer Applications, Francis Xavier Engineering College

<sup>3</sup>Department of Computer Applications, Francis Xavier Engineering College

### ABSTRACT

Calorie counter to record and estimate number of calories we need to consume daily. "FITNESS START WITH WHAT WE EAT". This project can also provide guidelines for gaining or losing weight. That have heard it way to get started with the very boring term dieting. A number of mobile fitness devices as well as smart watches have emerged on the technology landscape. Body Mass Index is a simple calculation using a person's height and weight. A BMI of 25.0 or more is overweight, while the healthy range is 18.5 to 24.9. Serious fat-burning activity uses the large muscle groups of the body – the thighs and bottom, chest and back. The greater the overall recruitment of muscle, the higher the calorie expenditure. So in your workouts, That are much better off using, say, the rower than isolating your arms for maximum calorie burn.

### KEYWORDS

component, formatting, style, styling, insert (keywords)

### **1. INTRODUCTION**

This Calorie Calculator is based on several equations, and the results of the calculator are based on a estimated average. The Harris-Benedict Equation was one of the earliest equations used to calculate basal metabolic rate (BMR), which is the amount of energy expended per day at rest. It was revised in 1984 to be more accurate and was used up until 1990, when the Mifflin-St Equation was introduced. The Mifflin-St Equation also calculates BMR, and has been shown to be more accurate than then revised Harris-Benedict Equation. The Katch-McArdle Formula is slightly different in that it calculates resting daily energy expenditure (RDEE).



### 2. ARCHITECTURAL DIAGRAM

Fig-1 Architecture Diagram

### **3. EXPERIMENTS AND RESULTS**

### A. Module

The project "FX CALORIES CALCULATOR & FITNESS ADVISOR" consists 5 modules for optimizing

### 1. User and Admin Accounts

Admin can monitor the user and the user details. Admin is authorised to add, updated and deleted slots. Admin can view the page. Unlike users, admins have access to the Account Dashboard and billing information. Admin is the role with the highest level of access to your website. Admins can add content on all pages and access all items in the Admin Toolbar. Instead, authors are assigned a specific page (or pages) of the website on which they can add content. Any changes an author makes are automatically saved, then submitted for review in the notification.

### 2. Calories Calculator

This module can be calculate the total body calories. Body calories may various to consume situational foods. Unwanted calories did not add to take health food fitness body. The "quality" of calories consumed is also important. There are different classifications of foods in terms of calories. This includes high-calorie foods, low-calorie foods, and empty calories. Consistent with their naming, high-calorie foods are foods that are calorically dense, meaning that there are a high number of calories relative to serving size.

### **3.** Foods Of Calories

Nuts and grains increase good calories. Pulses and wheat increase good calories. Oil calories. A calorie is a unit of measurement. A calorie is a unit of energy. Proteins: Red meats, pork, chicken with skin on (roast or broil don't deep fry for your health), salmon or other oily fish, beans, whole milk, eggs, cheese, full-fat yogurt. Carbohydrates: potatoes, brown rice, whole grain pasta, whole grains, whole grain Breads

### 4. BMI Calculator

This module can weight category—underweight, healthy weight, overweight, and obesity. BMI=m/h2. BMI is an inexpensive and easy screening method. The formula is BMI of 25.0 or more is overweight. health is at risk. BMI is 17.5. This means that you are underweight. Being underweight makes you more prone to diseases because it signifies that your body's immunity is weak. Children's BMI values are compared with other children of the same age and sex and a percentile is calculated.

### 5. Fat Burn Exercises

Serious fat-burning activity uses the large muscle groups of the body – the thighs and bottom, chest and back. The greater the overall recruitment of muscle, the higher the calorie expenditure. Caffeine is a substance commonly found in coffee, green tea and cocoa beans. Green Tea Extract. Green tea extract is simply a concentrated form of green tea. Protein Powder. Protein is incredibly important for burning fat. Soluble Fiber. There are two different types of fiber — soluble and insoluble. Yohimbine.

### **B.** Output Screen



Fig-1 Home Page



Fig-2 Login Page



Fig-3 Register Page



Available items:

Fig-5 Calories Calculating

1

へ *備* ゆ) 画 厚 1:37 PM 12-Mar-21

### International Journal on Cybernetics & Informatics (IJCI) Vol. 10, No.1/2, May 2021

← → C ① 127.00.1:8000/hom/ III Apps G Gmail ● YouTube ♀ Maps C All Software Catego BMI	Hello, Masthan		☆ Back to Ho	se me	* S	) : ng list at
Metric       Imperial         Weight:       80         Height:       1.88         Save It. ?		Nour BMI = 22.634676324128566 kg/m²   Normal           Undeweeght <18	Obesity: 30k	•		

Fig-6 BMI Calculating

😫 💽 🚺 🚳 🧿



Fig-7 Exercise Page

### 4. PERFORMANCE ANALYSIS

The existing and proposed system are analysed. The identified existing is system will also help in providing real time information provides some avenues for future research on IoT-based health care based on a set of open issues and challenges.Nearly 70% performance has been increased.

118

### **5.** CONCLUSION

All foods, including "healthful foods," should be consumed in moderation, and distinctions can often be misleading since even natural foods like fruits can have large amounts of sugar, and foods labeled as "health foods" such as low-calorie foods, reduced-fat foods, etc. Can potentially replace one unhealthy component with another. it greatly ease users who would like to quickly snap a picture and record their calorie intake. A prototype is developed to test and face the challenges of recognizing Malaysian traditional food.

### **6. FUTURE ENHANCEMENT**

It is important to remember that proper diet and exercise is largely accepted as the best way to lose weight. It contains to business related of sales to some nutritional clinics. It is inadvisable to lower calorie intake by more than 1,000 calories per day, as losing more than 2 pounds per week can be unhealthy, and can result in the opposite effect in the near future by reducing metabolism.

### REFERENCES

- Ng M, Fleming T, Robinson M, et al. Global, regional, and national prevalence of overweight and obesity in children and adults during 1980–2013: a systematic analysis for the Global Burden of Disease Study 2013. Lancet 2014; 384(9945): 766–781.
- [2] Giugliano D, Ceriello A, Esposito K. The effects of diet on inflammation: emphasis on the metabolic syndrome. J Am Coll Cardiol 2006;48:677–85.
- [3] Bailey, S., Gerada, C., Lester, H. & amp; Shiers, D. (2012). The cardiovascular health of young people with severe mental illness: addressing an epidemic within an epidemic. The Psychiatrist, 36, 375– 378.
- [4] C. P. Lambert, L. L. Frank and W. J. Evans, "Macronutrient considerations for the sport of bodybuilding," Sports Med. 2004;34(5):317-27
- [5] Longo VD, Mattson MP. Fasting: molecular mechanisms and clinical applications. Cell Metab 2014;19:181–92.
- [6] Stephanie B. Baker; Wei Xiang; Ian Atkinson: "Internet of Things for Smart Healthcare: Technologies, Challenges and Opportunities", IEEE Access (Volume: 5), DOI: 10.1109/ACCESS.2017.2775180

AUTHORS

**N.SHAHUL ASHFARN** doing final year MCA in Francis Xavier Engineering College.

**Mrs. J. ABALIN LUTHER** is working as Assistant Professor in the Department of Computer Applications, Francis Xavier Engineering College. She is having teaching experience of 5+ years. Her area of interest is Wireless Sensor networks.

**L.ANTRO JAMES** Doing first year MCA in Francis Xavier Engineering College.





### WOMENS SAFETY MOBILE APP

N. Ramesh Kannan<sup>1</sup> and S.Sujitha<sup>2</sup> S,Ganapathy Subramanian<sup>3</sup>

<sup>1</sup>Department of Computer Application, Francis Xavier Engineering College

### <sup>2</sup> AP Department of Computer Application, Francis Xavier Engineering College

<sup>3</sup>Department of Computer Application, Francis Xavier Engineering College

### ABSTRACT

This Women Safety application is used for protects womens from Crimes. Women safety matters a lot whether at home, outside the home or working place. Most of the women of various ages, till this day are being subjected to violence, domestic abuse. In this system user needs to feed three contact numbers, in case of emergency on moving the phone up and down thrice, the system sendsSMS and calls on one of the numbers feeded into the system with the location. The phone starts vibrating and siren starts ringing. Women's safety is a big concern which has been the most important topic till date. Women safety matters a lot whether at home, outside the home or working place. Few crimes against ladies particularly rape cases were terribly dread and fearful. Most of the women of various ages, till this day are being subjected to violence, domestic abuse, and rape. As ladies ought to travel late night generally, it's necessary to remain alert and safe. Although the government is taking necessary measures for their safety, still, there are free safety apps for women that can help them to stay safe. Most of the femalesthese days carry their smartphone with them, so it is necessary to have at least one the personal safety appsinstalled. Such a security appfor ladies will definitely facilitate in a way or the opposite. This is user-friendly application that can be accessed by anyone who has installed it in their smart phones. Our intention is to provide you with fastest and simplest way to contact your nearest help. In this system user needs to feed three contact numbers, in case of emergency on moving the phone up and down thrice, the system sends SMS and calls on one of the numbers feeded into the system with the location. The phone starts vibrating and siren starts ringing. This features for both everyday safety and real emergencies, making it an ultimate tool for all.

### **KEYWORDS**

Womens safety, gps, fingerprint scans.

### **1. INTRODUCTION**

This Womens safety is a very important issue due to rising crimes against women these days. To help resolve this issue we propose a gps based womens safety system that has dual security feature. This device consists of a system that ensures dual alerts in case a woman is harassed or she thinks she is in trouble. This system can be turned on by a woman in case she even thinks she would be in trouble. It is useful because once an incident occurs with a woman she may or may not get the chance to press the emergency button. In a button press alerting system, in case a woman is hit on the head frombehind, she may never get the chance to press panic button and no one will know she is in trouble. Our system solves this problem. This device is to be turned on in advance by a woman in case she is walking on a lonely road or some dark alley or any remote area. Only the woman authenticated to the devices can start the system by fingerprint scan. Once

started the devices requires the woman to constantly scan her finger on the system every 1 minute, else the system now sends her location to the authorized personnel number through SMS message as a security measure and also sounds a buzzer continuously so that nearby peoplemay realize the situation. In this case even if someone hits the woman or the woman falls down and get unconscious, she does not need to do anything, the system does not get her finger scan in 1 minute and it automatically starts the dual security feature. This device will prove to be very useful in saving lives as well as preventing atrocities against women. The device uses GPS sensor along with a gsmmodem, lcddisplay, leds and microcontroller based circuit to achieve this system. To develop an adaptive system for the End-users that support the system support features. It should be highly secured authentication system. It maintains privileges among set of users. The emergency alert feature activates with the users command and the system is protected after the alert process. Functionality will be transparent to end user and easy to use. It is useful because once an incident occurs with a woman she may or may not get the chance to press the emergency button. In a button press alerting system, in case a woman is hit on the head from behind, she may never get the chance to press panic button and no one will know she is in trouble. Our system solves this problem. This device is to be turned on in advance by a woman in case she is walking on a lonely road or some dark alley or any remote area. Only the woman authenticated to the devices can start the system by fingerprint scan.

The cases of harassment and rapes on women are increasing hence security issue for such woman is more important. So, it is essential to develop a system to provide security to women. In this he devised a system allows women to protect themselves from attackers. In recent days the attacks on women are increasing and sometimes they are not even able to take their mobile and dial-up to police, this system will help women in such situations to inform about attacks and also in giving their exact location to a nearby police station for necessary action. In this, the author designed a device, in that, by pressing the button of the device a message along with her location will be transmitted by the system to the police station and her few relatives, so thatthey will get aware of her current situation.He told that withthat message she is also for their defensive purpose they can able togive a shockto the attacker it will be more helpful to women at that critical situation, this system is designed as the defence equipment, it will them to attack the attacker. So, she has some time to rescue herself from that attacker.

The second section discuss about the literature review and continued by problem statements. The fourth section gives the experiments and results followed by the conclusion and future enhancement.

### **2. PROBLEM STATEMENT**

### **Architecture Diagram**

The existing system Project of security application provides the user alert by calling manually in the smartphones, the user cannot transmit the data of their location immediately and cannot protect the devices as soon as possible.Now a days we don't have like this facilities, In case any emergency situations we should make calls to Police or official by themselves.So, this is hardest things to do at that situations.

### **Traditional Education**

Traditional education is also called customary education or conventional education. The main motive of traditional education is to pass on the values, manners skills and the social practice to the next generation which is necessary for their survival. In traditional education the student learns about the customs and tradition of the society in which he lives. This type of education is mostly imparted to the students by the means of oral recitation.

There is very less written work or practical work. The students simply sit down together and listen to the teacher or another who will recite the lesson. The traditional does not include written tests but it includes some oral tests which are not very formal. Traditional education is very far from the use science and technology. Neither the education about sciences we study today in a great detail is imparted in the traditional education system. Traditional education system basically included the knowledge about customs, traditions, and religions. That is why it is called traditional education.

### **E** - Learning

E - Learning is learning utilizing electronic technologies to access educational curriculum outside of a traditional classroom. In most cases, it refers to a course, program or degree delivered completely online.

There are many terms used to describe learning that is delivered online, via the internet, ranging from Distance Education, to computerized electronic learning, online learning, internet learning and many others. We define eLearning as courses that are specifically delivered via the internet to somewhere other than the classroom where the professor is teaching. It is not a course delivered via a DVD or CD-ROM, video tape or over a television channel. It is interactive in that you can also communicate with your teachers, professors or other students in your class. Sometimes it is delivered live, where you can "electronically" raise your hand and interact in real time and sometimes it is a lecture that has been prerecorded. There is always a teacher or professor interacting or communicating with you and grading your participation, your assignments and your tests .



Figure : 1 Architecture Diagram

### **3. EXPERIMENTS AND RESULTS**

### Modules

The project "Women Safety Mobile App" consists 3 modules for optimizing education system.

- 1) User app module
- 2) Guardian app module
- 3) Server module

### User app module

- Initially the women security app needs to be installed in the mobile.
- Then user should enroll her ID, Name, Phone number.
- And then click on register button.
- Then it display registered successfully.
- If that mobile number is already registered it will display this number is already registered.

### Guardian app module

- Initially the guardian app needs to be installed in the mobile.
- Guardian should enroll their phone numbers.
- And click on register button.
- Then it display registered successfully.
- If that mobile number is already registered it will display this number isalready registered.

### Server module

- After installation of guardian app and victim app two tables are created in server model.
- Two tables are victim table and guardian table.
- Victim table contains five columns VID, VNAME, PHONE -NUMBER, LATITUDE, and LONGITUDE.
- Guardian table contains three columns PHONE NUMBER, LATITUDE, LONGITUDE.

### **Output Screen**



Figure : 2 Home Screen



Figure : 3 Women Safety App



Figure : 4 Login Page



Figure : 5 Menu Page

### **PERFORMANCE ANALYSIS**

The existing and proposed systems are analyzed. The problems can be easily rectified with this concept. Nearly 70% of the performance has been increased.

### **4.** CONCLUSION

Women can be powerful actors for peace, security, and prosperity. When they participate in peace processes and other formal decision-making processes, they can play an important role in initiating and inspiring progress on human rights, justice, national reconciliation and economic revitalization.

### **5. FUTURE ENHANCEMENT**

In this Women Safety android application we can easy to handle any crime situations. Whenever a women in trouble they can simply move phone up and down thrice, then it will make call or SMS to pre-defined police or family mobile phone numbers. So, using this advanced technology we can prevent any kind of crimes especially for women's and child.

### References

- [1] Design and Implementation of Women Safety System Using Mobile Application in Real-Time Environment S. Juhitha1, M. Pavithra2, E. Archana3 1,2Student, Department of Computer Science & Engineering, Panimalar Institute of Technology, Chennai, India 3Assistant Professor, Department of Computer Science & Engineering, Panimalar Institute of Technology, Chennai, India
- [2] ABHAYA: AN ANDROID APP FOR THE SAFETY OF WOMEN Ravi Sekhar Yarrabothu Department of ECE Vignan's University Vadlamudi, Gunture, India yrs\_ece@vignanuniversity.org Bramarambika Thota Department of ECE Vignan's University Vadlamudi, Guntur, India ambika.thota92@gmail.com.
- [3] An Android Based Application for Women Security Prof. Sankalp Mehta1, Sachin Janawade 2, Vinayak Kittur3, Suraj Munnole 4, Sandhya Basannavar5 Assistant professor1, Student2, 3, 4, 5 Department of Computer Science and Engineering K. L. E. College of Engineering and Technology, Chikodi, Karnataka, India.
- [4] World Health Organization, Global and Regional Estimates of Violence against Women, http://apps/who/int/iris/bitstream/10665/85239/1/9789241564625 eng.pdf, p. 2.

- [5] National Crime Records Bureau (Ministry of Home Affairs), "Crime in India 2012 Statistics," Government of India Press, June 2013
- [6] Dhruv Chand, M.; Sankaranarayanan, S.; Sharma, C., "Project Jagriti: Crowdsourced child abuse reporting," Global Humanitarian Technology Conference (GHTC), 2014 IEEE, vol., no., pp.609,613, 10-13 Oct. 2014 doi: 10.1109/GHTC.2014.6970346
- [7] Jou-Chih Chang; Pi-Shih Wang; Kang-Hsuan Fan; Shih-Rong Yang; De-Yuan Su; Min-Shiung Lin; Min-Te Sun; Yu-Chee Tseng, "iMace: Protecting Females from Sexual and Violent Offenders in a Community via Smartphones," Parallel Processing Workshops (ICPPW), 2011 40th International Conference on , vol., no., pp.71,74, 13-16 Sept. 2011 doi: 10.1109/ICPPW.2011.57
- [8] VithU: V Gumrah Initiative on the Google Play Store: https://play.google.com/store/apps/details?id=com.startv.gumrah. Accessed 2015-06-01. [6] Nirbhaya: Be Fearless: http://www.nirbhaya.mobi. Accessed 2015-06-01.
- [9] International Labour Organization, 2012, "ILO Global Estimate of Forced Labour: Results and Methodology," p. 14, Geneva. [8] F. Vanderschueren, 2000, "The Prevention of Urban Crime." Paper presented at the Africities 2000 Summit, Windhoek, Namibia. Cited in UN-HABITAT, 2006, State of the Worlds Cities 2006/2007, p. 144, Nairobi.
- [10] Directorate-General for Employment, Industrial Relations and Social Affairs, 1998, "Sexual harassment at the workplace in the European Union," p. iii, Brussels, European Commission. Cited in UN General Assembly, 2006, "In-depth Study on All Forms of Violence against Women: Report of the Secretary-General," A/61/122/Add.1, p. 42, New York.

### AUTHORS

Mr.N. Ramesh Kannan doing final year MCA in Francis Xavier Engineering College

**Mrs. Sujitha** working as Assistant Professor in the Department of Computer Applications, Francis Xavier Engineering College. Her area of interest is Wireless Sensor networks

Mr.S.Ganapathy Subramanian doing first year MCA in Francis Xavier Engineering College







128

## FX MEDIA(CAMPUS SOCIAL MEDIA)

Robin<sup>1</sup> and Sahaya Jenitha<sup>2</sup> and Santhosh<sup>3</sup>

<sup>1</sup>Department of Computer Applications, Francis Xavier Engineering College

### <sup>2</sup>AP, Department of Computer Applications, Francis Xavier Engineering College

<sup>3</sup>Department of Computer Applications, Francis Xavier Engineering College

### ABSTRACT

In recent years, social networking system has become one of the most popular Internet applications and has a large number of users. Although the public social networking systems have meet the interpersonal communication demand of people, there is inadequate support for the closely combination of user's learning, working and cultural life on campus with their real activity. Therefore, the paper design and realized a new campus social networking system for users, which is tightly integrated with the reality environment of campus and users' real activity. It will not only achieve the basic communication function but also provide a unified platform for the teaching, researching, management and many other aspects of cultural life to teachers and students in campus. It is also an effective support for the information construction of university.

### **KEYWORDS**

Web 2.0, BBS.

### **1. INTRODUCTION**

With the wide and rapid popularity of "Face book" and "Instagram", social network (also known as social networking system or social networking service) has become one of the most popular Internet applications in recent years, and is considered to be another revolution of Internet after search engine and Web2.0. Different with traditional BBS stations and Blog, social network no longer use anonymous way to manage users, but stressed the real-name system and establishment of network connection corresponded with the real social relationships between people. It not only emphasized the content created by users, but also highlight the spread of these content through real social relationships with the corresponding network links, in order to reduce the cost of user access to information and improve the effectiveness of information dissemination.

### **2. LITERATURE SURVEY**

### Social Networks Analysis, Management and Security (SNAMS-2019)

Social network analysis is concerned with the study of relationships between social entities. The recent advances in internet technologies and social media sites, such as Facebook, Twitter and LinkedIn, have created outstanding opportunities for individuals to connect, communicate or comment on issues or events of their interests. Social networks are dynamic and evolving in nature; they also involve a huge number of users. Frequently, the information related to a certain

concept is distributed among several servers. This brings numerous challenges to researchers, particularity in the data mining and machine learning fields. The purpose of International Conference on Social Networks Analysis, Management and Security (SNAMS-2019) is to provide a forum for researchers to present and discuss their work which is related to social network analysis

### Impact of Social Media on Society in a Large and Specific to Teenagers

E-learning has been for more than around for ten years. It is probably the learning object that is assumed to be the learning content today. Commencing from computer-based delivery systems world, learning objects were idolized as Lego blocks or atoms. E-learning can be assumed as a part of lecture room or not that totally depends upon its implementation. It can be designated to as self-paced, non-synchronous training or can be drove by an instructor or can be renamed as concurrent learning. Distance learning is best matched to E-learning and also adjustable training, but can also be utilized with confronting teaching, where the terminology commonly used is blended learning. This type of blended learning in today's world is kind of static learning where the student are presented with static content irrespective of their capability to grasp the knowledge they are being provided. Therefore, there is need for a type of system that can adapt to the student's capability and would then provide knowledge by adapting to student's pace. To realize this sort of system, we would be building a system of career counselling system wherein the student would be presented a set of questions that would be based on their previous answers thus adapting to the student capability. Our system would take into consideration various factors before presenting questions to the candidate. Also, keeping in track the students previous history which also is of utmost importance, the final result that would be displayed to the student would take into consideration the historical factors of the students as well.

# <u>Jinye Peng</u>, Noboru Babaguchi, angzai Luo, <u>Yuli Gao[2009]-</u>Building web application in college

Social media is a technology that can be developed in a fast and flexible manner, where internet connections are transformed into interactive platforms. Social networking programs are increasingly spreading around the world. Facebook users reached 1.44 billion per month in 2015, which means that most of the people of the world have a stamp on social networking platforms. Social media platforms have become integral part of teens'daily life. 22% of teenagers are enrolled in social networking programs about 10 times a day. The remaining category, which makes up more than half of teenagers register more than once a day through the use of mobile phone, where the proportion of teenagers who have their own cell phones reach 75%. The results show by RSA that the rate of cybercrime reached 173% by mobile phones during the period 2013-2015.

# <u>YasunoriShiono</u>, <u>TakaakiGoto</u>, <u>TetsuroNishino[2009]</u> – Development of social media System

Some areas in Asian have no medical facilities and proper mental health care is unavailable. Therefore, online counselling systems are needed. We have been studying and putting into practice online counselling for people assigned overseas. We constructed a system using agile software development for those assigned overseas in Asia. The first step involved developing a prototype system based on system requirements after we repeatedly discussed system development with people in charge of a clinic. Next, we conducted interviews about the online counselling system. We also discussed and analyzed the interviews. Finally, we completed the

online Web counselling system by repeatedly discussing possible improvements with the clinic and then incorporating the changes in the system. We report on the construction of the system.

### <u>Cui Li-xia</u>, Liu Ya-nan, <u>Lei Li</u>, <u>Tan Sheng</u>[2010]- <u>Relationship variables in</u> <u>online versus face-to-face</u> media

The study examined relational variables in face-to-face versus online counselling to explore how initial relationships between a counsellor and a client differed from face-to-face and online communication. The participants were 42 undergraduates who acted to come to Students Counselling center for help for the first time. Five graduates of clinical psychology acted as their counsellors. The counsellors of the two groups were same. We have been studying and putting into practice online counselling for people assigned overseas. We constructed a system using agile software development for those assigned overseas in Asia. The first step involved developing a prototype system based on system requirements after we repeatedly discussed system development with people in charge of a clinic. Social media is a technology that can be developed in a fast and flexible manner, where internet connections are transformed into interactive platforms. Social networking programs are increasingly spreading around the world. Facebook users reached 1.44 billion per month in 2015, which means that most of the people of the world have a stamp on social networking platforms.Social media platforms have become integral part of teens' daily life.

### **3. PROBLEM STATEMENT**

### **Architecture Diagram**



Figure 1: Architecture diagram

### 4. OUTPUT STREAM

Facebook	× +				٥	Х
$\leftrightarrow \rightarrow 0$ (	D localhost:3000/login		ŝ	¢ 🕀	8	
		the second secon				
		Email Address				
		Password				
		Log In				
		Forgotten Plesowerd? . Sign up for Fulledia				
H D Type here to	o search O Hi	<u>= = = 2 = = = 9 1</u>	^ <b>≡</b> £	Ø BNG 08	06 AM 12-2021	Q

Figure 2: Login page



Figure 3: Sign up page



Figure 4: Home page



Figure 5: Ad in FX Media



Figure 6: Chat box



Figure 7:Gallery in FX Media

### **5.** CONCLUSION

Social networks are becoming more and more popular. More than 80% of the 4.66 billion people on the planet with access to the internet are social network users and this share is expected to grow he world is changing so fast that the urgent question is what will happen next? Will the life completely move into a virtual reality. What to expect from social media users and advertisers in 2021 and further. Today, social platforms are selling not just brand coverage, engagement, and visibility, but also very concrete indicators of direct sales.

### **6. FUTURE ENHANCEMENT**

- The campus social network which adopt firebase and react JS provides real time data assessment. But also provide uniform platform for the teaching researching, management and many other cultural aspects life of teachers and students in campus.
- ➤ In addition it is an effective support for the information construction of university. FxMedia has offered a new platform for peer pressure with both positive and negative communication.
- But in this FxMedia the negative communication has been blocked and has been enveloped by the firewall. The hole screen shared with other users.

### REFERENCES

- [1] [1] A Critical Analysis of Privacy and Security on Social Media -Guoying Wang, Wei Zhou, Yunsheng Zhang-2015
- [2] Impact of Social Media on Society in a Large and Specific to Teenagers-Kazi Fakir Mohammed , SushoptiGawade , Vinit Nimkar- 2017
- [3] Social Networks Analysis, Management and Security (SNAMS-2019)
- [4] Yasunori Shiono, TakaakiGoto, TetsuroNishino[2009] Development of campus website application
- [5] Cui Li-xia, Liu Ya-nan, Lei Li, Tan Sheng[2010]- Relationship variables in online versus face-to-face media.
## AUTHORS

G. Robin doing Final Year MCA in Francis Xavier Engineering College

**Mrs. P. Sahaya Jenitha** working as Assistant Professor in the Department of Computer Applications, Francis Xavier Engineering College. Her area of interest is Wireless Sensor Networks

T. Santhosh doing first year MCA in Francis Xavier Engineering College







# **FX EVENT ORGANIZATION**

<sup>1</sup> Muthu Krishnan.S and <sup>2</sup> Angelin Ranjithamani.D <sup>3</sup> Deepa.C

<sup>1</sup>Department of Computer Application, Francis Xavier Engineering College.

## <sup>2</sup>HOD,Department of Computer Application, Francis Xavier Engineering College.

<sup>3</sup>Department of Computer Application, Francis Xavier Engineering College.

#### ABSTRACT

Online event management system is an online event management system software project that serves the functionality of an event manager. The system allows registered user login and new users are allowed to register on the application. The system helps in the management of events, users and the aspects related to them. This proposed to be a web application. The project provides most of the basic functionality required for an event type e.g. [technical,Non-technical events,etc]. College students are advanced in thinking, who are senior and specialized professionals trained by the nation. They have independent thinking skills, and often have unique views and opinions on events. In this paper, an index is constructed to solve the difficulty of monitoring the ideological dynamics of college students, since the ideological dynamics of college students is difficulty to be captured. In particular, a visualization management information system is developed to monitor the ideological dynamics of college students based on big data. This system is based on the B/S architecture, which uses the SQL Server database. This system realizes the functions of index modification, document entry, word segmentation statistics, index correlation, keyword search, index analysis, document analysis.

#### **KEYWORDS**

Events and Registration.

# **1. INTRODUCTION**

Event management is Traditional education is defined as teacher-centered delivery of instruction to classes of students who are the receivers of information. Traditional institutions generally stress basic educational practices and expect mastery of academic learning in the core subjects. Most organizations generally follow this educational model[8]. On the other hand, an online educational or e-learning service is a website, which teaches and helps students improve in certain subjects[5]. These are normally, used by institutes to let students learn from home and complete online homework.

Traditional education is not necessarily the most effective way of learning, because no student can pay full of attention to the class lectures, and it cannot be possible for a student to attend the class regularly. So due to many reasons such as lack of concentration, absent to the class ,wrong understanding of the concept,etc.,the education system may face a poor outcome. Another factor is that, a lecture rmay not handle an efficient teaching methodology. E-learning as a method of education makes the learners undergo contemplation, remoteness, as well as lack of interaction or relation. It therefore requires a very strong inspiration as well as skills with to the management

of time in order to reduce such effects. With respect to clarifications, offer of explanations, as well as interpretations, the e-learning method might be less effective that the traditional method of learning. The learning process is much easier with the use of the face to face encounter with the instructors or teachers[2].

Both traditional and e-learning system has its own advantages and disadvantages. In order to overcome the disadvantages, the project propose an idea of converting the education system into active learning education, by sharing the videos of class lectures through online. This method will deliver the benefits of both traditional and e-learning system and makes the education more efficient.

# **2. PROBLEM STATEMENT**

The Online Event System in JSP has become a fast growing event method because of its speed and accuracy. It also needed less manpower to execute the event. Almost all organizations nowa-days, are conducting their objective events by online event system.

Online event systems save the events information in a database Staff can add/delete events



Figure: 1 Architecture Diagram

# **3. EXPERIMENT AND RESULTS**

#### Admin

Online Event System is a web based application to conduct events online. In these modules we can add program schedules and store data.

## **Conduct Event**

In this module the institution can add programs. They can also set time for each event according to the schedule allocation. They can add any type of events like technical events, non-technical events.

## **Add or Delete Events**

Events can be added or deleted only by the admin.

#### **Database Collections**

User requirements are inserted on the database and it will be retrieved by the event management system .When the student finishes their work, they will update the requirements via pictures which were taken by them. User requirements are inserted on database and it will be retrieved by admin and student module. The all records will be stored in the database.

#### **About Project**

This project consists of two main modules Admin and Student. In the Admin module we have the login page which is used to login for their Admin and if new users can register themselves and then login. The Admin can add their own students with their category. They can also add events for particular technical events. The questions can be randomly given to the students by selecting randomizer on. .

While login as a student the student can take the events posted by their Admin.

### **Output Screen**



Figure: 1 DashBoard



Figure: 2 Register and Login Page



Figure: 3 Choose Requirements link

	File Upload Page	
welcome, kicha	Select a File: Choose File No Bis chosen	
	Exit	

Figure: 4 Upload File

← → C & https://docs.google.c	om/forms/d/e/IFAlpQLSfyvyZFRvDO04I0X-HYLqvqza_fVRUKYPINGt0WBYK7XcdZEA/viewform?fbzx=2306856109152910988	☆ =
	YOUTH RED CROSS MEMBERSHIP FORM	
	Email address * mk@gmai.com	
	NAME * kapi	
	ROLL NUMBER (ID CARD) *	
Vinted Desner (2).ong		# those all contribution. ×
8 8 3 8 6		Non al a LITAM

Figure: 5 Club Register



Figure:6 User Revocation



Figure:7 Faculty File Upload

the second se	1 - A - A - A - A - A - A - A - A - A -		
Professional     Sector State	1 lines services		1 P X
Call Control of Call Control o	a Martinearche (1177) Marchaelle (1177) (1170) (1170)	_	3
in a real a in the set of the se	10 (1990) (		43.8
<ul> <li>Bill According</li> <li>Bill According<!--</th--><th>T 2 το ποτο do en actor τ de mana τ de mana τ de mana t de m</th><th></th><th></th></li></ul>	T 2 το ποτο do en actor τ de mana τ de mana τ de mana t de m		
Section and the best of	Ons	next tel_tell	Contractions: 1

Figure:8 MySql Data Server

#### **PERFORMANCE ANALYSIS**

The existing and proposed systems are analyzed. The problems can be easily rectified with this concept. Nearly 70% of the performance has been increased.

#### **4.** CONCLUSION

We have prepared a new system after identifying issues in the existing manual system. Participant students can view and register for events online. The record maintenance use of previous records becomes easy and to join the event. Thus we will implement a College Event Organizer system to address the problem faced by event organizers with respect to communication and working methods.

# **5. FUTURE ENHANCEMENT**

We would like to propose two different works: First we would like to see improvement of the platform to look more interactive with motivate the user and engage to join the club activities. Second we would like to add interactive and gaming club activity, to engage the user in the event .To join the club in more interact to in gaming features will be added. The future security issues, security can be improved using emerging technologies.

#### REFERENCES

- Manuel Mazzara, Luca Biselli, Pier Paolo Greco, Nicola Dragoni, Antonio Marraffa, Nafees Qamar, and Simona de Nicola. Social networks and collective intelligence: a return to the agora. IGI Global, 2013.
- Andrei Lebedev, JooYoung Lee, V'ictor Rivera, and Manuel Mazzara. Link prediction using top-k shortest distances. In Data Analytics - 31st British International Conference on Databases, BICOD 2017, London, UK, July 10-12, 2017, Proceedings, pages 101–105, 2017.
- 3) Liu Qingzao. Practical Management of Sport Events. People's Education Press, 2006(in Chinese)
- 4) IOC Manual for candidate cities for the games of the XXIX Olympiad 2008[Z]. Lausanne: International Olympic Committee, 2000
- 5) Glenn Bowdin, Johnny Allen, William O'Toole, Rob Harris, Ian McDonnell, Events Management, Routledge London and New York 2011.
- 6) Oliver Thomas, Bettina Hermes, Peter Loos, "Reference modelbased event management," International Journal of Event Management Research, Volume 4, Number 1, 2008.
- 7) Xu Chunjiao, Chu Dianhui, Li Chunshan, "City Event Management System Based on Multiple Data Source", International Conference on Service Science (ICSS), 2015.
- Masayuki Otani, Toru Ishida, Yohei Murakami, Takao Nakaguchi, "Event management for simultaneous actions in the Internet of Things", IEEE 3rd World Forum on Internet of Things (WF-IoT), 2016.

### AUTHORS

**Mr.S.Muthu Krishnan** doing final year MCA in Francis Xavier Engineering College.

**Mrs. D. Angeline Ranjithamani** is working as Assistant Professor and HOD in the Department of Computer Applications, Francis Xavier Engineering College. She is having teaching experience of 12+ years. Her area of interest is Wireless Sensor networks.

Ms.C.Deepa doing first year MCA in Francis Xavier Engineering College.





# SCAD GEO SPATIAL WEB SOLUTION

# Roshini<sup>1</sup> and Angelin Ranjithamani<sup>2</sup> Deepa<sup>3</sup>

<sup>1</sup>Department of Computer Application, Francis Xavier Engineering College.

## <sup>2</sup>HOD,Department of Computer Application, Francis Xavier Engineering College.

<sup>3</sup>Department of Computer Application, Francis Xavier Engineering College.

#### ABSTRACT

Local bodies like municipalities need collect different kind of taxes from the citizens. Every citizen need to pay Water Bills and Electricity Bills to the particular authorities. Actually a citizen want to pay his municipal tax means he should go to municipal office and collect the necessary bill, pay there only. Same as water and electricity bills. This is not an easy job to get all these tax information in different authorities now days. For that purpose we are developing this application, which can collect the tax information from different authorities based on the house no's and owner name by using web services and stores the data in our own database. For getting the information regarding taxes citizens need to register first. The bill are calculating on different modes like annual, half yearly, quarterly etc... By using the user id and password citizens can log into the system and collect the necessary information from the home page. For this every user need to provide his house no and owner name. By clicking on the search button they will get their own. The smart city is equipped with the electronic circuitry where the weight of the garbage in the bin is measured and the value is updated in the database. The database of the families will be created and maintained by the municipality. A web portal gives the involved people and authorities access to the related information. A house is penalized for every kilogram more than the allotted garbage weight limit. Further enhancements are explored. Thus, the residents are incentivized to produce lesser waste.

### **KEYWORDS**

Payments, Tax and Bills

## **1. INTRODUCTION**

Local bodies like municipalities need collect different kind of taxes from the citizens. Every citizen need to pay Water Bills and Electricity Bills to the particular authorities. Actually a citizen want to pay his municipal tax means he should go to municipal office and collect the necessary bill, pay there only. Same as water and electricity bills. This is not an easy job to get all these tax information in different authorities now days.

For that reason we are building up this application, which can gather the assessment data from various specialists in light of the house no's and proprietor name by utilizing Web Services and stores the information in our own database. Forgetting the data with respect to charges natives need to enroll first. The bill is ascertaining on various modes like yearly, half-yearly, quarterly and so on.

By utilizing the client id and secret key nationals can sign into the framework and gather the important data from the landing page. Supply of drinking water, Providing and keeping up waste and sewage frameworks, Public road lighting, Maintaining sanitation and cleanliness of open spots, Providing Electricity Connection to national houses, Providing Water Connection to houses, Municipal Maintenance.

For that purpose we are developing this application, which can collect the tax information from different authorities based on the house no's and owner name by using web services and stores the data in our own database. For getting the information regarding taxes citizens need to register first. The bill are calculating on different modes like annual, half yearly, quarterly etc...

# 2. PROBLEM STATEMENT

The current framework is the manual framework. Here the representatives need to spare the data as exceed expectations sheets or Disk Drives. There is no sharing is conceivable if the information is as paper or Disk drives. Looking for specific data is exceptionally basic it requires the parcel of investment. Social occasion data from various sources isn't a simple occupation, information will be botched. Ascertaining distinctive bills physically going to be as a procedure of error. There is no interface to give different bills in the current framework. In the current framework native get the bill's data physically, in different specialists like water board, power office, property impose division and so on.

The improvement of this new framework contains the accompanying exercises, which endeavor to mechanize the whole procedure keeping in the perspective of database joining approach. There no weight of figuring water, electric, house impose charges in this framework, by sending a demand to the specific expert by means of web benefit we can get all the data with respect to these issues. The organization is the primary individual of this framework. He can have every one of the benefits to do anything in this framework. An administrator can get the data with respect to national's water charges, electric bills, and city charges from different sources. For that chairman need to send a demand for that specific specialist toss web administrations.



Figure: 1 Architecture Diagram

# **3. EXPERIMENT AND RESULTS**

#### **3.1 Administration**

Administration is the main person of this system. He can have all the privileges to do anything in this system. Admin can get the information regarding citizen's water bills, electric bills, and municipal taxes from various sources. For that administrator need to send a request for that particular authority throw web services.

#### **3.2 Citizen Bill Information**

The system interface is going to show the Bill information of different authorities. The bills mainly going to these types ,Water Bills , Electricity Bills , Property Taxes These interface also shows the, Pending Bills, Penalties, Due Dates.

#### 3.3 Search

By using the user id and password citizens can log into the system and collect the necessary information from the home page. For this every user need to provide his house no and owner name. By clicking on the search button they will get their own.

- House Members Details
- Electricity Bill Details
- ✤ Water Bill Details
- Pending Bills
- Dues Dates

#### **3.4 Reports**

The problem can be reported in the pages. For Example,

- Supply of Drinking Water.
- Providing Water connection to houses.
- Sending water bills to houses.
- Public Street Lighting.
- ✤ Maintaining sanitation and hygiene of public places.

#### **3.5 Database Collections**

The administrative user interface concentrates on the consistent information that is practically, part of the organizational activities and which needs proper authentication for the data collection. The interfaces help the administrations with all the transactional states like Data insertion, Data deletion and Data updating along with the extensive data search capabilities. The operational or generic user interface helps the users upon the system in transactions through the existing data and required services. The operational user interface also helps the ordinary users in managing their own information helps the ordinary users in managing their own information in a customized manner as per the assisted flexibilities

# **3.6 About Project**

The major inputs and outputs and major functions of the system are follows:

Admin enter his user id and password for login. User enters his user id and password for login. Admin enter user id or date for track the user login information New users give his completed personnel, address and phone details for registration. Admin gives different kind of user information for search the user data. User gives his user id, hint question, answer for getting the forgotten password. User request for Municipal Bill. Admin can have his own home page.

Users enter their own home page. The user defined data can store in the centralized database. Admin will get the login information of a particular user. The new user's data will be stored in the centralized database. Admin get the search details of different criteria. User can get his forgot password. User can get the Bill Details.

### **Output Screen**



Figure: 2 Login Page

148

SGSWS		HOME LOGIN REGISTER
	Register Page	
	Usemame	
	Phone Number	
	Password	
	Confirm Password	

Figure: 3 Registration Page

B SCAD GEO SPATIAL WEB SOLUTIE × +					-	đ	×
← → C ill localhost-44387/USER/housememberdetails.asp	204				立	* 0	1
👯 Apps 🌀 Gmail 💼 YouTube 🛃 Maps 📒 sms							
SGSWS ⊮∞	ME HOUSE MEMBERS DETAILS	ELECTRICITY BILL DETAILS	WATER BILL DETAILS	TAXES	REPORT COMPLAINTS		Î
Title		Door Number					
Select							
House Owner Name		Address					ł
D.O.B		City					
dd-mm-yyyy		Select					-1
Phone Number		Email ID					
State		Electricity Bill					J
Select		Selected					
Pincode Number		Road Tax				^	L.
https://iocalhostx44387/USER/housememberdetails.aspx		Selected				_	
🖶 🔎 Type here to search 🛛 O	े म 💽 🗖 💼	8 🐰 🚺 刘			^ ପ୍ରିଇଠ ∉େ ସ୍ଶିଇମସ ୁ	15:04 4-02-2021	5

Figure: 4 House Member Details

SGSWS	HOME ADD CITIZEN SHOW RENDING BILL + P	AID BILLS REPORT COMPLAINTS STATUS COMPLAINTS LOGOUT
	Your Bills	
Name	Aadhar Number	Bill Amount
Last Date dd-mm-yyyy	Today Date	Penalty Amount
Summary	Account Holder Name	Account Number
IFSC Code	Paid Amount	

Figure: 5 Bill Payment





9	SGSWS	HOME	HOUSE MEMBERS DETAILS ELECTRICITY BILL DE	TAKS WATER BILL DETAILS TAXES REM	ORT COMPLAINTS
es Upload			City	Phone Number	
ioose File	No file chosen		Select		
ten Name			State	Complaint Date	
			Select	dd-mm-yyyy	
dress 1			Pincode	Complaint	
dress 2			Email ID		

Figure: 7 Report Complaints



Figure: 8 Report Complaints





	SGSWS		номе	CITIZEN DETAILS	WELC:	ENDING	BILL ~ PAID BILL	COMPLAINTS SOLVED C	OMPLAINT LOGOU	T
11	กใช้ เรื่อง							-	J.	A
					lear D	otail	c			
					JSEI D	cran	.5			
d Ti	itle House_Owner_Nam	D_0_8	Door_Number	Address	City	State	Pincode_Number	Number_of_Members	Phone_Number	Email_ID

Figure: 10 Citizen's Details

SGSW	9 Mapa 📙 una	HOME CIT	IZEN DETAILS	BILL ~	BENDING	BILL Y PAID	BILL COMPLAINTS SOLVED	COMPLAINT LOGO	л
				WE	LCOME	1 t			
	h	<b>B</b> al		7			ht.	á	1
14		a I	в	endi	ing Bi	lls	i. Ö	ń	
Citizen, Name	Door,Number	Address,1	City	endi	ing Bi	lls phone	email	Adher,Number	bill, last, o

Figure: 11 Bills



Figure: 12 Bending Bills

SGSWS	HOME	CITIZEN DETAILS	III BENDING BILL -	PAID BILL	COMPLAINTS	SOLVED COMPLAINT	LOGOUT
		Cr	ompalints				
		Name	Jinpatints				
		Phone					
		Date					
		dd-mm-yyyy Summary					

Figure: 13 Paid Bills

M Grai	<ul> <li>YouTub</li> </ul>	e 💡 Mapa 📙 a	71										
S	GSV	VS	ном	спи	DEN DETAILS	BIL . BENDING BILL . P	AID BILL COM	PLAINTS	SOLVED COM	IPLAINT	LOGOUT		
						Č.						A	
						Compalints							
						compatints							
id	i Name	Address_1	City	State	Pincode	Email ID	Phone Number	Report Date	Complaint	Date	Status	Sum	mary

Figure: 14 Complaint Actions

1 22 matter • 1	1월월월 8월88 이 · 이 · 고구남왕 8 · · · · · · · · · · · · · · · · · ·	2 Se 11 - 1
Anter Experior Comment - U and - U an	SQLOwyLate:         Additional (Split Additiona) (Split Additiona) (Sp	appendix         - 3 - 4           Correct correction parameters
Convice Booker     Convertient of the converti	2 2 No. Nationali 1999-2016 451 vez dinc, sztanist Teurinkei Taul Holo 627303 2 C 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Display name Display Anton Adda San Display Name Display Anton Adda San Display Anton Adda San Display Adda

Figure: 15 Solved Complaints

#### **PERFORMANCE ANALYSIS**

The existing and proposed systems are analyzed. The problems can be easily rectified with this concept. Nearly 70% of the performance has been increased.

### **4.** CONCLUSION

It has been a great pleasure for me to work on this exciting and challenging project. This project proved good for me as it provided practical knowledge of not only programming in ASP.NET andC#.NET web based application and no some extent Windows. It also provides knowledge about the latest technology used in developing web enabled application and client server technology that will be great demand in future. This will provide better opportunities and guidance in future in developing projects independently.

### **5. FUTURE ENHANCEMENT**

This System being web-based and an undertaking of Cyber Security Division, needs to be thoroughly tested to find out any security gaps. A console for the data centre may be made available to allow the personnel to monitor on the sites which were cleared for hosting during a particular period. Moreover, it is just a beginning; further the system may be utilized in various other types of auditing operation viz. Network auditing or similar process/workflow based applications.

#### REFERENCES

- PimpriChinchwad Municipal Corporation, "SMS and Web-Based Complaint Monitoring System," Viewed
   Jul.2012;http://www.asci.org.in/ICT/Resources/CaseStudies/CITIZENCENTRIC/32SMS%20&%20
   Web%20based%20Complaint%20Monitoring%20System%20Pimpri%20Chinchwad.PDF
- [2] e-scrap news, Special Report, Feb. 2004.
- [3] The National Safety Council, "Electronic Product Recovery and Recycling Baseline Report: Recycling of Selected Electronic Products in the United States," 1999.

- [4] Communications with Goodwill Industries of Central Texas, 2004 and 2005.
- [5] S. Kucuk, F. Arslan, M. Bayrak, G. Contreras, Load management of industrial facilities electrical system using intelligent supervision, control and monitoring systems, in: International Symposium on Networks, Computers and Communications (ISNCC), 2016.
- [6] Afify, E., Hegazy, A., & El-Sayed, M., (2011). "A Model For Customer Complaint Management System using SOA. ", In Proceedings of the 15th WSEAS International Conference on Computers, World Scientific and Engineering Academy and Society (WSEAS), 291-296.
- [7] Liu, L.; Li, B.; Zlatanova, S.; Liu, H. The Path from Bim to a 3d Indoor Framework—A Requirement Analysis. Int. Arch. Photogramm. Remote Sens. Spat. Inf. Sci. 2018, XLII–4, 373–378.
- [8] Sirdeshmukh, N.; Verbree, E.; Oosterom, P.V.; Psomadaki, S.; Kodde, M. Utilizing a Discrete Global Grid System for Handling Point Clouds with Varying Locations, Times, and Levels of Detail. Cartographica: Int. J. Geogr. Inf. Geovis. 2019, 54, 4–15.
- [9] Breunig, M.; Kuper, P.V.; Butwilowski, E.; Thomsen, A.; Jahn, M.; Dittrich, A.; Al-Doori, M.; Golovko, D.; Menninghaus, M. The story of DB4GeO—A service-based geo-database architecture to support multi-dimensional data analysis and visualization. ISPRS J. Photogramm. Remote Sens. 2016, 117, 187–205.
- [10] Kuper, P.V. Efficient and Practical Handling of Spatio-Temporal Data Based on Time-Dependent Net Components. Int. Arch. Photogramm. Remote Sens. Spat. Inf. Sci. 2018, XLII–4, 321–327.

.

Ms.A.Roshini doing final year MCA in Francis Xavier Engineering College.

**Mrs. D. Angeline Ranjithamani** is working as Assistant Professor and HOD in the Department of Computer Applications, Francis Xavier Engineering College. She is having teaching experience of 12+ years. Her area of interest is Wireless Sensor networks.

Ms.C.Deepa doing first year MCA in Francis Xavier Engineering College.





# **ONLINE ELECTRICAL GOODS AND CREW**

S.PaulPushpa<sup>1</sup> and D.AngelineRanjithamani<sup>2</sup> S.Sowmiya<sup>3</sup>

<sup>1</sup>Department of Computer Application, Francis Xavier Engineering College

## <sup>2</sup>AP,Department of Computer Application, Francis Xavier Engineering College

<sup>3</sup>Department of Computer Application, Francis Xavier Engineering College

### ABSTRACT

The Online Shopping is a web based application intended for online retailers. The main objective of this application is to make it interactive and its ease of use. Electronic Commerce is process of doing business through computer networks. A person sitting on his chair in front of a computer can access all the facilities of the Internet to buy or sell the products. Unlike traditional commerce that is carried out physically with effort of a person to go & get products, ecommerce has made it easier for human to reduce physical work and to save time. It Provide full electrical work for home and shops etc... We are full responsibility for the work and the website was also include employee allocation details for admin only. In today's fast-changing business environment, it's extremely important to be able to respond to client needs in the most effective and timely manner. If their customers wish to see our business online and have instant access to your products or services. Using asp .net for creating this website, Developing Language is C#, Designing languages are CSS and Html. These include multi-tiered architecture, server and client side scripting techniques, implementation technologies such as ASP.NET, programming language (such as C#) and relational databases. The search engine provides an easy and convenient way to search for products where a user can Search for a product interactively and the search engine would refine the products available based on the user's input.

### **KEYWORDS**

Payment, Product, database

### **1. INTRODUCTION**

Ecommerce business drives profitable growth with reduction is cost-to-customer, developing customer-reach, and providing a unique customer experience. It has become more than essential for B2B as well as other businesses to make the right use of ecommerce. Now, ecommerce is evolving or better say evolved into digital commerce that implies to the entire business journey from buying to delivery with an online experience. This website was developed for my brother. If that was having a admin page and customer page. Main objective of this project.

- ✓ Reduce management costs
- ✓ Developing business relation
- ✓ Providing a unique customer experience
- ✓ Increasing the number of loyal customers
- ✓ Increasing sales

The second section discuss about the literature review and continued by problem statements. The fourth section gives the feasibility study, experiments and results followed by the conclusion and future enhancement.

#### **2. LITERATURE SURVEY**

The said research paper involves a study of the impact of Electronic Commerce on Business. The research study has highlighted the Management Information Systems, Finance and Accounting, Marketing and Computer Sciences of E-Commerce on Business. E-commerce is a way of conducting business over the Internet.

Zhiqiang Zhu: Compared with the huge demand of work forces in Chinese e-business, it is not optimistic about the career opportunity for graduates with e-commerce major at national level. The e-commerce employment rate is much lower than other business major averagely. Aiming at accelerating the reform of higher education system in e-commerce academic program, this paper presents a study on the knowledge structure of talents in applied e-commerce with vocational skills. Such study provides a scientific insight into the future curriculum development and pedagogy of e-commerce higher education.Zhu Lei:-The paper conducts a domestic E-Commerce research topics evolution statistical analysis based on 139 E-Commerce related literature published in 12 different core journals during 2006 to 2010 and explores the evolution process of E-Commerce research topics through perspectives of year distribution, author distribution, source journals distribution, keywords distribution and research topics distribution. This paper also concludes the following three main aspects: 1.the amount of E-Commerce related literature is decreasing year by year during 2006 to 2010; 2. there are steady research journals and researchers in ecommerce; 3. E-Commerce research is relatively concentrated.Liu Jinhua: with the rapid development of Electronic Commerce, the society requires an increasing number of Electronic Commerce talents. The main task of higher vocational education is to provide for the society all sorts of talents with high application skills as soon as possible and serve the development of social economy. This paper analyzes the status of e-commerce professional training in higher vocational colleges, and proposes ideas and solutions for the lack of Electronic Commerce curriculum, provides help for the training of e-commerce applied talents. XuHao : Now the B2B E-business websites compete fiercely, and a website s visiting quantity becomes an important factor for improving its profit. Information, design, assurance and communication are four dimensions of ecommerce website success model. This paper provides the empirical test of an adaptation of DeLone and McLean's IS success model in the context of e-commerce. We examined the key characteristics of e-commerce website. Exploratory factor analysis and confirmatory factor analysis are applied to data collected by questionnaire from 329 users of ecommerce websites. Syed EmdadUllah: E-commerce in Bangladesh actually started in the year of 1999 based in USA with some non-resident Bangladeshis. Our motto is to develop an enriched ecommerce website in our country that should be largely accepted by the customers. The database design is also discussed with an emphasis on its relational connectivity. People in the developed world and a growing number of people in the developing world now use ecommerce websites on a daily basis to make their everyday purchases. People in the developed world and a growing number of people in the developing world now use ecommerce websites on a daily basis to make their everyday purchases.Dan Zhao: This paper firstly defines the meaning of the enterprise website credibility. Secondly, it divides the enterprise website credibility into three parts: the website image credibility, the information content credibility and the business function credibility. An enterprise website is defined as a website that can provide appropriate services by computer technology, information technology, and network technology in order to establish a good corporate image and make the outside world understand the enterprise. It does not simply mean a group of web pages. BaljeetKaur: E-Commerce industry has experienced astounding growth in recent years. For the successful implementation of a B2C E-business, it is necessary to

understand the trust issues associated with the online environment which holds the customer back from shopping online. This paper proposes a model to discern the impact of trust factors pertaining in Indian E-Commerce marketplace on the customers' intention to purchase from an e-store.

# **3. PROBLEM STATEMENT**

#### **Existing System**

Many customer go for purchasing offline so as to examine the product and hold the possession of the product just after payment for the product. The existing system was used to just order the electrical things. Some places cannot allowed the door delivery. Payment was COD was cannot available for many places. Most of the website was high price for every product. Example website: eleczo.com, bestofelectrical. In this contemporary world customer's loyalty depends upon the consistent ability to deliver quality, value and satisfaction. Offline shopping has a sense of immediacy. You get to posses the item you've purchased the very moment. To buy any product user has to collect information about it either by visiting the shop or asking people which is the better one. Then the admin also cannot maintain the records.

### Drawbacks

- $\checkmark$  Lack of personal community and connection
- ✓ Security. The biggest drawback of e-commerce is the issue of security.
- ✓ Lack of privacy. Many websites do not have high encryption for secure online transaction or to protect online identity. Tax issue.
- ✓ Fear.
- ✓ Product suitability.
- $\checkmark$  Cultural obstacles.
- ✓ High Labour cost.
- $\checkmark$  Legal issues.

#### **Proposed System**

Idea was to create a separate page for the customer for wiring work.Some packages are there. Admin only wasaddinga workers detail. The main assured for this company workers was complete the full wiring work in correct time.The whole sale product was available.That website was basically easy to communicate with the wireman.Our main dream of this website everyone must get a lowest price items and wiring works.

#### Advantages

- ✓ Faster buying process
- ✓ Store and product listing creation
- $\checkmark$  Cost reduction
- ✓ Affordable advertising and marketing
- ✓ Flexibility for customers
- $\checkmark$  No reach limitations
- ✓ Product and price comparison
- ✓ Faster response to buyer/market demands
- ✓ Several payment modes

## **Architecture Diagram**



Figure 1: Architecture Diagram

#### **4. EXPERIMENT AND RESULT**

#### **Module Description**

The project "Online Electrical Goods and Grew" consists 5 modules for optimizing education system.

- 1. Admin Page
- 2. All Categories
- 3. Packages
- 4. Payment
- 5. Registration
- 6. Mail send
- 7. About Us

#### Admin page

Login : The admin also have a separate user name and password. Worker register: Then the Admin was also Add a Workers Details. Then that was also display for admin only. And also display the registered workers and customer was display in admin page. Payment: That module was display the customer Payment details. That details only view the admin. This module was build to manage the user registration, user authentication, Admin interface, user login and successful logout from the application. The user details are enrolled into the database with a registration form. Login form interfaces with the user to get the username and password, and authenticates the valid user.

#### **All Categories**

This module will display all the types of electrical goods and their description. The images of the electrical items will display the item description and the price of the product. That also includes the search option. Then click the Add to cart option then that product was display in Add to Cart Page. That selected product was display in add to cart page then make a payment.

#### **Packages**

This package module is used to display all the packages details of the electrical and employers details. Inside this package module there are three packages. They are: 1.Premium Elite Package 2.Premium Package 3.Golden Package. The Premium Elite Package contains all the higher-end products and the advanced technology electrical products will be awarded in it. The Premium Package contains some of the higher-end products and some of the branded technology electrical products. The Golden Package contains the second quality products and the count of the employers is also low in it.

#### Payment

Online payment usually is the transaction that results in transfer of monetary funds from the customer bank or credit card account to your bank account. The customer picks up an item and pulls out their card. The merchant submits a transaction. The payment gateway securely sends the transaction to the processor. The processor verifies and approves the transaction. The use of e-payments cancels out the use of drafting checks, transmitting cash and invoices for both businesses and customers.

#### Registration

Two registrations was there 1.Customer2.Worker.Enter the basic details of the people or worker. That details was stored in database and get the details from database using customer login. Then that was display in Admin Page. Registration only happens the first time you access the system. It is a way to check your credentials. Every time after your initial registration, you will log on to the system using the username and password you created.

#### Mail send

The admin was send a mail to the worker for sharing the working place and details. The from email was default company mail id. To email id was workers email id. Update the details about the work place and sending a products. A process sends an email to a user and another process receives the email, by either sending a response to the sender, or writing it to a log in the console.

#### **About Us**

About Us module will display the company details which is known as when did the company started. What are all the achievements for the company will achieve. The about us page is often a reflection of the purpose and personality of the business and its owners or top employees. Finally, the page can also incorporate contact or locational information. One way to view the about us concept is as a text self-portrait or short autobiography created by a business.



# **Output Screen**

Figure 3: Admin login



#### Figure 4: Admin page

😰 W	hatsApp		3	K 🖪 good	s and crew	×	3 (581) front page de	sign in html a 🗙	+		×
← →	C	<li>Ioca</li>	lhost:2981	7/eletrical/wo	orkerreg.aspx				\$	🗄 🗯 🌑 💷	date 🚦
App App	is M	Gmail 🕒	YouTube	💡 Maps	🕙 New Tab	G registration code	fo 📢 coding fo	rall catege 🤸 Le	eft Half and Right	WhatsApp	
F	lect	rical G	oods	and	HOME	WORKERS DETA	ILS PAYMENT	REG CUSTOM	REG WORKER	MAIL SEND	^
- C	rew	iter emp_e	email	ana	100010						
					100001						
	_										
	er	ter emp_s	alary								
	er	ter asigne	d custom	er							- 1
											- 1
s	ub	nit		Reset							- 1
											- 1
											- 1
REC	als	TER	ED V	VORK	ERS						
emp	_id	emp_i	name	dob	add	ress	mobile	email		salary	asi
1		nuchn	-	03/10/	oo mela	а	67676767	67 puchp	a Ogmail og	2000	
		pushp	d	05/10/	<sup>55</sup> thuv	araikulam	0/0/0/0/	or pushp	a@ginall.co	511 20000	<u> </u>
•	_			_							

#### Figure 5: Worker Registered by Admin



Figure 6: User Register

😢 WhatsAp	iP.		× 8	goods at	nd crew	× (381) front page design in html	× +	-	- ×
← → C III Apps ►	Gmail	calhost: • YouTi	19817/eletra	cal/regcu	istom.aspx NewTab <mark>G</mark> registrat	tion code fo 🐄 coding for all catage	ងំ 🔆 Left Half and Righ	r 🔝 🎘 🚳 🗍	Update 1
Elec Crev	trical v	Good	ls and		HOME WORKER	S DETAILS PAYMENT REG CU	STOM REG WOR	RKER MAIL SEND	
		10			B		6	10.2	
REGISTE	RED C	UST	OMERS	5					
REGISTE	RED (	UST ie m	OMER:	5	dob	email	password	cpassword	gen
REGISTE fname	RED ( Inam	UST ie m	OMERS	5	dob	email	password	cpassword	gen Male
REGISTE fname pushpa	RED ( Inam	UST ie m 4	OMERS nobile	1545	<b>dob</b> 03/10/99	email pushpa@gmail.com	password 12345	cpassword	gen Male Male
REGISTE fname pushpa ixon	RED C Inam s push	UST e m 4 pa 7	OMERS 10bile 545454	5 1545 9532	dob 03/10/99 12/10/2018	email pushpa@gmail.com jixon@gmail.com	password 12345 Jixon123	cpassword 12345 jixon123	gen Male Male
REGISTE fname pushpa jixon	RED ( Inam s push	UST ie m 4! pa 7!	OMERS nobile 545454 558119	5 1545 9532	<b>dob</b> 03/10/99 12/10/2018	email pushpa@gmail.com jixon@gmail.com	password 12345 Jixon123	cpassword 12345 Jixon123	gen Male Male
REGISTE fname oushpa ixon	RED ( Inam s push	UST e m 4 pa 7	OMERS 10bile 54545454 5558119	5 1545 9532	dob 03/10/99 12/10/2018	email pushpa@gmail.com jixon@gmail.com	password 12345 Jixon123	cpassword 12345 jixon123	gen Mal Mal

Figure 7: Registered Customer



Figure 8: User Page



Figure 9: All Categories

⊙ fut.   ⊙ exi:   ⊙ er c   🖪	goc 🕼 🌀 exi: 🕼 abc 🔒 🚺 (1) 🗍	M dov   O Inst   G elet	🔄 edit   😋 loc:	🛛 × 🕝 cok   •	+ - • ×
$\leftarrow \rightarrow \mathbf{C}$ (1) localhost:2	8687/bank1/Default.aspx			Q 🕁	🛚 🗯 🚳 🗍 Update 🚦
🖬 Apps M Gmail 🖸 YouTu	ibe ♀ Maps 🐄 coding for all cate	ege 🔺 Left Half and Right	🜖 WhatsApp 😋	color picker tool	B goods and crew **
	BANK TRNS	व्यन			
	DADR INTO				
	From Account number	1223323434			
	To Account Number	24342424244			
	Pin Number	2323			
	Amount	4500			
	Cancel	Transfer			
	Label				

Figure 10: Bank transfer

8		eletrica	al - Microsoft \	/isual Studio			- 8 ×
File Edit View Project	Build Debug Team Data	a Table Designer Too	Is Architecture	Test Analyze	Window Help		
i 🔂 • 🖾 • 🐸 🛃 🥥	おいろ ウ・ページ	- 🖏 🕨 Debug	<ul> <li>Any CPU</li> </ul>		🖄 form		- 🗠 🕾 🖬 🕸 🗶 🖬 🕻
14111日日日日	Spatial Indexes 💂						
Toolbox - 🖣 🗙	dbo.allcat: TableECTRICALS	HOP.MDF) $\times$ allcateus	er.aspx.cs all	cateuser.aspx	Allcategories.aspx	=	Solution Explorer 🛛 🔫 🗮 🗙
4 General	Column Name	Data Type	Allow Nulls				🕞 🖬 🛃 🖸 🔟 🌘 🐌
There are no usable	productid	int	•				all cate
controls in this group.	picpath	varchar(50)	•				allcat
Drag an item onto this text to add it to the	productname	varchar(50)					App_Data
toolbox.	price	varchar(50)					Controller
	Detail	varchar(50)					b image forms
	keywords	varchar(50)					b implementation implementation in the second se
							images
							pack1image
							b impackages
							style
							aboutus.aspx
xplorer * 🗆 ×							aboutuser.aspx
1 AF 🚽 🔉							adminhome1.aspx
i price ^	Column Properties						adminlogin.aspx
adminlogin							Adminmaster.master
a 🛄 alicat	21 =	21 E					adminpayment.aspx
productid	⊿ (General)					^	ads.xml
picpath	(Name)		keywords			- 11	Allcategories.aspx
productni price	Data Type		varchar				alicateuser.aspx
Detail	Default Value or Bindin	a	Turchor .				changepassword.asp
keywords	Length	-	50			~	changepassword
employee	(General)						b Calcheckout.aspx
Iogin							contactus.aspx
b pack							< >
a 🛄 package							💐 Solu 📷 Prop 💐 Clas
🔟 picpath							
	📋 🥝 🚺	> 📀 🌔	<b>W</b>	P3 🔛	0		▲

Figure 11: Database

#### **PERFORMANCE ANALYSIS**

The existing and proposed systems are analysed. The problems can be easily rectified with this concept. Nearly 70% of the performance has been increased.

#### **5.** CONCLUSION

Technology has made significant progress over the years to provide consumers a better online shopping experience and will continue to do so for years to come. With the rapid growth of products and brands, people have speculated that online shopping will overtake instore shopping. E-Commerce applications that started in early 1970's needs to be still developed in terms of security and efficiency. Electrical goods and crew website to developed using asp.net and SQL Server. This website provides a wiring works and electrical items lowest price. website has been based on the electricians, customer and company. And it will resolve the crowd in the offline shops. Some packages was Added in this Website for wiring works. Online shopping can save time for both the buyer and retailer, reducing phone calls about availability, specifications, hours of operation or other information easily found on company and product pages.

#### **6. FUTURE ENHANCEMENT**

The membership card for the website has been issued for the users who have been using this website especially the electricians. An I'd card scheme has been introduced for the dealers for their authorised dealership. The workers login has to be created for the workers who are all selected for this website with a respective training. Email is send to the users who has been purchased in the website with the verification process. Some of the promo code has been given for the members in the website and the offer amount is based on, in according with the users purchase. Maximum amount of offer is 50%.

#### REFERENCES

- [1] Electronic Commerce: A Study on Benefits and Challenges in an Emerging Economy By Abdul Gaffar Khan Mawlana Bhashani Science and Technology University, Bangladesh.
- [2] Study & Development of E-Commerce Website Aaftab Aalam1, Shivansh Mishra2, Satyam Sharma3, Richa Gupta4 1,2,3Student, Dept. of Electronics and Communication Engineering, RKGIT Ghaziabad, Uttar Pradesh, India.
- [3] E-Commerce: An Overview of Adoption and Its Effectiv Implementation Maureen Semu Kabugumila Department of Business and Entrepreneurship Studies National Institute of Transport Tanzania
- [4] "THE IMPACT OF ELECTRONIC COMMERCE ON BUSINESS ORGANIZATION" Rajneesh Shahjee.
- [5] C. Seemiller, and M. Grace, Generation Z Goes to College. San Fransico, CA. Jossey-Bass, 2016.
- [6] E-COMMERCE- BUSINESS- TECHNOLOGY- SOCIETY R.Tamilarasi 1, Dr.N.Elamathi 2 1 Research Scholar, Trinity College for Women, Namakkal. TamilNadu, India 2 Assistant Professor, Department of Computer Science, Trinity College for Women, Namakkal, TamilNadu, India
- [7] Electronic Commerce Research, Editor-in-Chief J. Christopher Westland Publishing model Hybrid (Transformative Journal).

#### WEBSITE REFERRED

- 1) www.ieeeexplore.ieee.org
- 2) www.scirbd.org
- 3) http://www.about-elearning.com/elearning-advantages-anddisadvantages.html
- 4) http://www.khanacademy.org.
- 5) https://en.wikipedia.org/wiki/History\_of\_education\_in\_the\_Indian\_subcontinent

# AUTHORS

**Ms. S. Paul Pushpa** doing final year MCA in Francis Xavier Engineering College

**Mrs D. Angeline Ranjithamani** is working as Assistant Professor and HOD in the Department of Computer Applications, Francis Xavier Engineering College. She is having teaching experience of 12+ years. Her area of interest is Wireless Sensor networks

**MS. S. Sowmiya** doing first year MCA in Francis Xavier Engineering College







# E-CARDS DOWNLOAD

# K Rabiyathul Basaria<sup>1</sup> and S Sujitha<sup>2</sup> K Nambi Natchiar<sup>3</sup>

<sup>1</sup>Department of Computer Applications, Francis Xavier Engineering College

<sup>2</sup>Department of Computer Applications, Francis Xavier Engineering College

<sup>3</sup>Department of Computer Applications, Francis Xavier Engineering College

#### ABSTRACT

This "E-Card Downloading application" is to design and develop for well secured dynamic application used for easy retrieval of necessary cards. Issued in the form of a standardized application, which includes the details like Driving license, Voter Id, Ration Card and Aadhar Card. Sometimes we come across the need of submitting or to show the proof of hardware copy of cards at this time this e-card application which is an safest application used for downloading cards of our necessary. This application also contains OTP generation in which the otp is send to the registered mail id so that we can protect our details from others.

### **KEYWORDS**

Smart card, otp, verification, download

### **1. INTRODUCTION**

The main objective of the web application is to download all the four cards in one web application. In this web application user can download all these four cards Aadhar card, Driving licence, Ration card and Voter id through unique identity number. User can also contact the admin through chatbox for seeking help. card application is considered as an easy and safest downloading methods of an cards. E-card application helps people to download regarding cards of their own necessary. It also need less manpower to handle updating details of every citizens of the country. The usage of smart card is very popular in the world. Some institutions use smart card to support their business for example, identity card, stored digital money. This paper proposed design multi purpose smart card to create identity card and payment transactions. The design make smart card doesn't save some data directly in the smart card but in the server for account based system. Authentication process must be fast to serve many transactions on client. payment card, the smart card has a microprocessor or memory chip embedded in it that, when coupled with a reader, has the processing power to serve many different applications. As an access-control device, smart cards can be used to access server. Through their combination of portability and security, smart cards are playing an increasingly important role in the rapidly developing areas of electronic commerce and online information services. Smart card technology has advanced over the last 30 years: storage and processing capabilities are improved, security has been enhanced, the management software has matured, contactless technologies are available, and multiple applications are there. Aarti Bhosale, Shweta Bhor, Pratima Sabale, Pushpak Shinde, "Survey on Smart Ration Card using Internet of Things" International Journal of Computer Applications (0975 - 8887) Volume 180 - No.3, December 2017.Dr. Satyam Pincha, Kusum Lata Joriya, "Analytical Study on Aadhaar Card (UIDAI) and its inclusion into Public Services Delivery" Journal for Studies in Management and Planning .Fernandes e Fizardo, Mr. Chavan Nehal Sadguru, Mr. Usapkar Yatin Digamber Mr. Naik Swaraj Shankar, Miss. Raikar Ashma Kishor, "Smart License Card" IJSTE - International Journal of Science Technology & Engineering Volume 3 Issue 07 January Mala, A. Ashwini, J. Jayapratha, E. Vimala, "A Smart Driving License System in RTO Using Quantum Machine Learning Techniques" International Journal of Engineering Research & Technology (IJERT).Lakshmi, R. Karthikamani, N. Divya, "Aadhar Card based smart e-voting system" International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249 – 8958, Volume-8, Issue-2S, December 2018

# **2. PROBLEM STATEMENT**

#### Architecture diagram



Figure 1 Architecture diagram

# **3. EXPERIMENT AND RESULTS**

### A. Modules

- i. Cards Generation (Admin) : E-card application is an web based application used for downloading cards. In this modules we can create e-card, update e-card details like uploading aadhar card, driving licence, ration card and voter id files which to be download, view e-cards and store data
- ii. My Card : In this module user can download the regarding cards of their need. In this module it contains an unique identity number for downloading each cards. It contains an captcha and otp generation through which an citizen can safely download the document file. And user can chat with the admin through chatbot.
- iii. Create E-card : In this module admin can create all the details of the citizen through which they can download the regarding cards through "My card" module.

- iv. Update E-card : In this module admin can update all the cards of the citizen so that they can avoid the cards downloading of wrong details or expired cards
- v. View E-cards : In this module admin can view all the card details.

## **B.** Output Screen

🤰 tawk.to   Chat	× Solocalhost:1861/E-Card Downlood × +				-	٥	>
← → C () localhost1	51/E-Card%20Download/Mycard.aspx		,	Å 😈	<b>5</b> 1	6	
👖 Apps 🌼 Settings 👩 3 d	erent types of 🔇 New Tab 🔥 Learn to Program b 💄 IT Project	ts - Project 🧧 File sharing and sto	🔶 12 Open Source Int 🐴 C# Corr	er : Privacy			
ET AADHAR CARD							
adhaar is for every Resident (	India.						
rom a new born to a senior cit	en, everyone can enrol for Aadhaar.						
Verify Aadhar Card Downlo	d Aadhar Card						
ET DRIVING LICEN	E						
rving Licence is for every hu	an above tha age of 16 used for driving.						
riving Licence is an official d	cument that authorises its holder to operate various types of mot-	or vehicles on highways and some	other roads to which the public have	access.			
Verify Driving Licence Dow	cad Driving Licence						
	-						
ET RATION CARD							
ation Card is for every people	n India to purchase food grains.						
ation cards are issued by state	overnments in India to households that are eligible to purchase :	subsidised food grain from the Pub	lic Distribution System.		୍ୟ	ello	ъ.
Verify Ration Card Downlo	Ration Card				Solis	A	Q
					Ñ (	8	,

#### Figure1.Welcome Page

🖇 taekta   Oat X 🔕 locahot: 1861/E-Card Dawnios: X 🕂		-	σ	×
← → C () localhost:1861/E-Card%20Download/VAadhar.aspx	\$ <b>U</b>	50	* (	:
🛗 Apps 🎄 Settings 🔞 3 different types of 😵 New Tab 🚯 Learn to Program b 🕌 IT Projects - Project 💿 File sharing and sto 🔅 12 Open Source Int 💲 C# Cor	mer : Privac	у		
Here you can check if your Aadhaar or Aadhaar submitted to you is a genuine one or not. Resident's are using this service to verify the identity of their workers.				^
Enter 12 digit Aadhaar number (UID)				
Aadhar Number				
12 Digit UID (1234/1234/1234)				1
				- 1
Enter Aadhar Number				
				- 1
				- 1
Captcha Verification				- 1
Type the characters you see in the picture.				- 1
· · · · · · · · · · · · · · · · · · ·				- 1
COART				- 1
				- 1
				- 1
				- 1
Verify Aadhar Card				
📲 🖓 Type here to search 🛛 O 🗄 📵 🚍 💁 🤞 💽 🧕 🥥 🕸 🔿 🕸	🧿 📼 B	VG 14	2719M /3/2021	5

Figure 2. Verification Page


Figure 3. Verified Page



Figure 4. Download Page

Ji tavk.to Chat x	Siocalhost 1861/E-Card Downlos: x + Card%20Download/Aadharotp.aspx		- 0 x 0 5 * 6
Apps Settings 3 different	ppes of. () New Table (4 Learn to Program b.	If Projects - Project.     Image: The sharing and sto.       Image: Comparison of the sharing and sto.	12 Open Source Int. 👔 Of Corner : Privacy
MY CARD	ABOUT CARDS	CONTACT DETAILS	CARDS GENERATION
OTP verification!			
Aadhar Number			
Enter OTP			
Verity	910		
P Type here to search	O 🖽 🥘 🖡	1 🖸 🌢 💽 🗿 🖉 🕬	- 😰 🔨 😨 💀 BNG 129 PM 14/3/2021

Figure 5. OTP Verification



Figure 6. Desktop



Figure 7. User chatbot



Figure 8. Admin Chatbot



Figure 9. About Card Page

🦻 tawicto   Chat 🛛 🗙 🖉 localhost:1	861/E-Card Download X Solocalhost	1861/E-Card Download × +	- ø ×
← → C (3 localhost:1861/E-Card%20Dowr	load/Contactdetails.aspx		🖈 🗉 🖪 🎓 🌚 E
🔢 Apps 💠 Settings 🔥 3 different types of 🔇	New Tab 🛛 🚯 Learn to Program b 🚪	IT Projects - Project 🧧 File sharing and sto	🔶 12 Open Source Int 🛛 😫 C# Corner : Privacy
wole and	CARD	DOWNLO	DAD
MY CARD	ABOUT CARDS	CONTACT DETAILS	CARDS GENERATION
	Send	us a Message	
User Name			
Phone Number			
Email Address			
Message			
	MESSAGE		
E 🔎 Type here to search	o 🖽 📵 🗖	🛛 🔹 💽 🧕 🖕	xx 😟 🔼 🔨 🤅 🖬 ENG 👬 151.FM 🖏

Figure 10. Contact Page

🔰 tawk.to Chat 🛛 🗙 😒 localh	sst 1861/E-Card Download 🗴 🔇 localhost	1861/E-Card Download X +	- 0 ×
$\leftrightarrow$ $\rightarrow$ C () localhost1861/E-Card%20D	ownload/Cardsgeneration.aspx		🖈 🗉 🛃 🗯 😆 🗄
🔛 Apps 💠 Settings 🜔 3 different types of	🔇 New Tab 🕴 Learn to Program b 🚪	IT Projects - Project 🧧 File sharing and sto	🔅 12 Open Source Int 💲 C# Corner : Privacy
evice and	CARD	DOWNLO	DAD
MY CARD	ABOUT CARDS	CONTACT DETAILS	CARDS GENERATION
User Name			
Password			
	LOGIN		

4	$\mathcal P$ Type here to search	0	Ŭ.	0	•	۵	0	0	4	00		^ © 🖗 🖿 ENG 152.PM 14/3/2021 📆

Figure 11. Cards Generation Page

🔰 tawk.to   Chat 🛛 🗙 🛛 🖉 localhost.1861/E-Ca	nd Download 🗴 🙆 localhost:1861/E-Card Download 🗴 🕂	- 6 ×
← → C () localhost:1861/E-Card%20Download/Ca	rds.aspx	🖈 🖲 😹 🇯 😝 E
🗮 Apps 🏮 Settings 👩 3 different types of 🔇 New Tab	🚯 Learn to Program b 📲 IT Projects - Project 💿 File sharing and sto 🔶 12 Open Source Int	. 🐐 C# Corner : Privacy
E-C	CARD DOWNLOAD	
E-CARDS	INBOX	LOG OUT
	CREATE E-CARD	
	UPDATE E-CARD	
	VEN E-CARD	
. D Turne here to cearch		∧ Či 🕅 ∎3 ENG 153 PM 💽
y type have to scalled		14/3/2021

Figure 12. E-card page

राज्ये वार्य	E-C	ARD DOWNLO	DAD
	E-CARDS	INBOX	LOG OUT
	Name		
	Gender	Male v	
	DOB		
	Phone Number		
	Email		
	Address		
	Aadhar Card		





Figure 14. E-card View Page



Figure 15. Cards Update Page

C         0         balance 1581.C-arch32000ential/9800.exp         C         Image: Control of the control of	🔓 tzwik.to   C	Chat 🗙 🛛 🥹 localho	st:1861/E-Card Dow 🗴 🛛 🔕 localhost:1861/E-Card D	low x 🛛 🕲 localhost:1861/E-Card Dow x	localhost:1861/E-Card Do	- × +	-	0
	$\in \rightarrow c$	Iccalhost:1861/E-Card%	20Download/Inbox.aspx			Ϋ́	8	* 📵
E-CARD DOGMANIA         Incourt           LCADS         NIOX         LOGOUT           Name         Plans Number         datald978 gmail.com         in an inflining from fewer i warl laws.           Math         9/17054012         datald978 gmail.com         Bior cas i spdare ng code datal.           Ristya         16541022         datald976 gmail.com         Bior cas i spdare ng code datal.           Ristya         105410212         datald976 gmail.com         Bior cas i spdare ng code datal.           Math         9/1214265         markelistem of gmail.com         Bior cas i spdare ng code datal.           Math         9/1214265         markelistem of gmail.com         Bior cas i dovatad any conto?	🗄 Apps  🏚	Settings 🔞 3 different types of.	. 🚷 New Tab 🔥 Learn to Program b 📕 fi	Projects - Project 🧧 File sharing and sto	12 Open Source Int	🗧 C# Corner : Pr	ivecy	
LCARDS         NBOX         LOGOUT           None         Piess Number         Mail ID         Nexuge           Damilie         917054512         danafd/7@gmal.com         in an efficing form form i wall leves.           Multis         9171249671         methodulom/9@gmal.com         Hore can i update any cand details.           Rifys         76550912         indips99@gmal.com         Where can i update any cand details.           Mail         917124945         wangroup@gmal.com         Hore can i update any cand details.           Mail         917124945         wangroup@gmal.com         Hore can i update any cands.			E-CARD I	DOWNL	OAD			
Name         Passes Number         Mod ID         Message           Daumik         917055412         daaaidh?@gmall.com         noi an inffiring from firer i wart lawn.           Mudu         912136497         muthalshub@gmall.com         Birer cas i update myc of defails.           Rifya         7655459912         rifys998 gmall.com         Where cas i update myc odd defails.           dia         123465791         wupryn@gmall.com         Birer cas i update myc odd defails.           um         957612495         yman?05 gmall.com         Birer cas i update myc cash.?		E-CARDS		INBOX		LOG OUT		
Damik         917054112         damikh <sup>17</sup> @gmal.com         ain sufficing four four i ward lows.           Midu         917134967         methodushu9@gmal.com         Hore can i update sty card details.           Rifya         765530912         infra999@gmal.com         Where can i update sty card details.           Bai         1214657901         waperqu@gmal.com         Hore can i update sty card details.           Man         957612495         wanaf 056 gmal.com         Hore can i dowaload sty cash?	Name	Phone Number	Mail ID		Message			
Mutha         9812340567         muthalakhan@@gmall.com         How can i update my card details.           Rifys         rifsyr99/gmall.com         Where can i update my card details.           da         123456719         wqueyaq@gmall.com         Where can i update my card details.           Mana         PK7512485         wana16@gmall.com         How can i download my cards?		00200004010	descript 07(2) annual annu	1				
Rhfys         765540012         rhfys90@gmail.com         Where cas i update my coels denils?           da         1234567391         vuerpreq@gmail.com         Where cas i download my cash?           Mann         977612495         vuerpreq@gmail.com         How cas i download my cash?	Daanish	98/0024312	cautions/@gnam.com	as 1 am suttering from fever	i want leave.			
daa 1234567891 wuqueqwa@gmail.com Vaaan 9876123405 vaaua76@gmail.com How can i download my cards?	Daanish Muthu	98/0634312 9812340567	mutholakshmi9@gmail.com	as 1 am suttering from fever How can i update my card d	i want leave. etails.			
Vanan 9876123405 vanur76@gmail.com How can i download my cards?	Daanish Muthu Rifaya	9810340567 9812340567 7865430912	nuthulakshmi9@gmail.com rifaya99@gmail.com	as 1 am suffering from rever How can i update my card d Where can i update my card	i want leave. etails. s details?			
	Daanish Muthu Rifaya daa	9870654312 9812340567 7865430912 1234567891	mstholakshmi9@gmail.com rifaya99@gmail.com wqwqwq@gmail.com	as i am suttering from fever How can i update my card d Where can i update my card	i want leave. etails. s details?			
	Daanish Muthu Rifaya daa Vanan	98/05/4512 9812340567 7865430912 1234567891 9876123405	aanaar/ogmail.com nuutuukkinii9@gmail.com rifsyn99@gmail.com wqwqwq@gmail.com vanan76@gmail.com	How can i download my car How can i update my card d Where can i update my card How can i download my car	i want leave. etails. s details? ds?			

🗧 🔎 Type here to search	0	8		۵	0	9	4	•0	۲	^ (j) 👽 🗃 ENG 305 PM 💭

Figure 16. Cards Inbox Page

# **C.** Performance Analysis

The existing and proposed system are analyzed. The problem identified in the existing system is user can download the aadhar card document file using otp generation. The framework for authentication is open ended. And user has an hesitation of registering their details because of the security of the web application. Each card has an separate web application to download the cards which leads the user to feel like doing many works. And in these web application there is no direct communication between user and the admin. Nearly, 70% performance has been increased.

# **4.** CONCLUSIONS

E-card Download is developed using Asp.net and SQL. This web application provides facility to download cards in a safest manner. It saves time as it allows easy and safest download of cards whenever necessary. Through unique identity number each citizen can download the cards in a safest manner using captcha and otp generation. And can also chat with the admin so that they can get information about the cards through chatbot or mail.

# **5. FUTURE ENHANCEMENT**

In future, first this application can be featured in the improvement of platform to look more interactive. Second this application can add more cards to be download based on future security issues, security can be improved using emerging technologies. Third this application can contains many youtube videos about how to download cards and also the purpose of these cards. Fourth it can involves scanning cards using QR code so that aadhar card, driving licence, ration card and voter id can be scanned and shown in an device as an alternative.

#### REFERENCES

- [1] S. Ashwin, S. Loganathan, S. Santosh Kumar, P.Sivakumar, "PROTOTYPE OF A FINGERPRINT BASED LICENSING SYSTEM FOR DRIVING" Embedded & Real-Time Systems PSG College of Technology
- [2] Mrs. Padmavathi. R,K.M Mohammed Azeezulla, P. Venkatesh ,Kanchan Kumar Mahato, Nithin G,"Digitalized Aadhar Enabled Ration Distribution Using Smart Card" 2017 2nd IEEE International Conference On Recent Trends in Electronics Information & Communication Technology (RTEICT), May 19-20, 2017, India
- [3] Anshu Prasad, Aparna Ghenge, Sonali Zende, Prof. Sashikala Mishra, Prof. Prashant Gadakh,"Smart Ration Card Using RFID, Biometrics and SMS Gateway" International Conference on Inventive Communication and Computational Technologies (ICICCT 2017)
- [4] Dr. M. PALLIKONDA RAJESEKARAN, R.ARTHI, D.BALAJI, P.DANIEL, "Automatic Smart Ration Distribution System for Prevention of Civi Supplies Hoarding In India" 2017 International Conference on Advanced Computing and Communication Systems (ICACCS -2017), Jan. 06 – 07, 2017, Coimbatore, INDIA
- [5] Gaikwad Priya B, Sangita Nikumbh, "E Public distribution system using SMART card and GSM technology" Proceedings of the International Conference on Intelligent Sustainable Systems (ICISS 2017) IEEE Xplore Compliant - Part Number:CFP17M19-ART, ISBN:978-1-5386-1959-9.
- [6] Mohamed Mohandes,"A Smart card management and application system", 2010 IEEE International Conference on Progress in Informatics and Computing. Part Number : 10.1109/PIC.2010.5687971
- [7] R Padmavathi; K.M Mohammed Azeezulla ; P. Venkatesh; Kanchan Kumar Mahato; G Nithin, "Digitalized Aadhar enabled ration distribution using smart card". 2017 2<sup>nd</sup> IEEE International Conference on Recent Trends in Electronics, Information & Communication Technology (RTEICT). Part Number: 10.1109/RTEICT 2017 8256670
- [8] Ch.Sai Pratap Varma; D.Sumanth Rahul; Jithina jose; B. Keerthi Samhitha; Suja Cherukullapurath Mana "Aadhar Card Verification Base Online Polling" 2020 4th International Conference on Trends in Electronics and Informatics (ICOEI)(48184).
- [9] Pooja Shrivastava; Sandeep kumar Agrawal "Unique Identification In Elections through Internet Of Things". Publisher: IEEE 2018 International Conference on Advanced Computation and Telecommunication(ICACT). Bhopal, India
- [10] Bhuvanapriya R.; Rozil Banu S.; Sivapriya P.; Kalaiselvi V.K.G. "Smart voting" 2017 2nd International Conference on Computing and Communications Technologies (ICCCT) DOI: 10.1109/ICCCT2.2017.7972261. Chennai India.

- [11]. K. Lakshmi, R. Karthikamani, N. Divya "Aadhar Card based smart e-voting system" International Journal of Engineering and Advanced Technology (IJEAT) ISSN: 2249 – 8958, Volume-8, Issue-2S, December 2018.
- [12] Himanshu Agarwal "Online voting system for India based on aadhaar id", NOVEMBER 2013 DOI:10.1109/ICTKE.2013.6756265 CONFERENCE: 2013 11TH INTERNATIONAL CONFERENCE ON ICT AND KNOWLEDGE ENGINEERING (ICT & KNOWLEDGE ENGINEERING).
- [13] R. Balaji1, Muhammed Afnas. M. P2, B. Praveen Kumar3, V. Varun4, C. Tamizhvanan5 "Embedded based E-Voting System through Fingerprint and Aadhaar Card Verification".
- [14] B.Madan Mohan Reddy, D. SrihariRFIDBASED BIOMETRIC VOTING MACHINE LINKED TO AADHAAR FOR SAFE AND SECURE VOTING, International Journal of Science, Engineering and Technology Research (IJSETR) Volume 4, Issue 4, April 20
- [15] L.Rura, B. Issac and M.K. Halder, ONLINE VOTING VERIFICATION with CRYPTOGRAPHY and STEGANOGRAPHY APPROACHES, Proceedings of 2011 International Conference on Computer Science and Network Technology, Harbin, pp.125-129. 2011

# AUTHORS

**Ms. K. Rabiyathul Basaria** doing final year MCA in Francis Xavier Engineering College.

**Ms. S. Sujitha** working as Assistant Professor in the Department of Computer Applications, Francis Xavier Engineering College. Her area of interest is Wireless Sensor networks

Ms. K. Nambi Natchiar doing first year MCA in Francis Xavier Engineering College







# PERSONALITY PREDICTION USING THROUGH CV ANALYSIS

# MuthuselviM, Angeline Ranjitha Mani and AbinayaV

# Department of Computer Applications, Francis Xavier Engineering College, Tirunelveli

#### **ABSTRACT**

This Human Resource Management is obviously bolstered by and gave more open doors by the improvement of Job Characteristics Model (JCM) which thusly depends on the idea of present day occupation plan. Luckily, the advancement in present day data framework, computerized innovations, the general access of electronic innovation and web prompted the tendency of the worldwide Human Resource. The board improvement and make the framework more pertinent. Following the pattern, the proposed framework attempts to structure an arrangement to coordinate Job Characteristics Model into E-HR framework to scan for another model of proficient activity on Human Resource Management in the Internet Age. In this venture, we present a lot of strategies that makes the entirety enlistment process increasingly viable and productive. We have executed a framework that positions the competitors dependent on weight-age arrangement just as a bent test. Today there is a developing enthusiasm for the character attributes of an up-and-comer by the association to more readily look at and comprehend the competitor's reaction to comparable conditions. Along these lines, the framework directs a character expectation test to decide the character attributes of the applicant. At long last, it shows the consequences of the contender to the selection representative who assesses the top competitors and waitlists the applicant. This system can used in many business sectors that may require expert candidate. This system will reduce workload of the human resources. This system will help the human resource to select right candidate for desired job profile, which in turn provide expert workforce for the organization. Admin can easily shortlist a candidate based on their online test marks and select the appropriate candidate for particular job profile. This will enable a more effective way to short list submitted candidate CVs from a large number of applicants providing aconsistent and fair CV ranking policy, which can be legally justified

# **KEYWORDS**

Personality, Service oriented architecture, CV ranking, Aptitude, Questions, Human Resource Management

# **1. INTRODUCTION**

Job Characteristics Model (JCM) which thusly depends on the idea of present day occupation plan. Luckily, the advancement in present day data framework, computerized innovations, the general access of electronic innovation and web prompted the tendency of the worldwide Human Resource. The board improvement and make the framework more pertinent. Following the pattern, the proposed framework attempts to structure an arrangement to coordinate Job Characteristics Model into E-HR framework to scan for another model of proficient activity on Human Resource Management in the Internet Age.the association to more readily look at and comprehend the competitor's reaction to comparable conditions. Along these lines, the framework directs a character expectation test to decide the character attributes of the applicant. At long last, it shows the consequences of the contender to the selection representative who assesses the top competitors and waitlists the applicant. This system can used in many business sectors that may require expert candidate. This system will reduce workload of the human resources. This system will help the human resource to select right candidate for desired job profile, which in turn provide expert workforce for the organization. Admin can easily shortlist a candidate based on their online test marks and select the appropriate candidate for particular job profile. This will enable a more effective way to short list submitted candidate CVs from a large number of applicants providing aconsistent and fair CV ranking policy, which can be legally justified.

# **2. LITERATURE SURVEY**

Afify (2011)Is highly related to the research topic as it presents a new model of job web service based on Service-Oriented Architecture (SOA). In this model, the researchers have tried to regain the connection between user and Social Solidarity. The proposed model aims to create a Web-based job and resume related to the subsidiary lifecycle. The cycle begins with the distribution of various services supplied through the subsidiary. Those services were delivered to various people according to their requirements. Due to different hindrances, those services may not be efficiently applied. Because of that, there has been a must for a system that tracks down and discovers user problems and provides them with suitable feedback. This system can manage complaints through recording them and giving feedback for each raised complaint. The study outcome has been a helpful reference to determine users' requirements from the job and the managing process of this complaint in the core of any firm.

Trappey (2010)Have analyzed the configuration of the personality handling system for a restaurant chain in Japan. The complaint handling process gets over the defective approach of prior complaint handling through modifying the operations. So, this was beneficial to the operations taking place between the chain main administrative center and the other branches. To describe the personality handling model and its process, the formal integrated process modelling approach has been utilized. The new configuration contained complaint reporting, compensation diagnosis as well as complaint analysis. Moreover, the model, through the system, can spontaneously give the decision support on complaint resolution.

TruptiBomble, RitikaRaut and RuchiKanekar (2015)Presented a paper on android based personality prediction from cv. This system proposes on developing an android application which will help the common people under the same jurisdiction of a municipal corporation to register their grievances about day to day problems in their locality through a mobile application, but the problem is that fake complaints can be entered and there is no possibility to verify before resolving it. In addition to this there is no guarantee regarding progress of every jobs. Our system overcomes these problems by, priority based complaint resolving method and every registered complaint will get an acknowledgement on the complaint with the due date of completion.

Ali Mohammad Ahmadvand and ElhamAkhondzadeh (2010)Presented a paper on effective user relationship management. In this they proposed a system on data mining the complaints made by the citizens to manage their requirements and a process which collects, analyzes, and evaluate their needs. The problem in this system is, that the system can't solve the day to day grievance of the citizens. But in our proposed system, the day to day grievance of citizen will be registered by the citizen and will be resolved in due time.

Pyon (2011)Have thought that personality by call centers are enough to support the analysis of service promotion in the monetary service industry. Thus, they have proposed a web-based decision support system for running the business operation exploiting customer complaints; Voice of the Customer (VOC). The system has been tackling information for service promotion

and involving VOC conversion for information upgrading together with including analysis of outlining, exception, and comparisons.

# **3. PROBLEM STATEMENTS**

The existing e-recruitment system simply scans the submitted CVs and shortlist the candidates wherein the proposed system conducts an online aptitude test and personality test thereby predicting the personality of the candidate as well as short-listing the candidate based on his skills and decision-making ability. The impact of manual interviews and the resumes over HR has kept on increasing in recent years. It is very important to come up with a solution that can shorten or fasten the HR department work. Therefore a system has been implemented that recommends the candidates CV. Traditional forms of recruitment typically involve job seekers filling out physical resumes and giving interviews with the surge in applicants lately, the number of candidates tends to over whelm the employers. The proposed automated candidate grading system utilizes machine learning algorithms to build the models which test them.

Candidate can also give an online test, which will be conducted on personality questions as well as aptitude questions. After completing the online test, candidate can view their own test results in graphical representation with marks. The system would then derive and rank the candidates who were eligible for the job. The rank of each candidate acts as a score of how well the candidate's profile meets the specifications of the recruiters as well as cumulative score of the aptitude test. The recruiter could also analyze the personality of the candidate based on the result of the personality test. So, based on CV, aptitude test and the personality test the candidate would be shortlisted.



# 4. ARCHITECTURE DIAGRAM

# **5.** FEASIBILITY

Preliminary investigation examine project feasibility, the likelihood the system will be useful to the organization. The main objective of the feasibility study is to test the Technical, Operational and Economical feasibility for adding new modules and debugging old running system. All system is feasible if they are unlimited resources and infinite time. There are aspects in the feasibility study portion of the preliminary investigation:

- Technical Feasibility
- Operational Feasibility
- Economical Feasibility

## \* Technical Feasibility

Earlier no system existed to cater to the needs of 'Secure Infrastructure Implementation System'. The current system developed is technically feasible. It is a web based user interface for audit workflow at NIC-CSD. Thus it provides an easy access to the users. The database's purpose is to create, establish and maintain a workflow among various entities in order to facilitate all concerned users in their various capacities or roles. Permission to the users would be granted based on the roles specified. Therefore, it provides the technical guarantee of accuracy, reliability and security. The software and hard requirements for the development of this project are not many and are already available in-house at NIC or are available as free as open source. The work for the project is done with the current equipment and existing software technology. Necessary bandwidth exists for providing a fast feedback to the users irrespective of the number of users using the system.

# \* Operational Feasibility

Proposed projects are beneficial only if they can be turned out into information system. That will meet the organization's operating requirements. Operational feasibility aspects of the project are to be taken as an important part of the project implementation. Some of the important issues raised are to test the operational feasibility.

# \* Economic Feasibility

A system can be developed technically and that will be used if installed must still be a good investment for the organization. In the economical feasibility, the development cost in creating the system is evaluated against the ultimate benefit derived from the new systems. Financial benefits must equal or exceed the costs. The system is economically feasible. It does not require any addition hardware or software.

# 6. EXPERIMENTS AND RESULTS

#### • Aptitude Question

This module was created for the added the aptitude question. The question can be a added only admin. The admin, who will be a question, will upload the questions into the database, which can be accessed by the authenticated users. The aptitude questionallowsthestudenttolearntheoutlineofthetopic, which is to be the student of the topic of topic of topic of topic of to

#### • Personality Question

This module was created for the added the aptitude question. The question can be a added only admin. The admin, who will be a question, will upload the questions into the database, which can be accessed by the authenticated users. The aptitude questionallowsthestudenttolearntheoutlineofthetopic, which is to be the state of the s

The system interface is going to show the questions of different . The mainly going to these types

- > Maths
- ➤ English
- Programming

#### • Take Test

By using the user id and password user can log into the system and collect the necessary information from the home page.

- Mathematical Question
- English Question
- Programming Question
- Personality Question
- Aptitude Question

#### • Result For Chart

The User can be result in the pages. For Example,

- Chart way of English question
- Chart way of Maths Question
- Chart way of Programming Question
- Chart way of Personality question
- Chart way of Aptitude question

#### • Database Collections

The administrative user interface concentrates on the consistent information that is practically, part of the organizational activities and which needs proper authentication for the data collection. The interfaces help the administrations with all the transactional states like Data insertion, Data deletion and Data updating along with the extensive data search capabilities. The operational or generic user interface helps the users upon the system in transactions through the existing data and required services. The operational user interface also helps the ordinary users in managing their own information helps the ordinary users in managing their own information in a customized manner as per the assisted flexibilities

# 7. ABOUT PROJECT

The major inputs and outputs and major functions of the system are follows:

Admin enter his user id and password for login. User enters his user id and password for login. Admin enter user id or date for track the user login information New users give his completed personnel, address and phone details for registration. Admin gives different kind of user information for search the user data. User gives his user id, hint question, answer for getting the forgotten password. User request for Municipal Bill. Admin can have his own home page.

Users enter their own home page. The user defined data can store in the centralized database. Admin will get the login information of a particular user. The new user's data will be stored in the centralized database. Admin get the search details of different criteria. User can get his forgot password. User can get the Bill Details.

# **8. OUTPUT SCREEN**



Figure: 1.1 - Home Page

💽 Login Register 🛛 🗙 🕂		• - • ×
← → ♂ ③ localhost6990/CV_Prediction/User_Logi	nJaspx	er Q 🖈 🐻 ≉ 🍪 I
🛗 Apps M Gmail 💼 YouTube 🛃 Maps		
CV PREDICTION		Home Login Register
	User Login	
	Username	
	Admin	
	Password	
	Login	
	Not a Member???Sign Up	
		Activate Windows Go to Settings to activate Windows.
2 P Type here to search	o # 🧕 🍇 🖪 🧊 🕮 💻 🖻	∧ i⊡ 44) ENG 12:40 PM 📢 US 2021-03-20 📢

Figure: 1.2 - Login Page

CV PREDICTION					Home Login	, fie	rister	
		Candidate Reg	istration					
Name		Email ID		Mobile Numbe	F			
		Admin						
DOB		Password		Address				
yyyy-mm-dd	•	-		1 mar (1997)				
Experience		Date Of Reistration		cv				
and and an over		yyyy-mm-dd		Choose File	No file chosen			
		Register						
					A set is sent in 3 Addies			

Figure: 1.3 – User Register Page

3 Admin X	+								0	-	σ	×
← → C (0) localhost/6990/0	V_Prediction/admin/Candidate_Detail	s-aspx						Q	☆	5	* 🤅	
🗄 Apps M Grnail 🖸 YouTube	🕈 Maps											
CV PREDIC	CTION	Home	Candidate Details	Add jobs	Result	Aptitude Question	Personality Question	View Details	v	Logout		

Candidates

name         email         phone         dob         address         experience         dateofregister         CV           Muthuselvi         muthuselvi@gmail.com         8940119179         2021-03-10         TVL         5 years         2021-03-10         Download           arul         arul@gmail.com         989496235         1994-02-25         chennai         3 years         2021-03-10         Download           Ramcy         ramcy@gmail.com         9345993500         2021-03-10         mumbal         0 years         2021-03-10         Download           arul         arul@gmail.com         989496231         2020-12-12         chennai         6 years         2021-03-10         Download								
Muthuseki         muthuseki/egmail.com         8940119179         2021-03-11         TVL         5 years         2021-03-18         Download           arul         arul@gmail.com         9894962313         1994-02-25         chennai         3 years         2021-03-11         Download           Rancy         ramcya@gmail.com         9345993500         2021-03-11         mumbal         0 years         2021-03-11         Download           arul         arul@gmail.com         9894962313         2020-12-12         chennai         6 years         2021-03-12         Download	name	email	phone	dob	address	experience	dateofregister	cv
arul         arul@gmail.com         9894982313         1994-02-25         chennai         3 years         2021-03-11         Download           Ramcy         ramcya@gmail.com         9345993500         2021-03-11         mumbal         0 years         2021-03-11         Download           arul         arul@gmail.com         9894982313         2020-12-12         chennai         6 years         2021-03-12         Download	Muthuselvi	muthuselvi@gmail.com	8940119179	2021-03-11	TVL	5 years	2021-03-18	Download
Ramcy ramcyo@gmail.com 9345993500 2021-03-11 mumbal 0.years 2021-03-11 Download arul arul@gmail.com 9894982313 2020-12-12 chennal 6.years 2021-03-12 Download Copyright Matum. All Rights Reserved	arul	arul@gmail.com	9894982313	1994-02-25	chennai	3 years	2021-03-11	Download
arul arul@gmail.com 9894982313 2020-12-12 chennai 6 years 2021-03-12 Download	Ramcy	ramcya@gmail.com	9345993500	2021-03-11	mumbai	0 years	2021-03-11	Download
© Copyright Maxim. All Rights Reserved	arul	arul@gmail.com	9894982313	2020-12-12	chennai	6 years	2021-03-12	Download
© Copyright Massim. All Rights Reserved								

Figure: 1.4 – Candidate Details

Admin	× +							¢	- (	σ	
← → C ① localhos	t6990/CV_Prediction/admi	n/View_jobs	aspx					0, 1	2 15	* 6	
🛗 Apps M Gmail 🖸 You	uTube 🔣 Maps										
CV PRE	EDICTION		Home	Candidate Details A	dd Jobs Result	Aptitude Question	Personality Question	View Details ~	Logou	1	
				Job	Details						
		id	technology	position	salery	experience	key_skills				
	Delete	1	Dotnet	Developer	500000	5 years	C# ,Angular ,				
	Delete	2	python	developer	30000	1	Python ,				
	Delete	з	java	Developer	40000	1	Java ,Python ,				
				© Copyright Maxim. A	ll Rights Reserved						
				Designed by CVF							

Figure: 1.5 – Job Details

O localhost6990/CV_Prediction/admin/adm	i_apptitute.aspx	옥 ☆ 🛅 🗯 🤅
ops M Gmail 💼 YouTube 🛃 Maps		
CV PREDICTION	Home Candidate Details Add Jobs Result Aptitude Question Pr	ersonality Question View Details ~ Logout
	Apptitute Question	
	Туре	
	English	
	Quetion	
	Нарру	
	Cartine 1	
	A36	
	Option 2	
	2.Rs.204	
	Option 3	
		Activate Windows
	Option 4	Go to Settings to activate Windows.

Figure: 1.6 – Apptitude Question

Admin	× +				•	-	٥	×
← → C (	D localhost:6990/CV_Prediction/admin	v/Add_personality.aspx		Q	☆	2	* 6	Ξ
🔛 Apps M Gris	ail 🖸 YouTube 🛃 Maps							_
CV	PREDICTION	Home Candidate Details Add Jobs Result Aptitude Question	Personality Question	View Details $\vee$	Log	gout		
		Personality Quetions						
		question						
		get easily stressed						
			-16					
		Disagree						
		conscientious						
		Disagree						
		Extraversion						
		Agree						
		agreebleness						
		Select-	Ac	tivate Wind	ows			
		neuroticism		to Settings to a		e Winc	lows.	
1 O Tunel	here to search			A 10.4	e ENG	i 124	T PM	В.

Figure: 1.7 – Add A Personality Question

M Gmail 🙆 Yo	uTube	🛃 Maps	NA WWWHEDHEDHEDHEDHEDHEDHEDHEDH							
CV PRE	D	CTION	Home Candidate Details Ad	i jobs Result	Aptitude Question	Personality Question	View Details ~	La	gout	
	id	type	question	option1	option2	option3	option4	answ	ler	
Delete Select	1	Mathematics	What is the average of first five multiples of 12?	1.36	2.38	3.40	4.42	1		
Delete Select	2	Mathematics	What is the difference in the place value of 5 in the numeral 7548537	49500	49950	45000	49940	2		
Delete Select	3	Programing	Choose the form in which Postback occur.	Htmlforms	Webforms	Winforms	none of above	1		
Delete Select	4	Programing	A variable which is declared inside a method is called avariable?	Senai	Local	Private	Static	4		
Delete Select	5	English	Synonym of ABANDON	try	[oin	keep with	forsake	4		
Delete Select	6	English	CORPULENT	lean	gaunt	emaclated	obese	з		
Delete Select	7	Mathematics	How many times the hands of a clock coincide in a day?	24	22	23	21	2		
Delete Select	8	Programing	which among the following is a conditional operator?	17	7.	7:	77	з		
Delete Select	9	Programing	the physical layer is responsible for?	line coading	channel	modulation	all of the mentioned	4		
Delete Select	10	English	which of these is not a type of tense?	present	language	past	future	zowi Z		
Delate Salart	11	English	which of these is not a type of present teose?	simple	continuous	imperfect	perfect	3	-	

Figure: 1.8 – View Add A Question Page

Uter X +						•	-	ø	×
$\leftrightarrow$ $\rightarrow$ $\mathfrak{C}$ ( $\textcircled{O}$ localhost:5990/CV_Prediction/user/Eng	ish_exam.aspx				Q	☆	图 1	• 🕲	Ξ
🛗 Apps M Gmail 😑 YouTube 🛃 Maps									_
CV PREDICTION	Horr	e Profile	Take Test	View Result	Openings	LO	gout		-
									1
	English Question								
	Synonym of ABANDON Otry Ojoin Oforsake Okeep with								
	CORPULENT Ofean Ogaunt Oobese Oemaciated								
	which of these is not a type of tense? Opresent Olanguage Ofuture Opast								
	which of these is not a type of present tense? Osimple Ocontinuous Operfect Oimperfect								
	which of these is an example of simple present tense? Of am going to Delhi tomorrow OThere she goest Of am reading the g He has just gone out	gita O							
	which of these words is used in technical writing? OApex OTop OBottom OSlanting								1
	which of these words is used in technical writing? OApex OTop OBottom OSlanting			Activ Go to S	ate Wind	ows			
	Next								
£ ,P Type here to search	o 🛱 💽 🍢 🖪 🦻 🖾 📼				~ • •	∜ US	5 12:48 2021-0	PM 03-20	2

Figure: 1.9 – Take A Test Page

E User		×	+								•	-	ø	×
$\leftarrow \rightarrow$	C 0	localhost:6990/C	V_Prediction/us	ier/Result.aspx						Q	ŵ	5	* 😢	1
📕 Арра	M Gmail	🔲 YouTube 💈	🕈 Maps											_
	cv	PREDIC	TION				Home Profile	Take Test	View Result	Openings	Log	put		
					Result	t								
		name		phone	dob	Aptitude	Percentage							
		Muthus	selvi	8940119179	2021-03-11	Apptitute	0%							
		arul		9894982313	1994-02-25									- 1
		Ramcy		9345993500	2021-03-11	Apptitute	6.6666666666667%							
		arul		9894982313	2020-12-12									

Figure: 1.10 View Result Page

ur X	+					•	-	٥
C () localhost:6990/CV_P	rediction/user/Opennings.aspx				Q	Ŷ	8 J	• 🕲
ps M Gmail 🧰 YouTube 🛃 N	Maps							
CV PREDICT	ION		Home F	rofile Take Test View Result	Openings	Log	jout	
		Vacan	ncies					
Technology	Position	Vacan	ICIES Experience	Key Skills				
Technology Dotnet	Position	Vacan salary 500000	CIOS Experience 5 years	Key Skills C# ,Angular ,				
Technology Dotnet python	Position Developer developer	Vacan 500000 30000	Experience 5 years 1	Key Skills C# ,Angular , Python ,				
Technology Dotnet python java	Position Developer developer Developer	Vacan 50000 30000 40000	Experience 5 years 1	K <b>ey Skills</b> C# "Angular . Python . Java "Python .				
Technology Dotnet python java	Position Developer developer Developer	Vacan selary 50000 30000 40000	Experience 5 years 1 1	Key Skills C# ,Angular , Python , java ,Python ,				
Technology Dotnet python java	Position Developer developer Developer	Vacan salary 500000 30000 40000	Experience 5 years 1 1	Key Skills C# ,Angular , Python , java ,Python ,				

## Figure: 1.11 - Opening Page







Figure: 1.13 – Chart Page

## **9.** CONCLUSION

This system will help the human resources department to select right candidate for particular job position, which in turn provide expert workforce for the organization. This system will help to get shortlisted CV's according to their ranking. Ranking is based on their test result and experience, qualification etc. This system will reduce work of the human resource department.

# **10. FUTURE ENHANCEMENT**

Further, we can alter the current framework to perform a conclusion examination of web-based life information. Some more arrangement calculations of AI can be incorporated to give much better functionalities. Further, the effectiveness and execution of the application can be tried and broke down.

#### REFERENCES

- [1] F. Safia, N Ashaamitha Mathew.(2014) "", International Journal of An integrated e-recruitment system for automated personality mining and applicant ranking.
- [2]. S.dilini , P kusai(2017) "Personality based E- recruitment system , 29th Annual International Conference of the IEEE.
- [3]. Allan Robey1, Kaushik Shukla2, KashishAgarwal(2018)SystemPersonality Prediction System through CV Analysis(2018). D Tantam, The machine as psychotherapist: impersonal communication with a machine. BJP synch Advances2017.
- [4]. Barrick M. R. Mount. M. K proposed big five personality dimensions for any person in 1991 to determine the personality of any reason.
- [5] Shruti Maheshwari, G. K. (2019). Personality Prediction through Curriculum Vitae Analysis Involving Password Encryption and Prediction Analysis. International Journal of Advanced Science and Technology, 28(16), 01 10.
- [6]. FoDRA Nikolaos D. Almalis George A. Tsihrintzis ,Aggeliki D. Strati , "A New Content-Based JobRecommendation Algorithm for Job Seeking and Recruiting", 2016.
- [7] Data, Vishnu M Menon Computer Rahul Nath H A, "ANovel Approach to Evaluate and Rank Candidates in ARecruitment Process by Estimating EmotionalIntelligence through Social Media", May 2016.
- [8] Manasi Ombhase, Prajakta Gogate, Tejas Patil "Automated Personality Classification Using DataMining Techniques" 10.13140/RG.2.2.35949.59363, 2017.
- [9]. Amit Palve, Rohini D.Sonawane, Amol D. Potgantwar, "Sentiment Analysis of Twitter Streaming Data forRecommendation using, Apache Spark", International Journal of Scientific Research in Network Security and Communication, Vol.5, Issue.3, pp.99-103, 2017.
- [10]. Huan Liu, Lei Yu, "Towards integrating feature selectionalgorithms for classification and clustering", IEEETransaction on Knowledge and Data Engineering,.

AUTHORS

Ms.M.Muthuselvi doing final year MCA in Francis Xavier Engineering College

**Mrs.D.Angeline Rangithamani** is working as Assistant Professor and HOD in the department of Computer Applications, Francis Xavier Engineering College. She is having teaching experience of 12+ years. Her area of intrest is Wireless Sensor Networks.

Ms.V.Abinaya doing first year MCA in Francis Xavier Engineering College.







# VEHICLE BREAKDOWN ASSISTANCE

NivethaM<sup>1</sup> and SujthaS<sup>2</sup>AbinayaV<sup>3</sup>

<sup>1</sup>Department of Computer Application, Francis Xavier Engineering College

<sup>2</sup>Department of Computer Application, Francis Xavier Engineering College

<sup>3</sup>Department of Computer Application, Francis Xavier Engineering College

# **ABSTRACT**

This application is used to find nearby area mechanics while we suddenly stranded on the remote locations with mechanical issues of our vehicle. It is a good solution for the people who seek help in the remote locations. In this, the approved mechanics are enlisted in this application. Also they are under monitored by this system for not charging any extra service fee from the users. This can be monitored by the admin through the user feedback based on their service. The registered users can access this application. This application will help to reduce wasting user time to found a proper mechanic. This application will allow user to make payment for a vehicle repair in a reasonable price.

# **K**EYWORDS

Vehicle, Assistance, Travel, Spare-parts, Mechanic shop, Power, Service

# **1. INTRODUCTION**

Today most of people use their own vehicle for travel. While travelling most of us are troubling with breakdown of our vehicle on the road. This is a worst experience that they have to face. When our vehicle suddenly breakdown on the road, the user have to search for mechanic and have to see a spare-part shops near to their location. At that time we can't able to search for a good mechanic and we have to arrange some other transportation. By using this application the user can find suitable mechanic. The most advantage is the user can find a mechanic based on their user location and make payment. Varun Kapadi, SaigitaGuruju, Bhupesh Bojja, Prof. NilimaNikam had discussed about the application which directly connect with google GPS system and it shows the users current location. This project will show the name and address or location of all hospital those are in the range and the user can able to select any one hospital. VibhaviArtigala, H.DhanukaNadeeshani have discussed about the application Helpme. This will show the user location and direct the nearest service provider to user and the chat platform where the user can ask some relevant questions to the mechanic. Miss. K. Iswarya Miss. D. Devaki Mr. E. Ranjith have discussed about the application which helps to find nearby service centres as well as the fuel stations in case of any emergency situations like insufficient fuel on vehicles and un-avoided incidents like puncture, break failure, doping etc. Akhila VKhanapuri, AnaghaShastri, Gareth Dsouza, Shannon Dsouza has discussed about the android application is proposed which monitors parameters like Engine RPM, fuel status, throttle position through an On board Diagnostics (OBD-II) being able to help amateur drivers with gear changing and provide assistance in case of vehicle breakdown. Khoo JinSheng, Ahma SuhaimiBahurudin, Kamal Karkonasasi has discussed in this paper that start with the analysis of the car breakdown

incidents on the road. It expects that through some research, the statistics of car breakdowns can be obtained to see if this project is helpful to those in need.

# **2. PROBLEM STATEMENT**

The problem while travel is breakdown of our vehicle. In this situation, the only way is to look for some other transportation at that time of issue and then they need to get a mechanic to the particular location at which they have left their vehicle. In this application, the mobile users can get nearby area mechanics by searching at anytime and anywhere. The admin can access the shop details and check whether the registered shop is licensed or not and provide approval.

## **Existing System**

- In an existing system there are users who have their own mechanic number and it is also difficult for them to arrive at time.
- And it is also possible to find out the suitable mechanic for the desired service at remote locations.
- The only way is to look for any other transportation at that time of issue and then they need to get a mechanic to the particular location at which they have left their vehicle.

#### **Proposed system**

- The proposed application helps to find the nearby mechanics easily and quickly.
- This application show the user location and direct the nearest service provider to the user.
- It allows us to search the nearby mechanics from different locations and call to the mechanic.
- The user can make payment based on their service through this application.

#### **Architecture Diagram**



Figure 1: Architecture Diagram

# **3. EXPERIMENT AND RESULTS**

### **Create Business**

In this module, the business owner can add their business details like Mechanic name, Services, Availability and Address. Once the business is created the admin will provide the approval for the business.

# **Update Business**

In this module, the business owner can upload the location and can edit and view the details.

# **Approve Business**

In this module, the admin can provide the approval for the registered business and can view the user details and ratings.

## Find on road services

In this module, the user can search the nearby mechanics according to their location. The user can call or message to the particular mechanics who is nearby to their locations. PAYMENT: In this module, the user make the payment based on the services.

#### Admin

The admin will provide approval for the registered business and can view user details.

# **Database Collection**

The database will maintain all records about the mechanic shop details and user details in this application. So that it is easy to access and retrieve data from the database. The user can search the nearby mechanics shop which is stored in the database.

User details and business owner details are stored in database and it can be viewed by admin. The admin will provide approval for the registered business. The admin will keep on checking the feedback of the user to know the service provided by the mechanic shop.

Roadside Assistance	Roadside Assistance
	Shop Name
	Shop Name
	Mechanic Name
	Mechanic Name
	Services
0 0 0	Services
	Available
	Available
	Address
Particular Standards	1234 Main St
ousinessownerLogin	City
UserLogin	Mobile No.
	Mobile No.
	Mobile No.

# **Output Screen**

# Figure 2:Login page



Figure 3 Create Bussiness

Busine	ess details	
	1	
op Name	Best Wheels	
schanic Name	Jai	
rvices	All 2 & 4 wheelers	
anable	Mon-Sat	
ty timute	8 0462348652698	
ngitude	7.4331016540527	
Edit	Update Location	
	2	
op Name	rty	
echanic Name	fghjkl	
Figure 4	4:Business Details	
Figure 4	4:Business Details le Assistance	
Figure 4	4:Business Details	
Figure 4	4:Business Details	Chur
Figure 4	4:Business Details	Chur Post
Figure 4	4:Business Details	Chur Chur Imar Iggss +
Figure 4	4:Business Details	Chur Post That
Figure 4	4:Business Details	Chur Chur that
Figure 4	4:Business Details Ie Assistance Thits uvitation amenopital Assembly of God C Srichandana man Temple Salvation Array Character Construction Mag data 22021 Term 8.266646	Chur Chur thar Seft se of t

Figure 5:Find

Update Geo



Figure 6:Shop Details



Figure 7:Business Approval

	Roa	adside A	ssistance	
(ip				
/TY lony	Tu	rticorin	9876546795	Reject
hjk		ghjk	9875678483	Reject
rt Iony	Kann	iyakumari	7904804796	Reject
KJ lony	Kann	iya <mark>kumar</mark> i	9791814083	Reject
SH lony	Kann	iyakumari	9789146644	Reject
/ab	Na	Interest	0976542224	_
		Figur	e 8:Details	
	Roa	idside A	ssistance	
	F	Busines	s details	
Na	me	nive		
Em		nive113	@gmail.com	
Ad	Address 113/JK		olony	
City		Nagerco	il	
Zig	2	629852		
Sec. 1		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		



Figure 9:Other Business Details



Figure 10: User Details

🚍 Roadside Assistance	
PayPai	
Debit or Credit Card	
Powered by PayPal	

Figure 11:Paypal

## **PERFORMANCE ANALYSIS**

The existing and proposed systems are analysed. The problems can be easily rectified with this concept. Nearly 70% of the performance has been increased.

# **4.** CONCLUSION

When the vehicle breakdown occurs the driver have to see a mechanic or the repair shop. The driver has to ask for help from the people. By using this application, the user can find mechanic based on user location. The user can get the mechanical help directly and easily. This is help to save user's time while the traveling. When the breakdown occur, user can fix their vehicle immediately. That make comfortable the user. They won't make tired their journey.

# **5. FUTURE ENHANCEMENT**

In Future, the vehicle and spareparts shop will be categorized according to the vehicle model. That is help to user found their spare-parts according to the type of the vehicle by saving their time. In addition to that the list of hospitals and Fuels stations can be added.

#### REFERENCES

- [1] Lee, Shuiping Wei, Bangyan Ye, Zhiguang Fu, "Research on GPS Positioning Information Transfer Based on Wireless Network," 2007, 28(6): 589-592.
- [2] Jianxun Zhao, "Mobile Location Services Development and Implementation Based on Android Platform," Modern Business Trade Industry. pp 271-272. October 2010.
- [3]. "A public safety application of GPSenabled smartphones and the android operating system"- Systems, Man and Cybernetics, 2009. SMC 2009. IEEE International Conference-Whipple, J.Inf. Syst. Eng. Dept., Southwest Res. Inst., San Antonio, TX, USA Arensman, W. ;Boler, M.S.
- [5]. "Developing an Android based learning application for mobile devices", Telematics and Information Systems (EATIS), 2012 6th Euro American Conference, de Clunie, G.T.Fac. de Ing. de Sist., Computacionales, Univ. Tecnol. de Panama, Panama City, Panama Serrao, T.; Monteiro Braz, J.R.-. Serr o, T. Rangel, N. Castillo, A. G mez, B. Rodrguez, . de Barraza, . Riley, J.
- [6]. The Interaction Design Foundation. (2020). Prototyping: Learn Eight Common Methods and (Anon., 2020)Best Practices. [online] Available at: https://www.interactiondesign.org/literature/article/prototyping-learn-eight-common-methods-and-best-practices [Accessed 20 Jan. 2020].
- [7] The Interaction Design Foundation. (2020). Prototyping: Learn Eight Common Methods and Best Practices. [online] Available at: https://www.interaction-design.org/literature/article/prototyping-learn-eight-common-methods-and-best-practices [Accessed 20 Jan. 2020.
- [8]. Monica, 2018. A Car Breakdown Service Station Locator System. INTERNATIONAL JOURNAL OF ADVANCE SCIENTIFIC RESEARCH, 3(4), pp. 13-16
- [9]. Florian, e., 2017. Google Patent. [Online] Available at: https://patents.google.com/patent/US20190171758A1/en [Accessed 17 January 2020].
- [10].Reichardt, e., 2002. Car Talk 2000. [Online] Available at: https://ieeexplore.ieee.org/abstract/document/1188007 [Accessed 17 December 2019 ].

# AUTHORS

Ms.M.Nivetha doing final year MCA in Francis Xavier Engineering College.

**Mrs.S.Sujitha** working as Assistant Professor in the department of Master of Computer Applications, Francis Xavier Engineering College. Her area of intrest in Wireless Sensor Networks.

Ms. V.Abinaya doing first year MCA in Francis Xavier Engineering College.





# A NOVEL ONLINE APPROACH FOR JAZZY JEWELS

# Subha J<sup>1</sup> Sujitha S<sup>2</sup> Subalakshmi K<sup>3</sup>

# <sup>1</sup>Department of Computer Application, Francis Xavier Engineering College, Tamil Nadu, Tirunelveli

<sup>2</sup> AP/Department of Computer Application, Francis Xavier Engineering College, Tamil Nadu, Tirunelveli

<sup>3</sup>Department of Computer Application, Francis Xavier Engineering College, Tamil Nadu, Tirunelveli

# ABSTRACT

The objective of this software is to enable a Jeweller manage all their business workflow through an automated software system which brings more efficiency to their business and interactive/transparency to the user. It also provides automated tools that can be used for Online purchasing and order. Jewellery Automated System can be user friendly between the Jewellery shops and their clients

## **KEYWORDS**

Ec,c2c,mas,rdbms,gnu

# **1. INTRODUCTION**

It is open that most of the people are seeking to buy items every day in most cities and towns, both locally and abroad, desperate if they might get a solution or a right person to deliver a solution to them. These people end up settling at items or service providers who are fraud or who sell illegal and fake items to the desperate buyers. There are legit business people and store owners who have quality items in the locality of the auctioneer, but they do not meet for business because the auctioneer is not informed about the items available. This is a great frustration in deed!This project shall handle this issue by creating an online platform where a user will be able to post items online for auction. The items will accompany item name, selling price, and a picture presentation for the bidder to see. The bidder, if interested in the item, will make the auction for the product and will be able to inspect the item physically to make an approvement about the product then complete the business with the seller.People are always on the go to their renown product supplier, or nearby market center or at times a local hawkers, who goes on to supply items and at times when he cannot get the item the buyer wants, mostly they give their hands to get them items and at times they mess and bring fake and quarks deliver stolen and bad items. This is because unqualified people offer delivery of items to customers. Due to the disparity of the buyers, scammers have always taken the advantage to offer item delivery to the customers. Many fake items have found their way into the hands of the people, or buyers remain in the same condition of lack, as they don't get the correct products from the sellers. Sometimes buyers struggle to find the right items, in failure, and they seek to get back to their homes. The customers will be assured of getting the right products, since they will take their time to analyses and compare a range of listed items and choose appropriately according to their need or desire. This

will save time that buyers take in search of items and therefore they will save themselves from worsening of conditions which may lead to wastage of time conditions. This will also save money that is spend around travelling and bidding for the undesired items.

Elementary education besides being a basic human need is vital for raising the standard of life, providing gainful employment, removal of regional backwardness, thereby ensuring overall development and wellbeing of a country. It is therefore the need of the hour to review the literature carried out by different academicians, educational thinkers, researchers, policymakers and educational reformers in the field of education Among our findings, we uncover an important correlation among sniping and high surplus ratios, which implies the uncertainty of true value in a competitive environment. The key issue is the wrong assumption that bidder's valuations are independent from each other, which leads to inefficient auctions. In order to address the inefficiencies of current online formats we introduce a declining price auction model customized for online transactions. Conceptually, this model ought to deal with the complexities of competition in an online environment while maximizing social welfare. [1] The online auction does not take place face to face which creates anonymous bidders. The auctioneers cannot have a hold on who is participating in the bidding. This can lead to anonymity in identifying the bidders and further in shill bidding. By predicting the end-bid price of product and keeping it concealed from bidders, bids can be analyzed against the predicted price or range of it and if any unpredictable unexpected bid is occurred, then the respective bid can be treated as shilled or fake one and can be ignored..[2]Online auction is becoming more and more popular in electronic commerce (EC). It has become the mainstream trading methods in consumer to consumer (C2C), such as eBay. The steady collaboration field and common concept of exchange ;may be formed in the cooperation of the MultiAgent system (MAS), and then the agents will have so much common knowledge in order to complete the tasks. The member of MAS has both cooperation and self-interest. Based on the analysis of the cooperation and competition of the participators in the online auction, the concept of overtime and history information is introduced. As existing consider the history information. This paper put forward a MAS flow frame and negotiation algorithms that make the bidders of the auction participate in the negotiation honestly and actively. Both the efficiency and transparency among the participators have been enhanced. [3]Online auction are among the most significant e-business applications. Their impact on trading in business to business, as well as in the business to consumer and consumer to consumer fi eld. Day to Day use of Online Auction is increases. Customers are moving toward to online Auction for purchasing and selling items. Quite a few companies have started projects of their own, trying to improve their purchasing and sales channels.[4]With the added convenience of online transactions also comes the risk of electronic fraud. Although companies such as eBay have operated for the last 10 - 15 years, very little auction data has been collected and made publicly available or analysed, to the knowledge of the authors. Before any assertions about the amount of fraud in online auctions can be made, the underlying nature and structure of online auctions must be understood.[5]

# **Architecture Diagram**





# **2. PROBLEM STATEMENT**

## Modules

#### Admin

- Admin has the following privileges. Admin can add the new agents(Employees) and new design and various offer categories.
- Admin can update his profile and types and cost of Jewellery. He can delete the agents and some jewel categories.
- Admin can view all the agents' details and booking details. He can generate reports for ad bookings and customer details.

### Agent

- Agent must be login to perform his activities. He has the following privileges. Agent can add the customers.
- He can update his profile and change his password. He can view all the customer details and booking details.
- Agent will interact with Customers or clients queries and request.

# Customer

• Every user must be a registered person. After registration he gets his own username and password. By using this username and password only user can

logon into the system. If the user name and password is invalid the request is thrown back.

• User can view all the new designs uploaded by the Jewel shops. Based on the interest he can order the jewels through online itself by confirming the advance payments. Also user can uploaded their own design requirements to employees for the further proceedings.

# Database

- MySQL is an open-source relational database management system (RDBMS).
- MySQL is free and open-source software under the terms of the GNU General Public License, and is also available under a variety of proprietary licenses.
- MySQL is a fast, easy-to-use RDBMS being used for many small and big businesses.
- MySQL is developed, marketed and supported by MySQL AB, which is a Swedish company. MySQL is becoming so popular because of many good

# **3. EXPERIMENT AND RESULTS**

# **Output Screen**

0-10-15	Document1 - Microsoft Word -	_		X	
📥 JEWELS	× +	-			×
← → C	🛈 localhost/erppy/adm_add_emp.py 🏂	se	*	3	:
		×			
	Admin Employees - Clients - Salary Leaves - Logout				
	Add Employee				
	emp0011				
	Employee Name				
	Date of Birth:				
	dd-mn-yyyy 🗂				
	Contact				
	E-Mail Id				
	Date of Joining:				
	dd - ma - yyyy				
	emp0011				
Pa	Password				
E O Type he	re to search 🛛 🕹 🗗 🚖 💼 💽 🖾 🛤 🎯 🖾 🦉 🖉 🦧 🖉	0	9:45 13-202	Ę	0

Figure 2 Employee Details

- 10 - 15 =	Document1 - Microsoft Word	
JEWELS × +		- 🗆 ×
$\epsilon  ightarrow \mathtt{C}$ () localhost/erppy/adm_logi	n.py	🖈 🖬 🗯 遵 E
	Home	Admin Employee Contact
5	Admin Login	
	User Name	
	Password	
	Login	
	Cancel	
Pa		0044

## Figure 3 Admin Login



Figure 4 Client Details


Figure 5 Employee Profile

## **PERFORMANCE ANALYSIS**

The existing and proposed system are analysed. The problem identified in exsiting is an admin panel by which an admin can control the whole bidding system. Admin can manage all the auction processes and also control the registered customers. There is fixed delivery policy. After finishing the bidding process, the won bidders can buy the product bymake online payment. This is a fully dynamic system which can be easily operated by the users This assumption has prevented them from automating.Nearly 70% performance has been increased

## 4. CONCLUSION

Online auction has made the interested bidders from being physically present in auction houses. The auction website provides variety of products online which gives many choices to the bidders to select the product of their interest. The products are placed according to their location.

# 5. FUTURE ENHANCEMENTS

Online Auction System has made consumers more effective and efficient in their behaviour and has driven businesses to a new level. Though the buyers can view his status in our website, they are not otified when he won the auction. So further notifications like email and SMS can be made as future enhancements.

#### REFERENCES

- [1]. Farooq M, Hasan M, Gull F, Mycobial deterioration of stone monuments of Dharmarajika, Taxila, Journal of Microbiology & Experimentation, Vol. 2(1). Pp. 36-412015.
- [2]. Kalaskar, P.G., Zodpe, S.N. Biodeterioration of library resources and possible approaches for their control. International journal of applied research. Vol. 2(7). Pp. 25-33. 2016.
- [3] Patidar D. and Soni A. Indigenous material of preserving manuscripts in library. International Journal of Research in Library Science. Vol. 2(2). Pp. 183-187. 2016.

- [4] Thiyam Satyabati Devi, Impact of Information Technology on the Societal Archive: A Case Study of Manipuri Manuscripts, International Information and Library Review, Vol.40 (3). Pp. 179-184. 2008
- [5] Bakkali, F., Averbeck, S., Averbeck, D. and Idaomar, M. Biological effects of essential oils-A review. Food and Chem. Tox., Campden BRI, Gloucestershire UK Publication Vol. 46. Pp. 446-475. 2008.
- [6]. Manasi Bhamare, Arati Chame, Gaurav More Prof Amol Rindhe," Online Auction".
- [7]. Geetanjali Sawant, Ganesh Bane, Akshay Gurav, Swaraj Pawar, "Survey on Online Auction System".
- [8]. Patidar D. and Soni A. Indigenous material of preserving manuscripts in library. International Journal of Research in Library Science. Vol. 2(2). Pp. 183-187. 2016.
- [9]. Rashesh G Chothani, Punit R Patel, "A Review of

Online Auction and It's Pros and Cons ".

[10]. Rodel Balingit, Jarrod Trevathan and Wayne Read,

"Analysing Bidding Trends in Online Auctions".

#### AUTHORS

Subha J doing final year MCA in Francis Xavier Engineering College

**Ms. S. Sujitha** working as Assistant Professor in the Department of Computer Applications, Francis Xavier Engineering College. Her area of interest is Wireless Sensor networks

Subalakshmi K doing first year MCA in Francis Xavier Engineering College





# **DATA INTEGRITY PROTECTION IN CLOUD**

# Indira G<sup>1</sup> Sujitha S<sup>2</sup> Subalakshmi K<sup>3</sup>

<sup>1</sup>Department of Computer Application, Francis Xavier Engineering College, Tamil Nadu, Tirunelveli

<sup>2</sup> AP/Department of Computer Application, Francis Xavier Engineering College, Tamil Nadu, Tirunelveli

<sup>3</sup>Department of Computer Application, Francis Xavier Engineering College, Tamil Nadu, Tirunelveli

#### ABSTRACT

In cloud computing integrity of data and access control are challenging issues. Protection of outsourced data in cloud storage becomes critical. Codes which are regenerating of data provide fault tolerance. Therefore, remotely checking the integrity of data against corruptions and other issues under a real time cloud storage setting is our problem of study. It practically design and implement Data Integrity Protection (DIP) environment.

## **KEYWORDS**

DBMS,ACID,DIP,RAID,RSA

# **1. INTRODUCTION**

As the data is stored in the remote location the user data falls into threats of the intruders where the confidentiality and integrity of the data is breached. This reduces the trust of the cloud service provider. There are several measures used by the CSP to provide the security of the data, but it never matches to the aspects. More and more owners start to store the data in the cloud. However, this new paradigm of data hosting service also introduces new security challenges. Owners would worry that the data could be lost in the cloud. This is because data loss could happen in any infrastructure, no matter what high degree of reliable measures cloud service providers would take. Sometimes, cloud service providers might be dishonest. It could discard the data which has not been accessed or rarely accessed to save the storage space and claim that the data are still correctly stored in the cloud. Therefore, owners need to be convinced that the data are correctly stored in the cloud. Data integrity is one of the most critical elements in any information system. Generally, data integrity means protecting data from unauthorized deletion, modification, or fabrication. Managing entity's admittance and rights to specific enterprise resources ensures that valuable data and services are not abused, misappropriated, or stolen.Data integrity is easily achieved in a standalone system with a single database. Data integrity in the standalone system is maintained via database constraints and transactions, which is usually finished by a database management system (DBMS). Transactions should follow ACID (atomicity, consistency, isolation, and durability) properties to ensure data integrity. Most databases support ACID transactions and can preserve data integrity. Authorization is used to control the access of data. It is the mechanism by which a system determines what level of access a particular authenticated user should have to secure resources controlled by the system.Data integrity in the cloud system means preserving information integrity. The data should not be lost or modified by unauthorized users. Data integrity is the basis to provide cloud computing service such as SaaS, PaaS, and IaaS. Besides data storage of large-scaled data, cloud computing environment usually provides data processing service. Data integrity can be obtained by techniques such as RAID-like strategies and digital signature.Owing to the large quantity of entities and access points in a cloud environment, authorization is crucial in assuring that only authorized entities can interact with data. By avoiding the unauthorized access, organizations can achieve greater confidence in data integrity. The monitoring mechanisms offer the greater visibility into determining who or what may have altered data or system information, potentially affecting their integrity. Cloud computing providers are trusted to maintain data integrity and accuracy. However, it is necessary to build the third party supervision mechanism besides users and cloud service providers

The impact of algorithms and protocols, used to ensure data integrity and privacy, is studied to test the performance of the proposed model. The prototype system showed that data integrity and privacy are ensured against unauthorized parties. This model reduces the burden of checking the integrity of data stored in cloud storage by utilizing a third party, integrity checking service, and applies security mechanism that ensure privacy and confidentiality of data stored in cloud computing. This paper proposes an architecture based model that provides data integrity verification and privacy preserving in cloud computing.[1]In this paper, we propose the model of distributed virtual machine agent, and the model provides a unique and credible monitoring of virtual machines for each user in the cloud, so that even the sole administrator of the cloud server monitoring mechanism cannot bypass it and obtain protected sensitive data, preventing data from being tampered. In addition, based on virtual machine sagent auditing data, we utilize a data integrity protocol to make sure the users' data availability and integrity. Security analysis proves that the protocol can defend three kinds of attack from cloud service provider in our security model.[2] As many users share their data on a cloud the main question is about security of data present on cloud. In this research paper solution is provided to maintain data security and data integrity. This scheme contains a combination of RSA Partial homomorphic and MD5 hashing algorithm. In this solution data is encrypted by RSA Partial before uploading it on cloud server. After uploading its hash value is calculated by MD5 hashing scheme. All these approaches undergo through the following steps Encryption/Decryption, Data uploading on a cloud, Hashing and Verification.[3] In this paper, a detailed analysis of the cloud security problem is presented. Also the different problem in a cloud computing system and their effect upon the different cloud users are analyzed. It is providing a comparably scalable, position independent. Low cost platform for client's data. Since cloud computing environment is constructed based on open Architecture and interface. Based on this analysis various computing system and their effect upon the system, upon organizations and also upon different cloud users are analyzed. It is providing a comparably scalable, position-independent, low cost platform for client's data. Since cloud computing environment is constructed based on open architecture and interface. Based on this analysis various researches have also presented a view of measures that can be taken to deal with the cloud security problem and prevention that must be taken into account by any organization and cloud users seeking investment in cloud computing. [4]This new paradigm of data storage service also introduces new security challenges, because data owners and data servers have different identities and different business interests. Therefore, an independent auditing service is required to make sure that the data is correctly hosted in the Cloud. This paper surveys protocols that verify remote data possession. These protocols have been proposed as a primitive for ensuring the long-term integrity and availability of data stored at remote untrusted hosts. In this survey, we analyze several of these protocols, compare them with respect to expected security guarantees and discuss their limitations[5]

# **Architecture Diagram**



Figure 1 Architecture diagram

# **2. PROBLEM STATEMENT**

#### Modules

#### **Data Processing**

- In this module, apply metadata processing suitable for operating data intensive and computational intensive applications. There is a serious requirement to deal with the data security issues for preserving the data integrity, privacy and trust in the security environment.
- While security concerns are protecting some organizations from adopting cloud computing at all. In this module, data owners first encode the metadata files by using regenerating code, and then store the coded file across multiple cloud servers. The multiple cloud web servers may locate in the same provider or different service providers. Data owners may perform block-level active functions on the outsourced data.

# Meta Indexing

- In this module, meta indexing are proposed using data structure to support dynamic data update operations in which the data owner needs to store block index and block logical location for each block of the outsourced file.
- The main advantage of this method is that it is able to efficiently support dynamic update operations efficiently due to the node re-balancing problem.
- Data represent the user's data to be updated
- Index service represent the MAC indexing service
- The data index represent the index of the data on the server Fail Index represent the failed server index
- When any changes occurred then it uploaded

# **Third Party Auditor**

- In this module, for data integrity confirmation use a third get together auditor, specifically a sole third party auditor. TPA helps an end user verify the metadata. TPA can gain access to control should be applied to determine traditional users and minimize the possibility of unauthorized users.
- The communication and computation expense should be reduced. Information integrity with high security may be ensured when blocks of information are distributed between multiple auditors for verification.
- Data represent the user's data to be updated
- Index service represent the MAC indexing service
- The data index represent the index of the data on the server.

# **3. EXPERIMENT AND RESULTS**

# **Output Screen**

Data Integrity		
Data	a Integrity Prote	ection
	Third Party Auditor	
Receive	Split	Servers
abcdefghijkl		

# Figure 2 Servers Form

	Data Integrit	y Protection	
Upload Fi Select Filename Size Type	ile iers\admin\Desktop\data1.txt data1.txt 12 bytes .txt View Upload	abcdefghijkl	

Figure 3. File Upload Form

	Split Files	
Split Files	Share Files	Process
Split Files		
a1.txt	<u></u>	
a2.txt	Message	
a3.txt		
a4.txt	File are splitted	

Figure 4 Split Files

	Data Integrity Protec	tion
	Generate MAC	
Server 1	EhE/jzovmVl+l3GspqUoa5QRNb0=	
Server 2	J1d0m06p/SFWnDbCITB1NfKX3jI=	]
Server 3	bEFRB2CxIbnaWFdhfOGmuk3FJTE=	
Server 4	98W68z+CHwZzNOKaQvCKbEE+q0I=	



## **PERFORMANCE ANALYSIS**

The exisiting and proposed system are analysed. The problem identified in existing The existing system is Storage Based on Erasure Coding that Simplify the content placement and recovery problem at the cost of longer data retrieval. The Rate less property enables its redundancy. Data security requirement of cloud computing and setup a mathematical data model for cloud computing, some of the things that appear on the existing system are given

below. Regenerating codes are implemented to minimize repair traffic in the network. It does not reading and reconstructing the whole file during the repair time. It reads a set of chunks smaller than the original file from the other servers and reconstructs only the lost contents. This assumption has prevented them from automating.Nearly 70% performance has been increased

# **4.** CONCLUSION

In this project, a TPA based Integrity Verification and Data Recovery has been proposed, which helps reducing the computation time delay and traffic mismatch errors. The system mainly depends on Third Party Auditor (TPA) which will verify the status of the servers in regular interval for the lost connection or data. The system will gain more efficient, higher analytical of data records, time consuming. This system provides higher result in time consumption and reduced computation overhead which compared to the previous results. This DIP scheme maintaining the transparency between End user and cloud service provider by performing the tight security manually on the client side so that they can be satisfied on their security of data. So seen the popularity of outsourcing real storage to the respective cloud servers, it is necessary to enable clients to verify the integrity of a data in the cloud. Our DIP scheme preserve a fault tolerance and repair traffic saving.

## **5. FUTURE ENHANCEMENTS**

In the future work, a backup or replication to the TPA can provide higher data retrieval and indexing in very less period. The security can be added to the system will help in protecting the more privacy to the user data and files. An efficient machine learning algorithms like ADABOOST can be implemented in the system which will help the system in time consumption and increase the accuracy of the retrieval.

In future we are going to focus on storage of data and retrieval of data to be done automatically that is auto backup with more tight security of data. It is designed for text file so in future we will further developed for audio and video respectively

#### REFERENCES

- [1].C. Wang, Q. Wang, K. Ren, and W. Lou, "Privacy-Preserving Public
- [2].Auditing tool for cloud Data Storage", In Proc. of IEEE INFOCOM, 2010.
- [3]'Balachandra Reddy Kandukuri, Ramkrishna Paturi V, DR.Atanu Rakshit,
- [4]."Cloud Security Issues", 2009 IEEE International Conference on Services Computing.
- [5].Mandeep Kaur and Manish Mahajan, "Implementing Various Encryption Algorithms to Enhance The data Security of Cloud in Cloud Computing",
- [6].2012 VSRD International Journal of Computer Science & Information Technology.
- [7].Mehmet Yildiz, Jemal Abawajy, Tuncay Ercan and Andrew Bernoth, "A Layered Security Approach for Cloud Computing infrastructure", 10th International Symposium on Pervasive Systems, Algorithms, and Networks, 2009 IEEE.
- [8].Amazon Elastic Cloud. http://aws.amazon.com/ec2/.

- [9]. Amazon Simple Database Service.http://aws.amazon.com/s3/.
- [10]. http://ieeeexplore.ieee.org/Cloud Security and Data Integrity Farooq M, Hasan M, Gull F, Mycobial deterioration of stone monuments of Dharmarajika, Taxila, Journal of Microbiology & Experimentation, Vol. 2(1). Pp. 36-412015.

## AUTHORS

Indira G doing final year MCA in Francis Xavier Engineering College

**Ms. S. Sujitha** working as Assistant Professor in the Department of Computer Applications, Francis Xavier Engineering College. Her area of interest is Wireless Sensor networks

**Subalakshmi K** doing first year MCA in Francis Xavier Engineering College





# PULLING DATA FROM MULTIPLE WEBSITES TO IDENTIFY BEST DEALS ON AUCTION WEBSITES

GuruSharmila S<sup>1</sup> Arul Amalraj A<sup>2</sup> Subalakshmi K<sup>3</sup>

<sup>1</sup>Department of Computer Application, Francis Xavier Engineering College, Tamil Nadu, Tirunelveli

<sup>2</sup> AP/Department of Computer Application, Francis Xavier Engineering College, Tamil Nadu, Tirunelveli

<sup>3</sup>Department of Computer Application, Francis Xavier Engineering College, Tamil Nadu, Tirunelveli

## ABSTRACT

Robotic process automation(RPA) is an emerging tool of automation technology based on notion of software robots or Artificial intelligence(AI). If the customer wants to buy a Bluetooth speaker. He will go to flip kart and search the product. and see the prices as expensive. He will buy it .But the same product is cheaper in Amazon. So our project will give the best product based on the best price and best rating.

# **KEYWORDS**

RPA, BPA, AI, ENIAC, SP

# **1. INTRODUCTION**

Robotic Process Automation (RPA) is being leveraged by many businesses around the world in a wide variety of sectors to provide a vital competitive advantage in business process automation. IT Automation is enabled by software including APIs, scripts, jobs, schedulers, programs, events and a broad range of automation tools. With the advent of Cloud Computing, resources are exposed by APIs and accessible in real-time.

"Watson is creating a new partnership between people and computers that enhance, scales and accelerates human expertise "Way back in 1943, the ENIAC, the computing machine was invented by J.Presper Eckert and John Mauchly at the University of Pennsylvania and was not completed until 1946. Some people say that abacus was the first computing machine. This is how the computing era started in decades back. Like a chameleon, the computing technology wearing different colors in terms of hardware like desktops, servers, laptops, mobiles and now entering into "rolltops". In addition to this, abundant software developments happened in terms of operating systems, applications, utilities and computing capabilities at the networking edge level with high bandwidth. Further, the organizational applications also stepped into many folds including punch cards, spreadsheets, office applications. Nowadays the business operations are leapfrogging into the new technological land the so-called "Robotic Process Automation.

The way Companies do their business, the way people do official work as well as the public daily life is going to be drastically assisted by new hardware, software technologies along with smart devices. The lifestyles of human being are changing across the due to global collaborations, multinational businesses, new IT/ITes advancements with RPA technology. Along with the existing new technologies functional in the human life Viz. Internet of Things, Big Data Analytics, Deep Learning, Artificial Intelligence, Machine Learning and other allied technologies, RPA is becoming one of the noteworthy disrupting technology.

#### **Architecture Diagram**





## **2. PROBLEM STATEMENT**

#### Modules

#### Economic

Economic feasibility is to check out the project in the view that whether it is financially satisfies the client as well as developers. In this project the secure framework helps to increase the security and reduce the cost. This economic feasibility helps us to ensure the budget of the project is reduced. It is essential.

220

## Technical

Technical feasibility helps to know about the project satisfies the technical requirement. Technical feasibility centers on the existing computer system and to what extent, it can support the proposed addition.

## Social

An estimate is made of how strong are action the user is likely to have towards the development this software and how it is used successfully in real time situation. It requires less man power and thus it is socially feasible.

# **3. EXPERIMENT AND RESULTS**

## **Output Screen**



Figure 2 Purchase Form



Figure 3 Amazon Result Form



Figure 4 Flipkart Form

# **PERFORMANCE ANALYSIS**

The exisiting and proposed system are analysed. The problem identified in exsiting The existing system is RPA is a tactical move to be used in the short term, until a traditional automation project can be planned and implemented. RPA is non-disruptive and is almost agnostic of the underlying technologies. The traditional automation of business processes (BPA) is a strategic information system transformation move, highlighting all of the places where existing processes can be automated with better system integration or the set-up of a specialized process software. it could be deployed on server or on user's desktop and it automates actions at the User Interface level. This assumption has prevented them from automating.Nearly 70% performance has been increased

## **4.** CONCLUSION

Robotic Process Automation technologies including manufacturing industries, chemical plants, the healthcare sector, aviation and so on, that were already discussed in this article. Let industry welcome the artificial intelligence humanoids to assist to human life. With this technology people will be improving their quality of life, caring of elderly people, get services in 24x7, escape the risky jobs from dangerous situations, bust workflow inefficiencies, shoring up productivity, and free people from doing repetitive tasks.

## **5. FUTURE ENHANCEMENTS**

The irruption of the RPA tools in the analysis phase would offer an exceptional added value to the product, based on the fact to that exisisting proposals had not been able to integrate it until now and the analysis is one of the most important phases in a software project .Achieving substantial improvements in the execution of the analysis process when an RPA implementation project is carrying out means reducing economically and temporally the cost of the whole project .There after achieving the automation of this phase would be beneficial for the current offer of RPA,by incorporating additional interfaces that allow to document in detail the characteristics of each process to be automated ,including information such as objectives, metrics, deliverables, hypotheses, team members, scope, stake holders, customers, input data, and customer requirements.

#### REFERENCES

- [1] Capgemini (2017). Robotic Process Automation: Gearing up for greater integration. White paper Available at: https://www.capgemini.com/wp-content/uploads/2017/08/robotic-process-autmoation-paper.pdf.
- [2] A Study of Robotic Process Automation Among Artificial Intelligence Available at: https://0x9.me/23EJU Robotic Process Automation. Available at: https://www.intellidynellc.com/sites/default/files/2019-02/ITD%20RPA%20Initiative.pdf.
- [3] Maximizing Your RPA ROI. Available at: https://www.helpsystems.com/resources/guides/maximizing-roi-robotic-process-automation.
- [4] Robotic Process Automation (2017). A Pragmatic Approach to Digital Transformation. White paper Available at: https://contextor.eu/wp-content/uploads/2017/06/Livre\_Blanc\_Contextor\_EN.pdf.
- [5] Dr. John Hindle, Dr. Mary Lacity, Dr. Leslie Willcocks, Dr. Shaji Khan (2018). ROBOTIC PROCESS AUTOMATION: Benchmarking the Client Experience. White paper Available at: https://0x9.me/GSzhj.
- [6] Mark Davison and James Manos (2018). WHAT IS YOUR BOT VISION? when and How to Scale Robotic Process and Cognitive Automation. White paper Available at: https://0x9.me/CH6X1.

International Journal on Cybernetics & Informatics (IJCI) Vol. 10, No.1/2, May 2021

- [7] David Chappell (2017). Introducing Blue Prism. Robotic Process Automation for the Enterprise. White paper Available at: http://www.davidchappell.com/writing/white\_papers/Introducing\_Blue\_Prism\_v2--Chappell.pdf.
- [8] Banks, M. R., Willoughby, L. M., & Banks, W. A. (2008). Animal-assisted therapy and loneliness in nursing homes: use of robotic versus living dogs. Journal of the American Medical Directors Association, 9 (3), 173-177. [Links]
- [9]. Barnett, G. (2015). Robotic process automation: adding to the process transformation toolkit. [ Links ]
- [10]. Blue Prism Software Robots: Introducing the Virtual Workforce. Accessed dated on 12/6/2018 from the Accessed dated on 12/6/2018 from the https://www.blueprism.com/about-us. [Links]

#### **AUTHORS**

GuruSharmila S doing final year MCA in Francis Xavier Engineering College

**Mr. A. Arul Amalraj** is working as Assistant Professor in the Department of Computer Applications, Francis Xavier Engineering College. He is having teaching experience of 12+ years. His area of interest is Cloud Computing

Subalakshmi K doing first year MCA in Francis Xavier Engineering College





224

# E-VOTING WITH HYBRID ENCRYPTION RSA ALGORITHM

V.Selva Bhuvaneshwari<sup>1</sup> and D.Angeline Rangithamani<sup>2</sup> K.Aathi Vignesh<sup>3</sup>

<sup>1</sup>Department of Computer Application, Francis Xavier Engineering College

<sup>2</sup>AP,Department of Computer Application, Francis Xavier Engineering College

<sup>2</sup>Department of Computer Application, Francis Xavier Engineering College

## ABSTRACT

*E-voting system based on and improved from our previous work*. *E-voting system, referred to as Enhanced note is enhanced with a new protocol design and watchdog hardware device to ensure voter confidentiality and voting accuracy. The watchdog device records all voting transactions to prevent voter frauds. The RSA cryptography algorithm ensures that votes casted are secured, thus maintaining the privacy of votes. The system is such that when the votes are cast on the nodes, the RSA technique encrypts the vote that is sent to the server system using both node and vote identity number.* 

## KEYWORDS

voting, citizen, style, styling, insert (key words)

# **1. INTRODUCTION**

Lifestyle E-voting is recording, storing and processing of electoral data of a voting system as digital information. E-voting system is employed to enable stress-free election and increase the attendance at polls. The application is initialized, it does not access the Internet until the vote is completely encrypted and digitally signed and ready to be cast. The various schemes have been proposed to improve the security and accuracy of Electronic Voting (E–Voting), many disputes happened in past elections still have not been resolved and new challenges have emerged. In addition, with paper ballots or machine–readable ballots, the tally results suffer from the unavoidable delay and ballot feeding errors work .

# **2. PROBLEM STATEMENT**

Electronic voting technology intends to speed the counting of ballots, reduce the cost of paying staff to count votes manually and can provide improved accessibility for disabled voters. Also in the long term, expenses are expected to decrease. Results can be reported and published faster. Voters save time and cost by being able to vote independently from their location. This may increase overall voter turnout. The citizen groups benefiting most from electronic elections are the ones living abroad, citizens living in rural areas far away from polling stations and the disabled with mobility impairmentsE-Voting system use the hybrid RSA algorithm which encrypts and decrypts the data.In the registration phase the user request pair keys by send hash of

his identity with the random key generator to include in his certification in order to prevent covering the voter's proof in next phases. The voter can obtain only one pair private key because the voter have one identity and password.

#### **Architecture Diagram**



Fig-1 Architecture Diagram

#### **3. EXPERIMENTS AND RESULTS**

#### Module

#### A.Admin

The admin emailid and the password has to be gathered if it's a replacement admin and if it's already existing admin they will use their name and password to log in with their account to manage the user's account. This module also has the responsibility of adding new users and allowing them to cast their votes and release their voting results. It's a login session for the administrator voter and exist

#### **B.** Citizen

In this module we enter the details of the candidates who participate in the given selected election. And We can update the details of the candidate for the election

#### **C.Voting**

In this module we enter the information of the voters and we can view the details of voters

#### **D.** Result

In this module we can view the final results of the Participating candidate. And it can also reset database after all process is completed

# **Output Screen**



Fig- 2 Login Page



Fig-3 Admin page



Fig-4 Citizen Page



Fig-5 Voting Page

E L'EVote x +			-	٥	×
$\leftarrow$ $\rightarrow$ C $\odot$ localhost:52698/EVote/citizenregister.aspx	έõ	£≞	(Ĥ		
ADMIN CITIZEN VOTING RESULT					
citzenid:					
ADD					
Online Voting © 2021					
🖷 🔎 Type here to search 🛛 🔿 🛱 👩 🥺 🔯 🌔 🗘 🥵 🖉	ê 🗈	<0) EN	G 14 G 11-03	:51 3-2021	5

Fig-6 Citizen Page



Fig-7 Voting Page

#### **PERFORMANCE ANALYSIS**

The Existing and proposed system are analysed. In existing system reduce the cost of paying staff to count votes manually and the proposed system random key generator to include in his certification in order to prevent covering the voter's proof in next phases.Nearly 70% performance has been increased.

#### **4.** CONCLUSION

This model proposed helps in achieving the authenticity, nontraceability of vote cast and security with confidentiality also being enforced.Security models such as the voter-verified audit trail allowed for voting systems that produce a project trail that can be seen and verified by a voter could be a future work.In such a system, the correctness burden on the voting terminal's code is significantly less as voters can see and verify a physical object that describes their vote and are allowed to vote in terminal only after their identity is proved and lifestyles.

# **5.FUTURE ENHANCEMENT**

Physical The password used by the user to vote is provided by the administrator. In the future the user can be given the privilege of changing the password. So it helps to increase the security of the system. The other two methods that can be used are cornea detection and fingerprinting. But here the problem is that it decreases the scope of the platform because these systems need some electronic components to implement. So it will avoid the users privilege to cast the votes at their fingertips. But it can guarantee that fake voting will be impossible.

#### REFERENCE

- Tadayoshi Kohno, Adam Stubblefield, Aviel D.Rubin, Dan S. Wallach, "Analysis of an Electronic Voting System", Johns Hopkins University Information Security Institute Technical Report, TR-2003-19, July23,2003
- [2] http://newindianexpress.com/states/andhra\_pradesh/Maoistsstrike-fear-make-off-.
- [3] with-poll-papers-in-agency/2013/07/15/article1684243.
- [4] M Executive Summary of "Genesis and Spread of Maoist Violence and Appropriate State Strategy to Handle it", Bureau of Police Research and Development, Ministry of Home Affairs, NewDelhi
- [5] http://en.wikipedia.org/wiki/Electronic\_voting
- [6] David L. Dill, Bruce Schneier, and Barbara Simons, "Voting and technology: Who gets to count your vote?", Communications of the ACM, vol. 46(8), Aug. 2003, pp.29–31
- [7] David Evans and Nathanael Paul, "Election security: Perception and reality", IEEE Security & Privacy, vol. 2(1), Jan. 2004, pp. 24-31
- [8] David Evans and Nathanael Paul, "Election security: Perception and reality", IEEE Security & Privacy, vol. 2(1), Jan. 2004, pp. 24-31

on

[9] Rebecca Mercuri. "Statement electronicvoting"http://www.notablesoftware.com/RMstatement.html, 2007

#### AUTHORS

Ms.V.Selva Bhuvaneshwari doing final year MCA in Francis Xavier Engineering College

**Mrs. D. Angeline Ranjithamani** is working as Assistant Professor and HOD in the Department of Computer Applications, Francis Xavier Engineering College. She is having teaching experience of 12+ years. Her area of interest is Wireless Sensor networks

Mr.K.Aathi Vignesh doing first year MCA in Francis Xavier Engineering College





# **FX HEALTHY PHYSICAL**

H.Mohamed Masood<sup>1</sup> and J.Abalin Luther<sup>2</sup> R.Kejapriya<sup>3</sup>

<sup>1</sup>Department of Computer Application, Francis Xavier Engineering College

# <sup>2</sup>AP,Department of Computer Application, Francis Xavier Engineering College

<sup>2</sup>Department of Computer Application, Francis Xavier Engineering College

#### ABSTRACT

All are aware of the saying "health is wealth". No one in this world is perfectly alright incase of health. Each and Every is suffering from some or the other sickness. More applications are being used through the mobile devices. The study was to analyze healthy projects from the viewpoint of the planning, implementation and evaluation of the projects. The purpose was to generate knowledge about the work done in projects that can be utilized in Health physica l management.

#### **KEYWORDS**

*healthy, fitness, style, styling, insert (key words)* 

## **1. INTRODUCTION**

Lifestyle choices can include physical activity, a healthy diet, stress reduction, sleep, quitting smoking and good oral hygiene. If your habits are already healthy, make sure to maintain them. If one or more of these areas need improvement, pay some extra attention to it. For a long-term, successful change, the journey towards a healthy lifestyle should be a positive experience. Notice all small improvements; every move in a positivedirection is a step forward. Your habits have a direct impact on your well-being. For example, getting enough quality sleep will make you feel thoroughly rested, good oral hygiene will contribute to a healthy mouth, and so on. aper is organized as follows: Section II presents the proposed model of the CV system, Section III states the optimization problem formulation, Section IV expresses the model results and discussion, and Section V states the conclusion and future research work .

# **2. ARCHITECTURAL DIAGRAM**



Fig-1 Architecture Diagram

# **3.**EXPERIMENTS AND RESULTS

#### Module

#### A. Nutritious foods

Manufacturer will register and login to the system by using valid credentials. Then manufacturer can add the products in its database. They also generate the QR code in the products.

## B. Food To Avoid

This module Mainly use of live a long day by avoiding these unwanted foods Ex: Junk Foods, Sugary Drinks, Cake & Candy ...etc. There is no health to the human body as all of these foods are eaten .

#### C. Stay Fitness Tip

This module full focused on Fitness and Great Physique. allocate three fitness tips. fat to fit transformation, lose fat, gains weight.

#### **D.** Beneficial of Water

Drinking Water Helps Maintain the Balance of Body Fluids. Your body is composed of about 60% water. The functions of these bodily fluids include digestion, absorption, circulation, creation of saliva, transportation of nutrients, and maintenance of body temperature. we are includes how to reduce the body and increase the body through the Japanese method.

#### E. Increase Testosterone Hormone

Formula of Testosterone: C19H28O2 Testosterone is a hormone produced by the human body. It's mainly produced in men by the testicles. Testosterone affects a man's appearance and sexual development. testosterone plays a key role in the development of increased Muscle & bone mass, growth of Body hairs. It stimulates sperm production as well as a man's sex drive. Testosterone is

both male and female hormone. But mainly used male. Ovaries times of Female used this hormone

#### F. Trainer

In this Trainer Modules have more and more specification on this Website. Users can interact with the Trainers. Users can access Voice Call & Video call with the trainers. the users can Contacts with Trainers example: email, phone no, instagram, WhatsApp etc.. The user's Any Doubts will comes with Clarify the trainers with Chat Applications. The Chat Application will provide on this website.

#### G. Blogs

The Blog module allows authorized users to maintain a blog. Blogs are a series of posts that are time stamped and are typically viewed by date as you would view a journal. The Trainer can Post Health based Blogs and only viewed by Users and read the daily blogs. In this Module when Trainer can post the Blogs, then Blogs will store on the database and Blogs will be displayed on User interface.

#### **Output Screen**



Fig- 2 Login Page



Fig-3 Register page



Fig-4 Home Page



Fig-5 Nutritious foods

#### **PERFORMANCE ANALYSIS**

The existing and proposed system are analysed. The problem identified existing is system will also help in providing real time information provided by the healthcare professionals and the problem identified proposed system Including Healthy ways to Boost Metabolism and Increase the Testosterone harmone.Nearly 70% performance has been increased.

## **4.** CONCLUSION

The Good nutrition is fundamental for children's current and future health, as well as their development and learning. The benefits of developing healthy dietary and lifestyle patterns from an early age onwards can positively impact on people's nutrition and health throughout their adult lives, and enhance the productivity of individuals and nations. Nutrition education is an

important element in an overall strategy aimed at improving food security and preventing all forms of malnutrition. Schools (from pre-school to secondary) are ideal settings for promoting lifelong healthy eating habits and lifestyles.

## **5. FUTURE ENHANCEMENT**

Physical fitness is a general state of health and well-being and, more specifically, the ability to perform aspects of sports, occupations and daily activities. Physical fitness is generally achieved through proper nutrition, moderate-vigorous physical exercise, physical activity, and sufficient rest. Before the industrial revolution, fitness was defined as the capacity to carry out the day's activities without undue fatigue. However, with automation and changes in lifestyles physical fitness is now considered a measure of the body's ability to function efficiently and effectively in work and leisure activities, to be healthy, to resist hypokinetic diseases, and to meet emergency situations.

#### Reference

- [1] H. Nazeran, S. Chatlapalli and R. Krishnam, "Effect of Novel Nanoscale Energy Patches on Spectral and Nonlinear Dynamic Features of Heart Rate Variability Signals in Healthy Individuals during Rest and Exercise," 2005 IEEE Engineering in Medicine and Biology 27th Annual Conference, Shanghai, 2005, pp. 5563-5567, doi: 10.1109/IEMBS.2005.1615745.
- [2] G. OuYang, "Design and Implementation of Body Mass Index Calculator Based on Android Technology," 2018 2nd IEEE Advance Information Management, Communicates, Electronic and Automation Control Conference (IMCEC), Xi'an, 2018, pp. 2459-2462, doi: 10.1109/IMCEC.2018.8469304.
- [3] M. Chiang, C. Wu, J. Feng, C. Fang and S. Chen, "Food Calorie and Nutrition Analysis System based on Mask R-CNN," 2019 IEEE 5th International Conference on Computer and Communications (ICCC), Chengdu, China, 2019, pp. 1721-1728, doi: 10.1109/ICCC47050.2019.9064257
- [4] Gregory J. Colman & Dhaval M. Dave" Physical Activity and Health" DOI 10.3386/w18858
  ISSUE DATE February 2013
- [5] Yash Jain; Hermish Gandhi; Atharva Burte; Aditya Vora," Mental and Physical Health Management System Using ML, Computer Vision and IoT Sensor Network", 2020 4th International Conference on Electronics, Communication and Aerospace Technology (ICECA), DOI: 10.1109/ICECA49313.2020.9297447

#### AUTHORS

Ms. H.Mohamed Masood doing final year MCA in Francis Xavier Engineering College

**Mrs. J. Abalin Luther** is working as Assistant Professor in the Department of Computer Applications, Francis Xavier Engineering College. She is having teaching experience of 5+ years. Her area of interest is Wireless Sensor networks

Ms.R.Kejapriya doing first year MCA in Francis Xavier Engineering College





-

# **FX JOB RECRUITMENT**

## Padmanaban<sup>1</sup> and Sujitha<sup>2</sup> Muppidathi@Priya<sup>3</sup>

<sup>1</sup>Department of Computer Application, Francis Xavier Engineering College

## <sup>2</sup>AP,Department of Computer Application, Francis Xavier Engineering College

<sup>2</sup>Department of Computer Application, Francis Xavier Engineering College

#### ABSTRACT

In this project present a secure and privacy-preserving access control to users, which guarantee any member in a group to anonymously utilize the cloud resource. Moreover, the real identities of data owners can be revealed by the group manager when disputes occur. In this project provide rigorous security analysis, and perform extensive simulations to demonstrate the efficiency of our scheme in terms of storage and computation overhead. Cloud computing provides an economical and efficient solution for sharing group resource among cloud users. Unfortunately, sharing data in a multi-job portal manner while preserving data and identity privacy from an un trusted cloud is still a challenging issue, due to the frequent change of the membership.

The major aims of this method a secure multi-owner data sharing scheme. It implies that any user in the group can securely share data with others by the un trusted cloud. This scheme is able to support dynamic groups. Efficiently, specifically, new granted users can directly decrypt data files uploaded before their participation without contacting with data owners. User revocation can be easily achieved through a novel revocation list without updating the secret Keys of the remaining users. The size and computation overhead of encryption are constant and Independent with the number of revoked users.

Job portal is developed for creating an interactive job vacancy for candidates. This web application is to be conceived in its current form as a dynamic site-requiring constant updates both from the seekers as well as the companies. On the whole the objective of the project is to enable jobseekers to place their resumes and companies to publish their vacancies.

#### **Keywords**

Network Protocols, Wireless Network, Mobile Network, Virus, Worms & Trojon

## **1. INTRODUCTION**

Traditional education is defined as teacher-centered delivery of instruction to classes of students who are the receivers of information. Traditional institutions generally stress basic educational practices and expect mastery of academic learning in the core subjects. Most organizations generally follow this educational model[8]. On the other hand, an online educational or e-learning service is a website, which teaches and helps students improve in certain subjects[5]. These are normally, used by institutes to let students learn from home and complete online homework.

Traditional education is not necessarily the most effective way of learning, because no student can pay full of attention to the class lectures, and it cannot be possible for a student to attend the class regularly. So due to many reasons such as lack of concentration, absent to the class, wrong understanding of the concept, etc., the education system may face a poor outcome. Another factor is that, a lecturer may not handle an efficient teaching methodology. E-learning as a method of education makes the learners undergo contemplation, remoteness, as well as lack of interaction or relation. It therefore requires a very strong inspiration as well as skills with to the management of time in order to reduce such effects. With respect to clarifications, offer of explanations, as well as interpretations, the e-learning method might be less effective that the traditional method of learning. The learning process is much easier with the use of the face to face encounter with the instructors or teachers[2].

Both traditional and e-learning system has its own advantages and disadvantages. In order to overcome the disadvantages, the project propose an idea of converting the education system into active learning education, by sharing the videos of class lectures through online. This method will deliver the benefits of both traditional and e-learning system and makes the education more efficient.

#### • Emily BAGARUKAYO, Ezra MWESIGWA(2017),

This paper proposes and highlights the need of an online job board system for colleges and its effectiveness in bridging the gap between college students and career opportunities. Traditionally, employment websites have been used in HR management for finding candidates and in recruitment. This work is based on a job portal built for one of the leading engineering campuses of Nepal, Pulchowk Campus, which is a variation of such job boards designed specifically to serve the students of the Campus. With services like job recommendations to students based on their skills, and candidate filtering to assist companies in candidate matching, the system is expected to be of use for both students for exploring jobs, and companies to find potential candidates suited for the job.

#### • Vijay Yadav(2019),

This paper presents a designing of a web based system for Career Guidance and Employment Management System (CGEMS). Basically, CGEMS is tries to help a user who is looking for career advice guidance, or looking for their opportune job.

CGEMS tries to make one place where student, job seeker, career advisor or consultant, and various company or organization can meet and help. In order to help the users to determine their best career choice, this system also offers some tests or quizzes that are related to such career and the user personality which will be useful for the career path. Furthermore, users of CGEMS such as company or organization can post a job description, when they look for employee.

#### • Vivek Kumar Sehgal (2013),

In the current scenario, there is a rat race in each and every professional field. It is also true for job market. A job portal is a website dedicated for online information about recruiters as well as job seekers. A job portal helps both the job seekers and recruiters finding the right organization for the employees. In the case of job seekers, according to their educational qualification, experience and their preferences, the job portal shows the list of companies to the job seeker. And, to the recruiters, provides the suitable candidates from a pool of lacks. The objective of this application is to develop a system to enable interaction between employers and applicants. The

determination is to allow communication between the interested parties and complete the task of recruitment quickly.

#### • Marjan Mansourvar and Norizan Binti Mohd Yasin (2014),

"Dreams Job" is an online Job Search Portal, a web application through which job seekers can register and apply for jobs. Through this portal employers can also post their jobs and review applications. The traditional recruitment systems are time taking and costly. A job seeker must find jobs through advertisements, college fairs, job fairs etc., and the employers must put in much effort to find the right candidate for a vacant position. This application addresses such shortcomings and is a convenient platform for both job seekers to find and apply for jobs and for employers to post jobs and review applications with much ease. Candidates can search for jobs in any field through advanced search capabilities. They can upload their resumes to this application which is stored for future use also. Employers can download these resumes and post/delete job positions. The admin controls this portal and makes the decision about companies and jobs that can access/appear in this portal. Candidates and Employers can use this portal without any geographical barrier, from any part of the world. This application is also developed by using some cutting-edge technologies that are in great demand in the IT industry today. Some of them are NodeJS, AngularJS, Sequelize ORM, etc.

## • Keethana Kopuri, Gulam Mujtaba Hussain Aqueel (2017),

A job portal helps both the job seekers and recruiters finding the right organization for the employees. In the case of job seekers, according to their educational qualification, experience and their preferences, the job portal shows the list of companies to the job seeker. And, to the recruiters, provides the suitable candidates from a pool of lacks.

The objective of this application is to develop a system to enable interaction between employers and applicants. The determination is to allow communication between the interested parties and complete the task of recruitment quickly.

#### • PAVAN P APARANJI, JAI PRAKASH TRIPATHI (2018),

As cross-sectoral categories such as green jobs, ethical jobs and seasonal work. Users can usually submit their resumes and send them to potential employers and recruiters for review, while employers and recruiters can post job postings and search for potential employees. Niche job directories begin to play a bigger role in providing jobs and employees with more goals for the candidate or employer. Employment Councils, such as For example, airport jobs and federal jobs provide a very specific way to eliminate and reduce the time for the most appropriate

# **2. PROBLEM STATEMENT**

#### • Architecture Diagram

Naukri.com", "Shine.com", etc. brought the revolution of transforming traditional way of job search into technological advancement called "Online job Portal". Initially, less number of trusted clients and improvement through advertisements and branding. Job recruitment links are provided only through Whatsapp group. Candidate have to upload resume for each drive. Any training given by company which was followed through circular mode.

#### • Job Analysis

Traditional Job Analysis as a means to find a framework for many human resource practices. Traditional Job analysis is a time consuming process that is often focused more on the past and less on the behaviours we want to encourage today in employees.

## • E – Job Portal

It is a platform that joins recruiters and the job seekers to complete their goals and requirements. Recruiters look for a right candidate who has the right qualification to handle the responsibilities efficiently.

Simple and professional GUI for users of all qualification groups. Increased filtering for employees seeking job as a Fresher Or as an. Experienced individual. All the recruitment intimation provided in the website. Student can register all the recruitment drive using this website. Candidate also upload cv, which is use for further drive. Recruitment results also published. Student can register for training.

To improve the efficiency of verifying multiple tasks, we further extend our mechanism to support batch student. There are two interesting problems we will continue to study for our future work. One of them is traceability, which means the ability for the group manager to reveal the identity of the signer based on verification metadata in some special situations.





# **3. EXPERIMENTS AND RESULTS**

#### • Modules

The The project "FX Job Recruitment" consists 5 modules for optimizing education system.

- 1) User and Admin Accounts
- 2) Mentor
- 3) Students

## • USER AND ADMIN ACCOUNTS

This module was build to manage the user registration, user authentication, Admin interface, user login and successful logout from the application. The user details are enrolled into the database with a registration form. Login form interfaces with the user to get the username and password, and authenticates the valid user. Admin accounts are managed with the MySQL Admin Interface. After logout of the user, the web application redirects to the Home page.

## • Mentor

This module was created for the Mentor to give information about the Job Recruitment. The Mentor, will upload the drive and training details into the database, which can be accessed by the authenticated users. The Mentor can view the students details who are all apply for the drive as well as training. The Mentor can download the students cv through this Mentor know who are the candidates are apply for the drive. The Mentor can revocation the students from the group. After the completion, of the drive and training, Mentor can delete the details of the file.

## • Student

This module allows the student apply for the drive and training. The students can access the drive and training details. The students can View which are all the drive are held today. The students can register for the drive by uploading the cv. The students can View all the OFF-Campus drive.

## **Output Screen**



Figure: 2 Admin Login


Figure: 3 Administrator Access



Figure : 4 Group Creation

User Regi	istration	form	
	Sign up		
Username			
Username			
Email			
Email			
Password			
Password			
Retype password			
Retype password			
Group Name			
san			
SIGN UP			





Figure: 6 Choose File



Figure :7 Deletion Page

Group Manage	er Validation
Select Grou	up name: MCA 🔍
C   Enter	GroupKey.
_	Submit
Figure: 8	Group Validation
User Re User	Welcome, civil, Your Client List Here



#### **PERFORMANCE ANALYSIS**

The existing and proposed system are analysed. The problems can be easily rectified with this concept. Nearly 70% of the performance has been increased.

# **4.** CONCLUSION

The design a secure data sharing scheme, job for dynamic groups in an un trusted cloud. In job, a user is able to share data with others in the group without revealing identity privacy to the cloud. Additionally, job portal supports efficient user revocation and new user joining. More specially, efficient user revocation can be achieved through a public revocation list without updating the

private keys of the remaining users, and new users can directly decrypt files stored in the cloud before their participation. Moreover, the storage overhead and the encryption computation cost are constant. Extensive analyses show that our proposed scheme satisfies the desired security requirements and guarantees efficiency as well.

#### **5. FUTURE ENHANCEMENT**

This paper, I propose a secure data sharing scheme, named job portal, for dynamic groups in the cloud. By leveraging group signature and dynamic broadcast encryption techniques, any cloud user can anonymously share data with others. Meanwhile, the storage overhead and encryption computation cost of our scheme are independent with the number of revoked users. In addition, we analyse the security of our sc. We would like to add online preliminary exam and interview.

#### REFERENCES

- [1]. Marjan Mansourvar and NoZrizan Binti Mohd Yasin, "Development of a Job Web Portal to Improve Education Quality", 1, February 2014.
- [2] Pooja T. Killewale, Prof A.R. Mune, "A Review on: Job Portal A Web Application for clients", May 2017
- [3] Gulam Mujtaba Hussain Aqueel, Azbar Sadiqa Jabeen, "A Online Job portal management system", February 2017.
- [4] PAVAN P APARANJI, JAI PRAKASH TRIPATHI, "REVIEW OF JOB PORTAL IN RECUIREMENT", January 2018.
- [5] G. Adomavicius, and A. Tuzhilin, "Toward the Next Generation of Recommender Systems: A Survey of the State-of-the-Art and Possible Extensions," IEEE Trans. Knowl. Data Eng., pp. 734-749,2005.
- [6.] G. Linden, B. Smith, and J. York, "Amazon.com Recommendations: Item-to-Item Collaborative Filtering," Published by the IEEE Computer Society, IEEE Internet Comput., vol. 7, no.1, pp. 76-80, 2003.
- [7] S. Lanning, and J. Bennett, "The Netflix Prize," in ACM digital library, San Jose, California, USA, August 12, 2007.
- [8] J. Malinowski, T. Keim, O. Wendt, and T. Weitzel, "Matching People and Jobs. A Bilateral Recommendation Approach," Proceedings of the 39th Hawaii International Conference on System Sciences, Kauia, HI, USA IEEE, January 23rd, 2006.
- [9] I. Paparrizos, B. Cambazoglu, and A. Gionis "Machine Learned Job Recommendation," RecSys '11 Proceedings of the fifth ACM conference on Recommender systems, Chicago, Illinois, USA, pp. 325-328, October 23–27, 2011.
- [10] B. R, "Hybrid Web Recommender Systems," The Adaptive Web: Methods and Strategies of Web Personalization, Verlag Berlin Heidelberg, Springer, pp. 377-408, 2007.
- [11] F. Cacheda, V. Carneiro, D. Fernández, and V. Formoso "Comparison of collaborative filtering algorithms: Limitations of current techniques and proposals for scalable, high-performance recommender systems," ACM Trans., vol. 5, no. 1, New York, NY, USA February 2011.

#### **AUTHORS**

Mr. K.Venkatesh Prabu doing final year MCA in Francis Xavier Engineering College

**Mrs. Sujitha** working as Assistant Professor in the Department of Computer Applications, Francis Xavier Engineering College. Her area of interest is Wireless Sensor networks

Muppidathi@Priya doing first year MCA in Francis Xavier Engineering College







# **ONLINE ALMA DEVELOPMENT**

K.Venkatesh Prabu<sup>1</sup> and S.Sujitha<sup>2</sup> M.Muppidathi@Priya

<sup>1</sup>Department of Computer Application, Francis Xavier Engineering College

# <sup>2</sup> AP Department of Computer Application, Francis Xavier Engineering College

<sup>3</sup>Department of Computer Application, Francis Xavier Engineering College

#### ABSTRACT

In our project graduates are our finest ambassadors and we are proud to count captains of industry, senior scientists and successful sports people among their number. Institute of Technology and Sciences ALUMNI ASSOCIATION links graduates and their alma mater. Membership of is free and automatic for all graduates and enables them to maintain a lifelong relationship with their college. Graduates also benefit from a wide range of services including class reunions, alumni newsletter, souvenir gift items, alumni ID cards and access to a variety of alumni chapters around the world. With an office on campus This is also responsible for coordinating an online community for alumni worldwide, providing a unique opportunity to connect with other graduates via the Website. In our project graduates are our finest ambassadors and we are proud to count captains of industry, senior scientists and successful sports people among their number. Institute of Technology and Sciences ALUMNI ASSOCIATION links graduates and their alma mater. Membership of is free and automatic for all graduates and enables them to maintain a life-long relationship with their college. Graduates also benefit from a wide range of services including class reunions, alumni newsletter, alumni ID cards and access to a variety of alumni chapters around the world. With an office on campus This is also responsible for coordinating an online community for alumni worldwide, providing a unique opportunity to connect with other graduates via the Website Alumni can communicate to the students regarding job opportunities and the students can share the department technology activities to the alumni. The alumni and the student can communicate only through the admin permission. A system that will be able to manage alumni data of a college and provide easy access to the system. Final year students will be initially given a student login ID. Access to the system can help them in building connections to their projects or for placements. The system will automatically list all Alumni information their graduation and their status will be transferred from the student module to the alumni module.

#### **KEYWORDS**

Alumni, Information Technology.

#### **1. INTRODUCTION**

The aim of our project is to make placement to each and every student so that no one in our college is unemployed so that we make our own student as safe guard for their student and to help their junior to get placed in their own company The main objective of this website is to enable the students to get ideas through Alumni and they can share their own Experience. The Alumni can help the students by providing guidance supports for their juniors It can encourage, promote and facilitate placement activities among students. While the implementation outcomes found very compatibility and reasonable in wide extents between available data and system

requirements. The main objective of this website is to enable the students to get ideas through Alumini and they can share their own Experience. The Alumini can help the students by providing guidence supports for their juniors It can encourage, promote and facilitate placement activities among students. While the implementation outcomes found very compatibility and reasonable in wide extents between available data and system requirements. **JONATHAN OLORES ETCUBAN** of University of Cebu Philippines says Databases for alumni are vital to every learning institution. The data and information are needed by the school to communicate, verify, archive and research the alumni. These are also used to validate the gap between the knowledge and skills possess by the graduates and the required qualifications needed by Subashini.S, Sowndarya.A Department of Information Technology industries. Prathyusha Engineering College, Thiruvallur Tamil Nadu - India had made a Alumni site research in that they has says that A system that will be able to manage alumni data of a college and provide easy access to the same. The alumni will also be interested to maintain relations with their institutions. Alumni can communicate to the students regarding job opportunities and the students can share the department technology activities to the alumni. Akeem Olowolayemo Dept of Cognitive Science, Faculty of Cognitive Science & Human Development, University Malaysia Sarawak, Malaysia. Make research of University Based Job Recommender & Alumni System With the advancement in technology, job seekers who among them are fresh graduates will tend to use erecruiting to find opportunity and apply for jobs. One of the desires of any university is to be able to track the employability of their graduates. After graduating, they often require their graduates to fill an online system prepared by the university which functions to know whether they are getting jobs and to records their jobs details in order to analyze the university's graduate's employability. Teddy Mantoro Department of Computer Science, Faculty Science and Technology, Sampoerna University Jakarta, Indonesia says This work aims to propose a system that enables university to track their graduate students' job information via a collage site. It also had a feature for students who have not secure a job position or wish to change their job to apply for available job opportunities after graduating. The profile of each student in the application is auto-created from information extracted from graduating students' file from university database which the student can then customize to include their job status. Kamaleiah Harun Dept of Cognitive Science, Faculty of Cognitive Science & Human Development, University Malaysia Sarawak, Malaysia The study aimed to design and develop an alumni database of the University of Cebu that would provide solutions to problems in tracing alumni. The proposed system would enable users to register as well as generate information for the purpose of tracing the whereabouts of the alumni. The descriptivedevelopmental method was utilized, and two sets of researchers made questionnaires were administered to 95 respondents.

The second section discuss about the literature review and continued by problem statements. The fourth section gives the experiments and results followed by the conclusion and future enhancement.

# **2. PROBLEM STATEMENT**

#### **Architecture Diagram**

Existing system is a manual one in which users are maintaining documents paper work to store the information like colleges details, student details. It is very difficult to maintain historical data. It is difficult to maintain important information in documents paper work. More manual hours need to generate required reports. It is tedious to manage historical data which needs much space to keep all the previous years, ledgers, documents paper work. The design and implementation of the ALUMNI Dashboard system will be available for general public use through the web interface. A non- registered visitor can look at the list of graduates according to year of graduation or a field of study. He can also look at graduates profiles. The level of profile details shown to the public is limited. By default, a public visitor can only see name and surname of a graduate, year of graduates can also add some information about themselves to propagate its graduates. Therefore graduates can also add some information about themselves into the system during the study such as working experience, knowledge. Graduates can enable to display this information in their profiles for public visitors.Keyword: Alumni, System, Student, Management, Dashboard,Find Alumini .



Figure :1Architecture Diagram

# **3. EXPERIMENTS AND RESULTS**

#### Modules

The **Discovery Alumni:** Its shows the notable alumni's and also Search for an particular alumni by their jobs, search by Events and View all the daily's News and Stories Find alumni and they can invite their friend

**Job Reference:** Students can see their Alumni job Details ,Location It make them to maintain smooth relationships and get job in alumni company's

**Prominent Member:** Popular alumni in the good company are remain here you can collect some good knowledge and get placed in their company's

**Chats:** In this the students at the current Placement drive can Make suggestion from there Aluminize

**Placements:** Here we provide the detail of the company by their suitable qualification And also provide Training for all the company in common and all the preview year question for reference Internship for student will be provided by our placement cell Details of our college

Management: Provide details of chairman management and Details of finance committee

Admin: Admin can only add and view all the information of our students They can add all the details of company's adding member to site only by the admin

**Contact us:** We provide our all our management contact by mail and also by phone number so that admin can only view the review by the student

**Database collection:-**The data collector is a core component of the data collection platform for SQL Server and the tools that are provided by SQL Server. The data collector provides one central point for data collection across your database servers and applications. This collection point can obtain data from a variety of sources and is not limited to performance data, unlike SQL Trace. The data collector enables you to adjust the scope of data collection to suit your test and production environments. The data collector also uses a data warehouse, a relational database that enables you to manage the data that you collect by setting different retention periods for your data. The data collector supports dynamic tuning for data collection and is extensible through its API. For more information, see <u>Data Collector Programming</u>.

#### **Output Screen**



Figure:2 Home Page

🖸 Post Attendee - Zoom 🛛 🗙 🛛 😹 localhost / 127.0.1	0.1   phpMyAdr: 🗙 🕘 Online Alumini	× +			-	σ	×
← → C ③ 127.0.0.1:8000/login					아 ☆ 🛪	F 🔘	:
👯 Apps 🤣 Gmail 💶 YouTube 🛃 Maps 🎂 News	😹 Web Store 🐚 Translate 🔞 Replit - D	jango Te 🍸 Major Projects or	J dtt: Learn New Skills Wi	i 🙆 Pluralsigh	t 👩 Introduction to Net		39
FRANCIS XAVIER® ENGINEERING COLLEGE KUTONINGON IN STITUTOR ACCERTING IN NA	ALMA DEVELO	PMENT					Î
Home Discover Alumini Pre	ominent members Placeme	ent Job Referance	Management	Feedback	Login Register		
Login E-Mall Address Password Remember Me Loge Poget Your Password?	karthi@gmail.com						
	© 2020	Copyright: FXEC					
FRANCIS XAVIER CHIGHEEENNG COLLEGE ACCESSITION COLLEGE	L Contact us === Francis Xavie t is one 103/G2, Bypass Ro 103/G2, Bypass Ro	er Engineering College ad, Vannarpettai,			<b>ms</b> tivate Windows		
of Tirunelveli heralded worldwide as the Oxfor South India and No 1 Engineering College in	rd of Tiruneiveli South 627003 Tamil Nadi	India	SCAD G			414	Ţ

Figure:3 Login Page

→ C ① 127.0.0.1:8	000/addmember						* *
Apps 😵 Gmail 😐 YouTu	be 🛃 Maps 💼 News 🍃	Web Store 🎥 Translat	e 🔞 Replit - Django Te.	Major Projects on J	dt: Learn New Skills Wi	😑 Pluralsight 👩 Introductio	n to Net
Members	Admin 🔻						
lob Reference	First Name:						
Placement	Last Name:						
lob Referance							
	Description:						
Management							
eedback							
	Profile Link:						
		Add Memb	er				
						Activate Windo	ows
						Go to Settings to ac	

Figure:4 Registration Form



Figure:5 Website

#### **PERFORMANCE ANALYSIS**

The existing and proposed system are analysed. The problems can be easily rectified with this concept. Nearly 70% of the performance has been increased.

# **4.** CONCLUSION

This system will be available for general public use through the web interface. A non-registered visitor can look at the list of graduates according to year of graduation or a field of study. He can also look at graduates profiles. The level of profile details shown to the public is limited. By default, a public visitor can only see name and surname of a graduate, year of graduation and a field of study. The faculty endeavors to propagate its graduates. 2) Therefore graduates can also add some information about themselves into the system during the study such as working experience, knowledge. Graduates can enable to display this information in their profiles for public visitors. Inserted information can be used as an input for generating graduate's curriculum vitae in pdf format, which I provided automatically. It is in a graduate's competence, which information will be searching pages with their crawlers. A graduate can use it for the building of his virtualweb identity on the internet.

# **5. FUTURE ENHANCEMENT**

The future scope of this project is implementing application should be user friendly with accurate Company details. And also, changes can be made by providing some provisions to accept different kinds of Sector implementing the QR code technique. The review may given by the user once they can able to place in a MNC, after that they can be able to give same set of help to their Junior

#### REFERENCES

- [1] Baaken, T., & Kliewe, T. (2012). Creativity techniques using online facilities. Retrieved on March 13, 2013 from http://goo.gl/Fr2yU0
- [2] Barnard, Z. (2007). Online community portals for enhanced alumni networking (Doctoral dissertation, University of Johannesburg). Retrieved on April 2013 from http://152.106.6.200/handle/10210/851
- [3] Davidson-Shivers, G. V., Inpornjivit, K., & Sellers, K. (2004). Using alumni and student databases for program evaluation and planning. College Student Journal, 38(4), 510. Retrieved on May 25, 2013 from <u>https://google/Ghonjl</u>.
- [4] N. Barnes, A. Lescault, 2011, Social media adopion soars as higher-Ed experiments abd reevaluates its useod new communication tools http://www.umassd.edu/cmr/studiesandresearch/socialmediaadoptionsoars/
- [5] G. Crisp, I. Cruz, Mentoring College Students: A Critical Review of the Literature Between 1990 and 2007, Research in Higher Education, 525-545.
- [6] ABET (2009). Criteria for accrediting computer programs: Effective for evaluations during the 2010-2011 accreditation cycle. Baltimore: ABET, Inc. Retrieved January 2010, from http://abet.org/uploadedFiles/Accreditation/Accreditation\_Process/Accreditation\_Documents/caccriteria-2010-2011.pdf, 2-3.
- [7] Research: Principles, Methods, and Practices (Second Ed.), Tampa, FL: Global Text Project.

#### AUTHORS

Mr. K.Venkatesh Prabu doing final year MCA in Francis Xavier Engineering College

**Mrs. Sujitha** working as Assistant Professor in the Department of Computer Applications, Francis Xavier Engineering College. Her area of interest is Wireless Sensor networks

M.Muppidathi@Priya doing first year MCA in Francis Xavier Engineering College







# DEFENDING VIRTUAL GROSS SYSTEM FROM SOFTWARE GUSTY

# A.SUBASH<sup>1</sup> AND SAHAYA JENITHA<sup>2</sup> ALLEN STEVE<sup>3</sup>

<sup>1</sup>Department of Computer Application, Francis Xavier Engineering college

# <sup>2</sup>AP.Department of Computer Application,Francis Xavier Engineering college

<sup>3</sup>Department of Computer Application, Francis Xavier Engineering college

#### ABSTRACT

The aim of our project is to build a secure Web Application platform for auditing. The auditee uploads their financial records to the platform and the uploaded records can only be accessed by an authorized auditor. The data integrity is ensured by using cryptography. We can prevent malware like Trojan. The data will be in an encrypted format. Even if a hacker manages to get his hands on the data, it cannot be exploited.

# **KEYWORDS**

Network Protocols, Mobile Network, Virus, Trojon

# **1. INTRODUCTION**

To evaluate the proposed secure communication frame-work, a set of studies have been conducted, a discrete event-driven network simulator built with java. In real time auditing application there is a major drawback in security side because of illegal advertisement run on the app with owner permission on that same time Trojan malicious should be injected on the system by hackers to avoid this we can secure the applications confidential details by using our concept. Researchers have proposed a broad range of defense strategies against XSS attacks. Park and Sandhu's [36] cookie-securing mechanism can be adopted to eliminate XSS, but it requires explicit modifications to existing Web applications. Scott and Sharp [50] have proposed using gateways for filtering malicious input at the application level. In addition to preventing XSS, the gateway also prevents SQL injection-another widespread Web application vulnerability. Next, we describe how information flow testing is performed in order to identify XSS vulnerabilities, and then report our results from two experiments. In experiment 1, we installed and scanned five Web applications that were found vulnerable by WebSSARI, and a) compared testing coverage with WebSSARI (static verification), and b) studied the results of our proposed non-detrimental scanning techniques and their impact on testing coverage. The second section discuss about the literature review and continued by problem statements. The fourth section gives the experiments and results followed by the conclusion and future enhancement.



Figure 1:Architecture diagram

# **2. PROBLEM STATEMENTS**

#### Modules

- **Economic feasibility** : The proposed system is economically feasible because the cost involved in purchasing the hardware and the software is within approachable. Working with this system need not require a highly qualified professional. The operating-environment costs are marginal. The less time involved also helps in its economic feasibility.
- **Technical feasibility** : Earlier no system existed to cater to the needs of 'Audit Business Information'. The current system developed is technically feasible. It is a browser based user interface for construction workflow. Thus, it provides an easy access to the users.
- **Social Feasibility** : The analyst considers the extent that the proposed system will fulfill his departments. That is, whether the proposed system covers all aspects of the working system and whether it has considerable improvements. We have found that the proposed "Trojan Security" will certainly have considerable improvements over the existing system.

# **3.** EXPERIMENTS AND RESULTS

# **Output Screen**



Figure 2:Admin page

Security Auditing X +						-	đ	х
$\leftrightarrow$ $\Rightarrow$ C (i) localhost8080/Auditor_app/signup.html					0 ☆	5	h 🤤	:
0 +91 9159419363 전 subashcena512@gma	ail.com			f ¥ à	w			Î
Security Auditing	HOME	COMPANY PORTAL	KEY GENERATION CENTER	AUDITOR ADMIN				
	OU	IR SIGNU						
Back								
		LOGIN						
		E-mail						
		Password						
		LOGIN NOW						
locahost8080/Auditor_app/signup.html		f y à					- 701	₽M
E Search the web and Windows	E 😫 🗯 🛛	🦉 💆 🔲 🗸	<b>1</b>		^	⇒ 41	2/24	2021

Figure 3:login page



Figure 4:Registration page

<ul> <li>Security Auditing x +</li> <li>← → C. (0) Insalhost ADB/U/Auditor ann/Empiricipin</li> </ul>						<b>0</b> 7 G	+	-	0 • •	X :
0 +91 9159419363 ⊠ subashcena512@	gmail.com				8	f¥àv	ĸ	9		ĺ
Security Auditing	REQUEST KEY	KEY SENT RESPONSE	NEW	EDIT	AUDIT STATUS	LOGOUT				
	PUBLIC	KEY REG	UEST	T	7					
Name '	Subash									
Email '	subash1@gmail.com									
Request	O Request Key									
	Submit									
Search the web and Windows	🗎 🔒 😫	🛛 🖉 🗖 🥼	8 0				^ [	0 ¢i .	725 2/24	PM /2021

Figure 5:Request page

	Sec	urity	Auditing Request Key	KEY SENT RESPONS	e new edit	AUDIT STATUS	LOGOUT	
1			SERV	– /ER RESP	ONSE			
ck						-		
	S.NO	NAME	EMAIL	PAN ID	REQUEST TYPE	DATE	STATUS	
	1	Subash	subashcena1677@gmail.com	AAAAA9990Q	Requesting_Key	12-03-2021	KEYSENT	

Figure 6:Server page

$\Im$ Security Auditing $\leftrightarrow$ $\Rightarrow$ $C$ $\bigcirc$ k	x + calhost:8088/Auditor_app/New.jsp						e	l ☆	-	5 * 6	×
	0+91 9159419363 🖾 subashcena512@gm	ail.com		_		6	f 🖉 🔊 🗤	ĸ			
	Security Auditing	REQUEST KEY	KEY SENT RESPONSE	NEW	UPDATE	AUDIT STATUS	LOGOUT				
		UPL	OAD DET	AILS							
Back											1
	BASIC INFO										
	PUBLIC KEY*		Your F	Public Key							
	NAME*		First Name	L	ast Name						
	EMAIL ID & CONTACT NUMBER *		subashcena1677@gma	ail.c C	ontact Number						
Search the we	b and Windows	ê e 🔞	a 🖉 🖻 🤇					^ [	D 40	₹ 3/12	) PM /2021

Figure 7:Upload page



			0 Deien	ding Virt	tual Gros	s Systen	from So	Solhvare Gusty	
Search the web and Windows	Î	9	0	N,	-	B	0	へ ■ 如 単 <sup>65</sup>	0 PM 2/2021

Figure 8:Response page



Figure 9:Key Request page

200	X +		0	-		
900	D+91 9159419363 Id subashcena512@gma	all com	f y a w	и Ш	7	
	Security Auditing	HOME COMPANY PORTAL KEY GENERATION CE	NTER AUDITOR ADMIN			
		OUR SIGNUP				
lack						
		LOGIN				
		LOGIN E-dail				
		LOGIN E-tail Passoord				
		E-dail Passood LOGIN NOW				

Figure 10:Login page

S	ocurity		LOCOLE	
30		aiting	LUGUUI	
		CANDIDATE LIST		
ack		and the second		
_				
		East.	PAN ID	
NAME				
Subash		subash@gmail.com	VV/VV8888V	
Subash		subash@gmail.com subash@gmail.com	VVVVV888V SSSS9999P	
Subash Subash		subach lêgmail.com	VVVVV8888V 555559999P	
Subash Subash		subach ligmail.com subach ligmail.com 2021 © Defending Visual Gross System from Software Grafty	VVVVV8888V SSSS59999P	

Figure 11:List page

# 4. PERFORMANCE ANALYSIS

The existing and proposed system are analysed, The problem identified in existing is Because declarative security always appears at the beginning of the application element, it's easier to find the security settings. That makes it a better option from a documentation perspective This assumption has prevented them from automating nearly, 70% performance has been increased.

# **5.** CONCLUSION

In this application, we have presented followed by the basic framework for message encryption and mutual auditing as the interlinked upstream and downstream stages. We have mainly implemented by the all data's converted by the encryption method, all the data secured and efficiently delivered by the customers side. Privacy will be increasingly important, as our society become more networked and data about individuals are increasingly digitalized. Such a tool has several potential applications. Experimental results showed that the proposed security framework effectively precluded hardware Trojan collusion. It only imposed constant low overhead on communication latency, with negligible impact on packet arrival rate and network throughput. The only major overhead was the cost of utilizing nodes from extra vendors, which could be mitigated by wisely deploying the network.

#### REFERENCES

- M. Tehranipoor and F. Koushanfar, "A survey of hardware Trojan taxonomy and detection," IEEE Des. Test Comput., pp. 10–25, 2010.
- [2] Swarup Bhunia; Miron Abramovici; Dakshi Agrawal; Paul Bradley; Michael S. Hsiao; Jim Plusquellic; Mohammad Tehranipoor,"Protection Against Hardware Trojan Attacks: Towards a Comprehensive Solution,"Published in: IEEE Design & Test in 2013.
- [3] Veronika Reinauer; Christian Magele; Christian Scheiblich; Andrej Stermecki; Remus Banucu; Jan Albert; Michael Jaindl and Wolfgang M. Rucker,"Object-Oriented Development of an Optimization Software in Java Using Evolution Strategies,"Published in: IEEE Transactions on Magnetics in 2012.
- [4] H. Salmani, M. Tehranipoor, and J. Plusquellic, "A novel technique for improving hardware Trojan detection and reducing Trojan activation time," IEEE Trans. Very Large Scale Integr. (VLSI) Syst., vol. 20, no. 1, pp. 112–125, Jan. 2011.
- [5] Swarup Bhunia, Michael S. Hsiao, Mainak Banga, Seetharam Narasimhan, "Hardware Trojan Attacks: Threat Analysis and Countermeasures", Proceedings of the IEEE, vol. 102, no. 8, pp. 1229-1247, 2014.
- [6] Andrews, A., Offutt, J., Alexander, R. "Testing Web Applications by Modeling with FSMs." Submitted for publication, January 2004.
- [7] Bell, D. E., La Padula, L. J. "Secure Computer System: Unified Exposition and Multics Interpretation." Tech Rep. ESD-TR-75-306, MITRE Corporation, 1976.
- [8] Bertolino, A. "Knowledge Area Description of Software Testing," In Guide to the Software Engineering Body of Knowledge SWEBOK (v. 0.7), Chapter 5, Software Engineering Coordinated Committee (Joint IEEE Computer Society-ACM Committee), April, 2000. http://www.swebok.org
- [9] Benedikt M., Freire J., Godefroid P., "VeriWeb: Automatically Testing Dynamic Web Sites." In Proc. 11th Int'l Conf. World Wide Web, Honolulu, Hawaii, May 2002.
- [10] Bergman, M. K. "The Deep Web: Surfacing Hidden Value." Deep Content Whitepaper, 2001.

A,Subash doing final year MCA in Francis Xavier Engineering College

**Mrs. S. Sahaya Jenitha** working as Assistant Professor in the Department of Computer Applications, Francis Xavier Engineering College. Her area of interest is Wireless Sensor networks

Allen steve E College

doing first year MCA in Francis Xavier Engineering







268

# **ONLINE CAMPUS SELECTION PROCESS**

K.Parvathi1 and S.Sujitha<sup>2</sup> Allen steve<sup>3</sup>

<sup>1</sup>Department of Computer Application, Francis Xavier Engineering college

# <sup>2</sup>AP.Department of Computer Application,Francis Xavier Engineering college

<sup>3</sup>Department of Computer Application, Francis Xavier Engineering college

# ABSTRACT

The Present digital and technological era has facilitated the college campus recruitment process towards a manifestation of a vibrant shift in new systems of workforce engagements. The processes like gathering and compilation of information, filing of records, and all data related administrative work are done electronically, and therefore, paperwork is considerably diminished in the new model. Significantly, very less physical campus space is utilized for interview processes, and overall, consumes minimal time as compared with more traditional recruiting methods. And the super process excellence techniques is applied in the corporate with renewed focus on quality, even people recruiting has also been structured as a online flow system for steady results.

# **KEYWORDS**

Campus requirements, placement port, information regarding companies,

# **1. INTRODUCTION**

Most of the important processes in the institutes are carried out manually such as the registration of the students, managing huge information about students, faculty members. The project is beneficial for college students, various companies visiting the campus for recruitment and even the college placement officer. It provides an easy way for the company to hire candidates and also provides the facility to candidates to apply for different jobs. This system can be used as an application for the Placement Officer of the college to manage the student information with regards to placement. This system can be used as an application to manage student information to related placement. The system handles student as well as company data and efficiently displays all this data to respective sides. This System do all work regarding placement like collecting student records, Authenticate & activate the student profiles, Notifying eligible students. Proper login with time & role based secured access is provided to Placement Officer, Company, College staff and students.

# Architecture Diagram



Figure 1:Architecture diagram.

# **2. PROBLEM STATEMENTS**

# Modules

- Admin Module : In admin module the admin has to approve the company for to post the job details in the website.
- **Student module** : The Student module has to register then only he/she can attend the exam or apply for the job.
- **Company module** : Company module can conduct the exam those who are register as student .they can only attend the exam and apply the job.

# **3. EXPERIMENT AND RESULTS**

# **Output** screen



Figure 1:Login page

Ú	2	ONLIN	IE CAMPUS SELECT	ION PROCESS		
ADMIN	HOME	NEW COMPANY	NEW STUDENT	COLLEGE INFO	ABOUT US	CONTACT US
		SEARCH JOE CATEGORY	BIN FEW MINITUE!	!		
<u>ADD</u>	<u>EDUCATION</u> <u>DETAIL</u>	Skill QULIFICATION	: SELECT v : MCA v search			
EDIT	EDUCATION					
<u>A</u>	<u>APPLYJOB</u>					
A	PPLIEDJOB					

Figure 2:Job details page

ADMIN	HOME	NEW COMPANY	NEW STUDENT	COLLEGE INFO	ABOUT US	CONTACT US
		Al	DD EDUCATION QUAL	IFICATION		
		STDNAME	(			
		10 th PERCENTAG	B: 100 🗸			
		12th PERCENTAGE	}: <u>100 ∨</u>			
		QULIFICATION	: MCA v			
		SKILL	. select v			

Figure 3:Educational qualification page

Í	è		01	VLINE C.	AMPUS SELE	ECTION	V PROCESS		
ADMIN	HOME		NEW COMPANY		NEW STUDENT		COLLEGE INFO	ABOUT US	CONTACT US
Арг	oly Now					τ.		ά <b>ν</b>	
companyid	companyname	role	qualification	skill	joblocation	salary	status Apply		
1	grogle	Designer	EEE	AUTO CAD	TIRUNELVELI	12,000	<u>APPLY</u>		
2	tis	Developer	Π	CSS	TIRUNELVELI	15,000	<u>APPLY</u>		
3	yahoo	Designer	MCA	JAVA	TIRUNELVELI	15,000	<u>APPLY</u>		
4	worline	Designer	All Stream	DBMS	CHENNAI	20,000	<u>APPLY</u>		
ji të	in the second	jî.	¥-stim-	jî.	tin the second sec	÷.	Ng-15kin		

Figure 4: Apply page

ONLINE CAMPUS SELECTION PROCESS									
ADMIN	HOME	NEW COMPANY	NEW STUDENT	COLLEGE INFO	ABOUT US	CONTACT US			
WE ARE HIRING									
			ADD <mark>NEW JOB!!!</mark>						
		COMPANY NAME							
		CATEGORY :	Select v						
2	24.9.9	ROLE :	SELECT V	11		2.26			
		QULIFICATION	: [MCA v]						

Figure 5:Add page

ONLINE CAMPUS SELECTION PROCESS							
HOME	NEW COMPANY	NEW STUDENT	COLLEGE INFO	ABOUT US	CONTACT		
companyname	category	role					
google	Comp Sci	Designer					
tis	Comp Sci	Developer					
yaboo	EC	Designer					
worline	All Stream	Designer					
	EOCE         Output           google         0           google         0           google         0           google         0           google         0	EXXX CONTRACT C	ONLINE CAMPUS SELECT         NEW SUDENT         ROME       NEW SUDENT         comparizant       category       NEW SUDENT         gongle       Comp Sci       Designer         gongle       Comp Sci       Designer         gongle       EC       Designer         gongle       All Steam       Designer	ONLINE CALPUS SELECTION PROCESS         ROUGE       SELECTION PROCESS         ROUGE       SELECTION PROCESS         ROUGE       SELECTION PROCESS         ROUGE ROUGENTS         Category       RewSTUDENT         Category       RewSTUDENT <th colsp<="" td=""><td>ONLINE CAMPUS SELECTION PROCESS         SEW COLFANY       SEW STUDENT       COLLEGE NO       ABUTUS         SEW COLFANY       NEW STUDENT       COLLEGE NO       SEW COLFANY         SEW COLFANY       NEW STUDENT       COLLEGE NO       SEW COLFANY         SEW COLFANY       SEW COLFANY</td></th>	<td>ONLINE CAMPUS SELECTION PROCESS         SEW COLFANY       SEW STUDENT       COLLEGE NO       ABUTUS         SEW COLFANY       NEW STUDENT       COLLEGE NO       SEW COLFANY         SEW COLFANY       NEW STUDENT       COLLEGE NO       SEW COLFANY         SEW COLFANY       SEW COLFANY</td>	ONLINE CAMPUS SELECTION PROCESS         SEW COLFANY       SEW STUDENT       COLLEGE NO       ABUTUS         SEW COLFANY       NEW STUDENT       COLLEGE NO       SEW COLFANY         SEW COLFANY       NEW STUDENT       COLLEGE NO       SEW COLFANY         SEW COLFANY       SEW COLFANY	

Figure 6:Out page



Figure 7: Admin login page

# 4. PERFORMANCE ANALYSIS

The existing and proposed system are analysed, The problem identified in existing is This is the biggest challenge. If your survey is long and/or confusing you might get fake answers. Since there is less accountability, the chances for people just hitting buttons to finish are high. Check the questions you use carefully.People often take surveys because they're promised a reward at the end, resulting in them not accurately contributing to your study. Certain populations are less likely to have internet access and to respond to online questionnaires. Drawing samples is harder based on email addresses or website visitations. lack of a trained interviewer to clarify and probe can lead to less reliable data.This assumption has prevented them from automating nearly 70% Performance has been increased.

# **5.** CONCLUSION

In the existing system, maximum work goes manually and it takes time for any changes in the system. This big problem is the searching, sorting and updating of the student data and no any notification method available for giving information to student except the notice board. Proposed system gets automated in the online registration all the user, activation of the user and deactivation of the user. The admin can see the user information and will validate it, generate the student list on the basis of company criteria, company details can be provided to the user.

# 6. FUTURE ENHANCEMENT

In the future we can place the system on the cloud so the maintenance of the data can be reduced.

The students get notified by the SMS or Email if he/she is got selected for the job.And we can use the system monitoring to detected the malpractice. Admin module to be developed, there by automating the services of the Admin resulting in continuous flow of records from database.

#### REFERENCES

- [1] NileshRathod, Seema Shah, KavitaShirsat,"An Interactive Online Training & Placement System", International Journal of Advanced Research in Computer and Communication Engineering, Vol. 3, Issue 12,December-2013.
- [2] .Mr. R. J. laird, Dr. C. R. turner mima," Interactive Web based Placement Management Principles and Practice using OPUS" CGU-WACE, 2008.
- [3] .Hitesh Kasture, SumitSaraiyya, AbhishekMalviya, PreetiBhagat, "Training & Placement Web Portal", International Journal on Recent and Innovation Trends in Computing and Communication ISSN: 2321-8169 Volume: 2 Issue: 3,March-2014.
- [4] .Prof. AnaghaKulkarni , PriyankaHajare, PriyankaKhandave , ShitalAdhav,SwatiPimpale," Implementation of Online Placement System", IJERMT All Rights Reserved International Journal of Emerging Research in Management &Technology ISSN: 2278 -9359 (Volume-5, Issue-1), January2016.
- [5] .Mr R J LAIRD," Interactive Web-based Placement Management–Principles and Practice using OPUS", School of Engineering, University of Ulster, Shore Road, NEWTOWNABBEY, Co. Antrim, UK, BT37 0QB, 2008.
- [6] NileshRathod, Seema Shah, KavitaShirsat,"An Interactive Online Training & Placement System", International Journal of Advanced Research in Computer and Communication Engineering, Vol. 3, Issue 12,December-2013.
- [7] Mr. R. J. laird, Dr. C. R. turner mima," Interactive Web based Placement Management Principles and Practice using OPUS" CGU-WACE, 2008
- [8] Hitesh Kasture, SumitSaraiyya, AbhishekMalviya, PreetiBhagat, "Training & Placement Web Portal", International Journal on Recent and Innovation Trends in Computing and Communication ISSN: 2321-8169 Volume: 2 Issue: 3, March-2014.
- [9] Prof. AnaghaKulkarni , PriyankaHajare, PriyankaKhandave , ShitalAdhav,SwatiPimpale," Implementation of Online Placement System", IJERMT All Rights Reserved International Journal of Emerging Research in Management &Technology ISSN: 2278 -9359 (Volume-5, Issue-1), January2016.
- [10] Mr R J LAIRD," Interactive Web-based Placement Management–Principles and Practice using OPUS", School of Engineering, University of Ulster, Shore Road, NEWTOWNABBEY, Co. Antrim, UK, BT37 0QB, 2008.

# AUTHORS

K.Parvathi doing final year MCA in Francis Xavier Engineering College

**Ms. S. Sujitha** working as Assistant Professor in the Department of Computer Applications, Francis Xavier Engineering College. Her area of interest is Wireless Sensor networks

Allen Steve E doing first year MCA in Francis Xavier Engineering College







# DAWN SYMBO

# N.Anna lakshmi<sup>1</sup> and P.SahayaJenitha<sup>2</sup>, T.Marivjayakumar<sup>3</sup>

<sup>1</sup>Department of Computer Applications, Francis Xavier Engineering College

# 2AP Department of Computer Applications, Francis Xavier Engineering College

# <sup>3</sup>Department of Computer Applications, Francis Xavier Engineering College

#### ABSTRACT

The design of the Dawn-Sympo involves the analysis of the internal and external environment. The main objective of this web application is to enable the students to take up the test through online and to obtain their results. The student can also refer for their webinar details through the web application

# **KEYWORDS**

Webinar, events, webmail, admin

#### **1. INTRODUCTION**

Nowadays several organizations are interested in conducting symposiums and workshops amongst students and professionals. Such kind of events help people to develop their knowledge in wide area and also it boosts up their domain knowledge. Conducting an event successfully relies on the talent possessed by the organizing committee. It includes various stages like registration, submission, review, schedule, result announcement etc. All processes within the Symposiums are recorded on database so every participant can closely monitor the activities related to their respective roles, and that fits for authors, section coordinators, reviewers and website management. Literature study carried out by searching existing freely available reports reveal that, number of interested institutions(colleges) are increasing rapidly. Dawn Sympo will be flexible, easy to use, and has many features to make it suitable for various symposiums.

# **2. PROBLEM STATEMENT**

#### A. Existing System

Education is the imparting and acquiring of knowledge through teaching and learning, especially at a school or similar institution. The earliest educational processes involved sharing information about gathering food and providing shelter; making weapons and other tools; learning language; and acquiring the values, behavior, and religious rites or practices of a given culture. Before the invention of reading and writing, people lived in an environment in which they struggled to survive against natural forces, animals, and other humans. To survive, preliterate people developed skills that grew into cultural and educational patterns.

Education developed from the human struggle for survival and enlightenment. It may be formal or informal. Informal education refers to the general social process by which human beings acquire the knowledge and skills needed to function in their culture. Formal education refers to the process by which teachers instruct students in courses of study within institutions.

# **B.** Proposed System

The intention of this project is to make the education more efficient to resolve the overheads of traditional and modern education systems. The developed web application streams the videos of past-class, pre-class, and screen content lectures. Also, it enables the students to extract the web content in a relevant pattern. The admin of this web application will be the lecturer, who can do upload of video lectures and screen contents. The students can listen to the contents and may utilize the feature of web information retriever to extract relevant data. This ideology combines the best practices of both traditional and e-learning system.

# C. Architectural Diagram



Figure-1 Architectural Diagram

# **3. EXPERIMENTS AND RESULTS**

#### Module

# A. Home

- The home page consists of all information about the events in an specified manner.
- The Login module allow the user to login with the registered emails

# **B.** Events

- This module explains about all the events to be handled in terms of both technical and non-technical.
- The user can register for the event which they are preferred for through this module.
- This module explains about the timings of when an particular event to be conducted.

#### C. Take up rest

- This module enables the user to take their test through online with timer.
- Enables the immediate score evaluation of a test.
- ► The venue is also displayed along with the score.

#### **D.** Webinar

- This module is handled by the admin in which the user can be able to know about the webinar events which are to be held in future.
- The user can know about the project innovative ideas through this module.

# E. Webmail

- In this module, the user can raise their query and send feedbacks through their mail.
- It enables Admin to known about the feedbacks given by the user of the event handled.

# F. Report

- In this module the report can be generated regarding all the events happened throughout the application.
- The report can be shared through other sources in a file format.

# G. Contact us

- In this module the user can know for additional functionality such as phone number, Location.
- The multimedia contacts can also been view through this module.

# H. Admin

- This module checks for all the user registered for an event and specifies about the webinar event to be handled.
- It enables to control the operations of server and manage all the user details.
# **PERFORMANCE ANALYSIS**

The Existing and proposed system are analysed. The problem is identified. The intention of this project is to make the education more efficient to resolve the overheads of traditional and modern education systems. Nearly 70% performance has been increased.

### **Output Screen**



Figure-2 Login page



Figure-3 Home Page



Figure-4 Event Registration (User Side)

FX Francis xavier × +						- 0	×
← → C  C localhost:44358/User/Insert_Registration						☆ 👘	:
ENGINEERING COLLEGE AUTOMONDS INSTITUTION ACCREDITED BY NBA	Mobile localhos Numbo Thanks fo	st:44358 says or registeration	теят	WEBINAR REPORT	CONTACT LOGIN		^
	Department	Comp					
	Degree	MCA					
	Specialization	Cs					Ì
	College	FXEC					
	User Name	Anu					l
	russword	Register					ļ
							-
Type here to search	H C 🗄	🖻 🖄 📮 👙 🧿	🛃 💙 😣		ස <sup>R</sup> ^ 🖮 🦟 (\$0) ENG	06:39 18-02-2021	4

Figure-5 Events Registration



Figure-6 Webinar (user side)



Figure-7 Webmail (User)



Figure-8 Contact us

Francis xavier	× +	-Ouiz					- (
	ACCEPTED BY NEATERING		ном	E EVENTS TAKE TEST	WEBINAR WEBN	IAIL CONTACT I	OGOUT
who found C?	ACCO	NBA					
O Dennis Ritche							
O Bala Gurusamy							
O Gurusamv							
98-2							
O 67							
O 45							
O 96							
O 2							
The command which is	used to select all the wor	ds in the document?					
O ctrl +X							
O ctrl +V							
Octrl + B							
O ctrl + A							
Mout							





Figure-10 Take Test (admin)

G	localho	ERGINEERING AUTONOMOUS INS ACCREDITED E	'/List_Webinar (AVIER <sup>©</sup> college struttion sy NBA	ADMIN	HOME EVENTS TAKE TEST WEBINAR WEBMAIL REPORT CONTACT LOGOUT	☆ €
	S.No	Name	Subject	Email	Message	
	1	Anna Laxmi	Fxec College	annalaksh@gmail.com	The event was good conducted	
	2	Roja	Sethu eng college	roja@gmail.com	Super	
	3	Anu	Fxec College	annalaksh@gmail.com	99939	
	4	Anna Laxmi	Fxec College	roja@gmail.com	gud event	
	5	Anna Laxmi	Fxec College	annalaksh@gmail.com	the event was	

Figure-11 Webinar



Figure-12 Report

### **4.** CONCLUSION

This web application enables to store the user details and helps of conducting events through online of user registering and being login in to their account and they get registered through their events and they take up their test through online and they share their valuable feedback. Thus, enable the valuable feedback been visible to both the user and the admin and through the contact details they enable them to know their details of their location.

# **5. FUTURE ENHANCEMENT**

In future, this application can be featured comment boxes or group chat, so that students who hesitate to ask doubts in the classroom, may rise their doubts in the web application. Also, assignments can be posted by lecturer and the work of students can be monitored frequently via the application. Assessments like Quiz, learning agility test, etc., can be established in the applications.

#### Reference

- [1] Chao, S. and Reddy, Y.B. (2008). Online Examination. Proceedings of the Fifth International Conference on Information Technology: New Generations, 1266-1267.
- [2] Hang, B. (2011). The Design and Implementation of On-Line Examination System. Proceedings of the 2011 International Symposium on Computer Science and Society, 227-230.
- [3] Jun, L. (2009). Design of Online Examination System Based on Web Service and COM. Proceedings of the 2009 First IEEE International Conference on Information Science and Engineering, 3276-3279.
- [4] Lu, H. and Hu, Y. (2012). The Design and Implementation of Online Examination System Based on J2EE. Proceedings of the 2012 International Conference on Industrial Control and Electronics Engineering, 93-95.
- [5] Meletiou, G., Voyiatzis, I., Stavroulaki, V., and Sgouropoulou, C. (2012). Design and Implementation of an E-exam System Based on the Android Platform. Proceedings of the 2012 16th Panhellenic Conference on Informatics, 375-380.
- [6] Persis Urbana Ivy, B., Shalini, A., Yamuna, A. (2012). WebBased Online Secured Exam. International Journal of Engineering Research and Applications, 2(1), 943-944.
- [7] Sarrayrih, M., & Ilyas M. (2013). Challenges of Online Exam, Performances and Problems for Online). University Exam. IJCSI International Journal of Computer Science Issues, 10(1).

#### AUTHORS

N.Annalakshmi doing final year MCA in Francis Xavier Engineering College

**Mrs. P.SahayaJenitha** working as Assistant Professor in the Department of Computer Applications, Francis Xavier Engineering College. Her area of interest is Wireless Sensor networks

Mr.T.Marivijayakumar doing first year MCA in Francis Xavier Engineering College







# **ONLINE AUCTION SYSTEM**

S.Kokila<sup>1</sup> and J.AbalinLuther <sup>2</sup> T.Marivijayakumar<sup>3</sup>

<sup>1</sup>Department of Computer Application, Francis Xavier Engineering College

# <sup>2</sup>AP Department of Computer Application, Francis Xavier Engineering College

<sup>3</sup>Department of Computer Application, Francis Xavier Engineering College

### ABSTRACT

Online auctions are now an immensely popular component of the electronic marketplace. Online Auction management system is a web based application which will help users to buy or sell item. This application will allow users to post their products for auction; bidder can register and can bid for any available product around their location. It is developed with the objective of making the system reliable, easier and fast and to sell or order the products on the website from our house. The online auction system is based on the concept where a product is valued for the highest price. In most online auctions, the products listed for an auction are located away from the bidders location. In our auction system, the bidders or buyers can view the products in auction process which is located around his surroundings. So that the bidder or buyer can participate in auction for his nearby products.

### **KEYWORDS**

Online auction; reliable ; highest price; nearby products; bid.

# **1. INTRODUCTION**

The internet has become a very important aspect of life today. The rate at which this large population is seeking to buy items is also on the rise, as many people are seeking advanced and ideal routes of trading services. Some people spend a lot of money on transportation, using a lot of time of which at the end of the road they might lack to get the desired items which they opted for. It is open that most of the people are seeking to buy items every day in most cities and towns, both locally and abroad, desperate if they might get a solution or a right person to deliver a solution to them. These people end up settling at items or service providers who are fraud or who sell illegal and fake items to the desperate buyers.

There are legit business people and store owners who have quality items in the locality of the auctioneer, but they do not meet for business because the auctioneer is not informed about the items available. This is a great frustration in deed! This project shall handle this issue by creating an online platform where a user will be able to post items online for auction. The items will accompany item name, selling price, and a picture presentation for the bidder to see. The bidder, if interested in the item, will make the auction for the product and will be able to inspect the item physically to make an approvement about the product then complete the business with the seller. People are always on the go to their renown product supplier, or nearby market center or at times a local hawkers, who goes on to supply items and at times when he cannot get the item the buyer wants, mostly they give their hands to get them items and at times they mess and bring fake and quarks deliver stolen and bad items. This is because unqualified people offer

delivery of items to customers. Due to the disparity of the buyers, scammers have always taken the advantage to offer item delivery to the customers. Many fake items have found their way into the hands of the people, or buyers remain in the same condition of lack, as they don't get the correct products from the sellers. Sometimes buyers struggle to find the right items, in failure, and they seek to get back to their homes.[4] The customers will be assured of getting the right products, since they will take their time to analyses and compare a range of listed items and choose appropriately according to their need or desire. This will save time that buyers take in search of items and therefore they will save themselves from worsening of conditions which may lead to wastage of time conditions. This will also save money that is spend around travelling and bidding for the undesired items.

# **2. PROBLEM STATEMENTS**

#### A. Existing System

The process of an online auction is much the same as a live auction. This means that users place bids for items, and the goods get sold to the highest bidder.

In existing online auction systems, they allow users for bidding but the product is not available in bidder's local area. Then, in most online auctions they get the card details during bidding process which leads to privacy issues.

### **B.** Proposed System

This online auction system lists the products to the registered users according to his location and so the bidders can bid to his nearby available products. The card details is asked only to the users whohave won the auction process.

#### C. Architectural Diagram



Figure-1 Architecture Diagram

# **3. EXPERIMENTS AND RESULTS**

### Module

### A. Admin

This module was build to manage the auction process, user details and acts as a admin interface. Admin is capable of adding new location into the portal so that all the registered users can make use of the location.Sellers can sale products in that location and the bidders can select the location and make bids.The overall auction process is maintained by the admin. The registered users list can be viewed by the admin.

#### **B. Bid**

This module allows the bidders to make bid for any product. A registered bidder logs into the system and select the curent location. All the products under the selected location is shown and then the bidder can make bid for any interested product. After the auction ends, the bidder is capable of viewing the bidding status whether the auction of that product has been won or lost.

#### C.Sell

This module is used by the sellers to sell their products in auction. The seller uploads the product in their current location.Seller can view all the bids that has been made for isproducts. Then seller accepts the highest bidder and rejects other bidders.

#### **D.** Auction

This module enables bidders about their auction history and bidding status of auctioned products. The sellers finalize the auction status for their own products according to the amount bided by bidders. The highest bidder is accepted and others are rejected in this module.

# PERFORMANCE ANALYSIS

The Existing and proposed system are analysed. In existing online auction systems, they allow users for bidding but the product is not available in bidder's local area. This online auction system lists the products to the registered users according to his location and so the bidders can bid to his nearby available products.Nearly 70% performance has been increased

# **Output Screen**

United Decement × A Incalment / 1270     C ① Incalment 3000/meninter	11 / disauction: X 🖉 Untitled Document X 🗞 GFG Neumorgham Signin X +	*	- 0	×
II Apri			<b>u</b> O	
	Register Buyer/Seller			
	register here to get inside auction			
	🖂 First Name			
	Contraction			
	Last Name			
	Email ID			
	pasaword			
	C3 Mobile No			
	Signup			
Sheek.				

# Figure-2 Registration

😵 Untitled Document 🛛 🗙 loca	alhost / 127.0.0.1 / dbauctic 🗙 😵 localhost:8000/login	× ③ Untitled Document	×   🕑 View Product	×   +	- 0 ×
← → C ③ localhost:8000/login ∴ Apps				ф	<b>* 0</b> :
	Sign In or use your account Email Password SIGN IN	Auction here Enter your pers start journey wit	Starts onal details and th us		

Figure-3 Login

O Untitled Document x   ♣ localhost / 127.0.0.1 / dbauctic	×         SGG Reumorphism Signin         ×         Subtraction         × </th <th>×   + - 0 ×</th>	×   + - 0 ×
← → C ③ localhost:8000/product		⊞☆ 🖬 🗯 😝 🗄
05ks	register here to get inside auction	
	Title	
	Category	
	Choose file No file chosen	
	Description	
	D Base Price	
	Dasernee	
	bidstartprice	
	mm/dd/yyyy 📋	
	🖂 mm/dd/yyyy 📋	

Figure-4 SellProduct

<ul> <li>♥ Untitled Document</li> <li>×</li> <li>★ A C</li> <li>Iocalhost/127.00.1 / dbauctic</li> <li>×</li> </ul>	Untitled Document	X S Untitled Document	×   😵 View Product	×   + 야 ☆	-	•	× :
Apps							
		\$A					
		19-40					
		2 G					
		55					
	7						
		0/0					

Figure-5 Menu

# International Journal on Cybernetics & Informatics (IJCI) Vol. 10, No.1/2, May 2021

O Untitled Docur	ment 🗙 🛛 🙀 locali	ost / 127.0.0.1 / dbauction	×   🕄 Untitled [	Document	× ©	Laravel		× +			-	٥	×
← → C ( Apps	<ol> <li>localhost:8000/bid</li> </ol>									☆	Se	* 0	) :
	Id	Title Cat	egory Image	Description	baseprice	bidstartprice	bidstartdate	bidendstate	status				
	4	Mobile mo	biles	good	5000	2000	2021-03-04 00:00:00	2021-03-13 00:00:00	Bid				
	5	Black mo headphone acces	obile Sories	Better audio quality	3000	1000	2021-03-04 00:00:00	2021-03-17 00:00:00	Bid				
	All Products												

Figure-6 Products available for auction

→ C (	i) loc	alhost:8000/bi	dstatusadmin										☆	Se	* 6	9
	Id	Title	Category	Image	Description	baseprice	bidstartprice	bidstartdate	bidendstate	emailid	amount	status				
	5	Black headphone	mobile accessories		Better audio quality	3000	1000	2021-03-04 00:00:00	2021-03-17 00:00:00	nila@gmail.com	1500	reject				
	4	Mobile	mobiles		good	5000	2000	2021-03-04 00:00:00	2021-03-13 00:00:00	nila@gmail.com	1000	waiting				
	All P	roducts														



294

# **4.** CONCLUSION

Online auction has made the interested bidders from being physically present in auction houses. The auction website provides variety of products online which gives many choices to the bidders to select the product of their interest. The products are placed according to their location.

# **5. FUTURE ENHANCEMENT**

Online Auction System has made consumers more effective and efficient in their behaviour and has driven businesses to a new level. Though the buyers can view his status in our website, they are not notified when he won the auction. So further notifications like email and SMS can be made as future enhancements.

#### Reference

- [1] Manasi Bhamare, Arati Chame, Gaurav More Prof. Amol Rindhe," Online Auction".
- [2] Geetanjali Sawant , Ganesh Bane , Akshay Gurav , Swaraj Pawar, "Survey on Online Auction System".
- [3] Nazia Majadi ,Jarrod Trevathan, Neil Bergmann's uAuction: Analysis, Design and Implementation of a Secure Online Auction System
- [4] Rashesh G Chothani, Punit R Patel, "A Review of Online Auction and It's Pros and Cons".
- [5] Rodel Balingit, Jarrod Trevathan and Wayne Read, "Analysing Bidding Trends in Online Auctions".
- [6] Razon Aldej, Latifa Alfowzan, Reem Alhashem, "Analyzing Designing and Implementing a Web-Based Auction online System" (2018).
- [7] Chuancheng Ren,"Research and Design of Online Auction System Based on the Campus Network Using UML"(2008).

#### AUTHORS

**S.Kokila** doing final year MCA in Francis Xavier Engineering College

**J. Abalin Luther** is working as Assistant Professor in the Department of Computer Applications, Francis Xavier Engineering College. She is having teaching experience of 5+ years. Her area of interest is Wireless Sensor networks

**T.Marivijayakumar** doing first year MCA in Francis Xavier Engineering College







# AUTHENTICATION OF UNUSED MEDICINE DONATION FOR NGOS

J.Esther Jenslin<sup>2</sup> and P.Sahaya Jenitha<sup>2</sup> S.Sri Selva Meenakshi<sup>3</sup>

<sup>1</sup>Department of Computer Application, Francis Xavier Engineering College

<sup>2</sup> AP Department of Computer Application, Francis Xavier Engineering College

<sup>3</sup>Department of Computer Application, Francis Xavier Engineering College

### ABSTRACT

This project aims to donate medicines which are unused. The unused medicine can be donated for further utilization by a needy person. This application helps the user to donate unused medicines to NGO. Admin will login and manage members by deleting and blocking the users providing improper or expired medicines. Admin has to verify the uploaded image for their expiry date.NGO manages the stock which helps to maintain a record of the available medicine. Members can also check their previous data of medicine transactions. The donation of unused medicines is not accepted worldwide, although it is legal in some countries. A constant increase in the rate of prescription writing has prompted several charity organizations to collect a growing number of unused medicines. WHO guidelines for drug donations discourage donation of unused medicines, as this may create a number of problems. Detrimental effects of drug donations for use in emergency situations have been reported, as the arrival of unsorted, useless and expired medicines requires management and sorting, which may take up the time of health workers and eventually lead to the appearance of these drugs on the black market. However, cases of regulated donations have been reported in the USA, where several states have adopted laws in order to facilitate the redistribution of unused drugs to indigent and uninsured patients. This project aims to donate medicines which are unused. The unused medicine can be donated for further utilization by a needy person. This application helps the user to donate unused medicines to NGO. Admin will login and manage members by deleting and blocking the users providing improper or expired medicines. Admin has to verify the uploaded image for their expiry date.NGO manages the stock which helps to maintain a record of the available medicine.Members can also check their previous data of medicine transactions.

#### **KEYWORDS**

Web portal, Medicines, Medicine Donation

# **1. INTRODUCTION**

This project aims to donate medicines which are unused. The unused medicine can be donated for further utilization by a needy person. This application helps the user to donate unused medicines to NGO. Admin will login and manage members by deleting and blocking the users providing improper or expired medicines. Admin has to verify the uploaded image for their

D. Angeline, A. Arul et al.(Eds): ICICI-2021

pp. 297-307, 2021. IJCI – 2021

expiry date.NGO manages the stock which helps to maintain a record of the available medicine. Members can also check their previous data of medicine transactions. The donation of unused medicines is not accepted worldwide, although it is legal in some countries. A constant increase in the rate of prescription writing has prompted several charity organizations to collect a growing number of unused medicines. WHO guidelines for drug donations discourage donation of unused medicines, as this may create a number of problems. Detrimental effects of drug donations for use in emergency situations have been reported, as the arrival of unsorted, useless and expired medicines requires management and sorting, which may take up the time of health workers and eventually lead to the appearance of these drugs on the black market. However, cases of regulated donations have been reported in the USA, where several states have adopted laws in order to facilitate the redistribution of unused drugs to indigent and uninsured patients.

Elementary education besides being a basic human need is vital for raising the standard of life, providing gainful employment, removal of regional backwardness, thereby ensuring overall development and wellbeing of a country. It is therefore the need of the hour to review the literature carried out by different academicians, educational thinkers, researchers, policymakers and educational reformers in the field of education.

### A Webportal for Medicine Distribution among Poverty-stricken People

The GiveMed is a platform for the donors who want to donate their unused medicines to the poor or low-income people who need those medicines. This system will contribute to reduce the cost for national health services by making the proper use of unused medicines; and to help the poor or low-income people to get better health services.

#### **Android Application For Medicine Donation**

This medicine donation app is about the collection of medicine which is unused by the patient who recovers completely and remaining medicines becomes waste, those medicine can be collected and used further. This remaining medicines can be used by NGO's Hospitals who are indeed for those medicines. By use of this application there will be less wastage of medicines.

#### **Improvements for international medicine donations**

The World Health Organization (WHO) has developed the interagency Guidelines for Medicine Donations for use by donors and recipients in the context of emergency aid and international development assistance. Although comprehensive in nature and transferable to various emergency situations, adjustments to both content and formatting would improve this resource.

Medical donations are not always free: an assessment of compliance of medicine and medical device donations with World Health Organization guidelines (2009–2017)

Medicine and medical device donations have the potential to improve access to healthcare in some of the poorest parts of the world, but can do more harm than good. World Health Organization guidelines advise donors on how to make effective and useful donations. Our objective was to assess compliance of recent medicine or medical device donations with WHO guidelines from 2009 onwards. We searched media, academic and gray literature, including industry and organizational documents, to identify reports describing specific incidences of the donation of medicines or devices. We collected data on donation characteristics and guideline compliance. We identified 88 reports describing 53 donations. Most did not comply with at least some items in WHO guidelines and no reports provided sufficient information to assess

compliance against all items. Donations that fail to comply with guidelines may be excessive, expired and/or burden recipient countries with storage and disposal costs. It was estimated that 40–70% of donated medical devices are not used as they are not functional, appropriate, or staff lack training. More effective donations involved needs assessments, training and the use of existing distribution networks. The donation of medicines and medical devices is frequently inadequately reported and at times inappropriate. Guidelines need to be enforced to ensure effective donations.

# **2.PROBLEM STATEMENT**

**Existing System:** 

- 1) Loss of man power
- 2) Cost of the medicines is high
- 3) It difficult to find the needy people
- 4) Difficult to find the donors

### Proposed System:

- 1) It helps poor people for medicines.
- 2) It will help to maintain records of medicines
- 3) Many needy people will get cured.
- 4) Admin will verify the expire date



Figure :1 Architecture Diagram

# **3.**Experiments and Results

### Modules

Main modules are:

- > Admin
- > User
- verification for medicines

# Admin:

The admin able to add to users and also view to the all users and view the medicines. The sub modules are:

- Verify medicine
- View users
- Block users
- Search donors

# User:

The user able to donate the medicine and also view their donated.

The sub modules are:

- Donate medicine
- My donation
- Search donors
- Upload image

# Verification for medicine

The admin will verify the medicine is to be expired or not. If expired the medicine is discarded

# **Data Connection**

A database in Microsoft SQL Server consists of a collection of tables that contain data, and other objects, such as views, indexes, stored procedures, and triggers, defined to support activities performed with the data.

The data stored in a database is usually related to a particular subject or process, such as inventory information for a manufacturing warehouse.

SQL Server can support many databases, and each database can store either interrelated data or data unrelated to that in the other databases. For example, a server can have one database that stores personnel data and another that stores product-related data. Alternatively, one database can store current customer order data, and another; related database can store historical customer orders that are used for yearly reporting. Before you create a database, it is important to understand the parts of a database and how to design these parts to ensure that the database performs well after it is implemented.

# **Output Screen**



Figure : 2

300



Figure :3 Home Page



Figure: 4 About



Figure :5 Feedback



Figure :6 Feedback



Figure :7 Donate



Figure :8 Registration



Figure :9 Sign in



Figure :10 Admin Login Page



Figure :11 Sample admin main page



Figure :12 Donation view for admin page



Figure :13 Verification



Figure :14 Feedback



Figure : 15 User Login Page



Figure :16 User Main Page



Figure :17 Donate medicine form

### **PERFORMANCE ANALYSIS**

The existing and proposed system are analysed. The problems can be easily rectified with this concept. Nearly 70% of the performance has been increased.

# **4.**CONCLUSION

This was our project of System Design about "Authentication of Unused Medicine Donation for NGOs" developed as web application based on Asp .Net programming language. The Development of this system takes a lot of efforts from us. We think this system gave a lot of satisfaction to all of us. Though every task is never said to be perfect in this development field

even more improvement may be possible in this application. We learned so many things and gained a lot of knowledge about development field.

# **5.FUTURE ENHANCEMENT**

Reduce screen interactions and time taken for checkout

Collect reviews and feedback. Provide users with the ease and convenience as against the timeconsuming task of typing long feedbacks

- > In future tract the location for medicine collector and distributor.
- Add the doctor suggestion for the disease.
- Easy to find the needy person for using GPS tracker
- > Add the live interaction video for doctor and patient.

#### REFERENCES

- Medical donations are not always free: an assessment of compliance of medicine and medical device donations with World Health Organization guidelines (2009–2017) Sally McDonald, Alice Fabbri, Lisa Parker, Jane Williams, Lisa Bero INTERNATIONAL HEALTH, VOLUME 11, ISSUE 5, SEPTEMBER 2019, PAGES 379–402, HTTPS://DOI.ORG/10.1093/INTHEALTH/IHZ004
- Improvements for international medicine donations: a review of the World Health Organization Guidelines for Medicine Donations, 3rd editionNuria Cañigueral-Vila, Jennifer C. Chen, Lindsey Frenkel-Rorden, and Richard Laing
- 3) ANDROID APPLICATION FOR MEDICINE DONATION Netra Shigwan1, Pratiksha Chaudhari2, Shweta Pawar3, Prof Anuja Gote4 1.2,3 Student, Information Technology, Vidyalankar Institute of Technology, Wadala, Mumbai, India 4Assistant Professor, Information Technology, Vidyalankar Institute of Technology, Wadala, Mumbai, India
- GiveMed: A Webportal for Medicine Distribution among Poverty-stricken People December 2017 DOI: 10.1109/R10-HTC.2017.8288960 Conference: Humanitarian Technology Conference (R10-HTC), 2017 IEEE Region 10 Project: Development and Evaluation of Health Information Systems
- 5) Personalized Medicine: The Future of Health Care December 2016 The Indonesian Biomedical Journal 8(3) DOI: 10.18585/inabj.v8i3.271
- 6) http://www.asp.net
- 7) https://ieeexplore.ieee.org/document/7041139/

### AUTHORS

**Ms.Esther Jenslin** doing final year MCA in Francis Xavier Engineering College

**Mrs. S. Sahaya Jenitha** working as Assistant Professor in the Department of Computer Applications, Francis Xavier Engineering College. Her area of interest is Wireless Sensor networks

**S.Sri Selva Meenakshi** doing first year MCA in Francis Xavier Engineering College







308

# AUTOMATED ACCESS COMMUNICATION SYSTEM

# UppliammalS<sup>1</sup> and StanleyD<sup>2</sup> S.Sowmiya<sup>3</sup>

<sup>1</sup>Department of Computer Application, Francis Xavier Engineering College

<sup>2</sup>AP Department of Computer Application, Francis Xavier Engineering College

<sup>3</sup>Department of Computer Application, Francis Xavier Engineering College

### ABSTRACT

Automated Access Communication System is concerned with the development of a system that is simple and easy to use yet a powerful web application for sharing, managing and controlling enterprise documents on intranet/internet in a secure manner within the particular organization. It enables the communication between all the departments of the company through online. The development of this new system contains the following activities, which try to automate the entire process keeping in the view of database integration approach.

# **KEYWORDS**

ERP; manage; secure; enterprises; department.

# **1. INTRODUCTION**

The development of this new system contains the following activities, which try to automate the entire process keeping in the view of database integration approach. User friendliness is provided in the application with various controls provided by system Rice User Interface. The system makes the overall project management much easier and flexible. It can be accessed over the Intranet. The user information can be stored in centralized database which can be maintained by the system. This can give the good security for user information because data is not in client machine. Authentication is provided for this application only registered parties (Employees of all Departments) access. There is no risk of data management at any level while the project development is under process. With the introduction of new technologies and new web architectures, ERP has evolved into web-enabled ERP to target the greater customer base and efficient business strategies. With the introduction of new technologies and new web architectures, ERP has evolved into web-enabled ERP to target the greater customer base and efficient business strategies. Business located over various region can take advantage of central consolidation and better management reporting and business management. ERP applications also means that successful companies tend to rationalize business processes to achieve production, supply, sell the business processes in a straight line passing from the business-to-market, enhance the responsiveness and improve customer satisfaction. The import of ERP system has a rather long history with the dynamic progress of the companies themselves. After the determination of the type of ERP system, the interior structure of the company will be stable in a long time. However, because of the differences in children companies, in the top view of the header, it will be full of variances in the configurations of ERP in the children companies. With the latest technological trend of big data analytics and cloud computing, ERP has evolved into cloud-enabled ERP. Cloud service providers in conjunction with ERP vendors can provide easy, faster

and flexible modular pay-asyou-go services to accommodate business functionalities and avoid the many possible challenges and costly implications of establishing and implementing an on-premise ERP internally, Cloud ERP can further be evolved into Edge ERP. Cloud computing technology with its extension to edge computing has the potential to offer virtually unlimited computing and processing power. One such extension can be utilized to eliminate the need to physically setup a data center or a distributed server locally. A more trending area of study is extending cloud services towards outer edge network, ERP solutions that currently exist on cloud computing can be offset from the center of the cloud towards the edge network using edge computing technology.

The second section discuss about the literature review and continued by problem statements. The fourth section gives the experiments and results followed by the conclusion and future enhancement

### **2. LITERATURE SURVEY**

ERP has been an important component in the process of enterprise information. Especially, for the large companies, ERP is the basis of the information architecture. There are adequate literatures on ERP, just like the expending scale of ERP in industries. For large companies, ERP systems are deployed in clusters as distributed system, which is the new character of information system [1]. Corresponding to the hierarchy structure of company organizations, ERP systems are also deployed in complex structure with hierarchy levels. In the organization, the integration of ERP systems has been a hot research field, and has promoted the additional value of ERP systems. However, facing the complex of distributed architecture, the traditional static deployment and configuration of ERP will encounter the difficulty of increasing scale of distributed nodes. It will be an important research topic in the next generation of ERP systems to utilize the experiences of ERP importing and running in the organization or wider scope [2].From 1990s, organizations have moved from standalone business information systems applications to integrated and flexible enterprise wide information systems and the rise of Enterprise resource planning (hereinafter, ERP) systems has been the major event in the software industry. ERP systems present a holistic view of the business from single information and IT architecture. But ERP systems are comprehensive, huge and complex systems and warrant careful planning and execution not ensure the successful implementation. [3]. Business Process Management (hereinafter, BPM) includes methods, techniques, and tools to support the design, enactment, management, and analysis of operational business processes. It can be considered as an extension of classical Workflow Management systems and approaches. [4] As the business environment has changed over the years from traditional business to e-business, and to the greater ecommerce business, so has the MRP architecture, evolved into an automated and easily manageable process flow [5]. With the flexibility and the advantages of Internet, businesses needed to grow with the efficiency and requirements of customer demands and satisfaction. Business powerhouses then integrated various functional separate in-house tools into a single application such that the business could interlink each inter-dependent processes and achieve a coherent form of a single centralized application. This is where Enterprise Resource Planning (ERP) came into existence, which combines the manufacturing processes, human resource, assets, financials, procurement logistics and administration [5]. ERP implementation process, critical success factors for the assessment from the date of management[6], high-level support, training, management reform, partners and management processes, and other aspects of the restructuring, which also includes specific factors for each of the measure, For example[7], project management of the resources there to measure, team, skills and management of high-level support for its aims, to participate in activities such as the index. Training costs and time to reform the management of the exchange, hope, resistance and visibility, and so on, the partners have a role in management, price and experience, the restructuring process, there are cost and time. The import of ERP system has a rather long history with the dynamic progress of the companies themselves. After the determination of the type of ERP system, the interior structure of the company will be stable in a long time. However, because of the differences in children

companies, in the top view of the header, it will be full of variances in the configurations of ERP in the children companies. In another aspect, for the dynamic market and the managerial objectives, the ERP systems will be configured in a dynamic form. In order to improve the ERP system for each children company by the status of itself, the experiences should be shared, at least in the scope of the entire company. It will help to reduce the maintenance cost and promote the broadcasting of knowledge in the company.

# **3. PROBLEM STATEMENT**

# **Existing System**

The existing system is required to provide a useable and well managed interface for users (Employees), and administrator users to view and manipulate the data for which it is responsible.

For each it must allow the rapid formulation and resolution of queries related to the user information.in There is also a requirement for the system to interact with other information sources as required, both as an information source and as a consumer of related information during the resolution of queries.

### **Proposed system**

The development of this new system contains the following activities, which try to automate the entire process keeping in the view of database integration approach. User friendliness is provided in the application with various controls provided by system Rice User Interface. The system makes the overall project management much easier and flexible. It can be accessed over the Intranet. The user information can be stored in centralized database which can be maintained by the system.

### **Architecture Diagram**



Figure 1: Architecture Diagram

# 4. EXPERIMENT AND RESULT

### Modules Admin

The admin enables the user id and password for all the employees with respective departments. Admin controls all the activities of the employees. Admin could be able to produce the reports as per the requirements of the management.

### Employee HR Department

Every employee of the HR Department will be login into this system with userid and password. Entire HR department activities such as Recruitement, Employee Leave Approval, Employee salary calculation will be taken care through this system.

#### **Technical Department**

After the payment confirmation from the customers and clients, the respective project work will be allocated to the technical team along with deadline through this system. Accordingly the respective team goes towards the project completition. After completion of the project the information will be updated so all the other departments and their managers can view the complete data through this system.

### **Inventory Department**

Every employee of this department will be login into this system with userid and password. The respective department employees will maintain the companies entire assets details such as new purchases of computers, machineries, furniture's. The movements of assests in and out. Allocation of assets to the respective departments and employees as well.

### **Marketing and Sales Department**

Every employee of this department will be login into this system with userid and password. Every employee can be able to update their client and customer details, quotation and invoice preparation, customer tracking about their payment details etc.

#### **Finance Department**

Every employee of this department will be login into this system with userid and password.Every employee can be able to do all the activities relating their department such as maintaining cash, salary payment and other office expenses. Database

MySQL is an open-source relational database management system (RDBMS). MySQL is free and opensource software under the terms of the GNU General Public License, and is also available under a variety of proprietary licenses. MySQL is a fast, easy-to-use RDBMS being used for many small and big businesses. MySQL is developed, marketed and supported by MySQL AB, which is a Swedish company. MySQL is becoming so popular because of many good reasons.

- MySQL is released under an open-source license. So you have nothing to pay to use it.
- MySQL is a very powerful program in its own right. It handles a large subset of the functionality of the most expensive and powerful database packages.
- MySQL uses a standard form of the well-known SQL data language.
- MySQL works on many operating systems and with many languages including PHP, PERL, C, C++, JAVA, etc.
- MySQL works very quickly and works well even with large data sets.
- MySQL is very friendly to PHP, the most
  - > appreciated language for web development.

MySQL supports large databases, up to 50 million rows or more in a table. The default file size limit for a table is 4GB,but you can increase this (if your operating system can handle it) to a theoretical limit of 8 million terabytes (TB).

• MySQL is customizable. The open-source GPL license allows programmers to modify the MySQL software to fit their own specific environments.





Figure 2: Admin Login



Figure 3: Employee Login



Figure 4: Add Employee



Figure 5: HR Profile



Figure 6: Faculty leave status


Figure 7: Salary Details

) C () local	n, nhyqqivi Jaor	al_cal.py%	d=1						¢ (
etco	n		Intellity -	Attendance Calc	ulation •			6.0	
View Profile	Liave -							1	
View Profile	1	-		S	Salary Cal	culation	Banet	Calculete	
View Profile	Line	2.5%	Employee 14	S Thome Thursei	Salary Cal	culation Dealgoarion	Report I	Calculate	
View Profile	Laws	2.340 1 2	Comboyee (4 emp8001 emp8002	S Hame Tharani Gowałys	Salary Cal Department HR Marketing	Culation Designation of HR Manager Marketing Manager	Bead office Read office	Calculate Calculate	
Vine Postiin	Laws	2.310 1 2 3	Trophyse IA emp8001 emp8002 emp8002	S Name Therani Gawatya Sadhaiyam	Salary Cal Department HR Marketing Finance	Culation Decignation Hit Manager Marketing Manager Finance Manager	Head office Head office Head office	Celculate	-
View Profile	Laws	1 2 3 4	Croployee 14 emp8001 emp8002 emp8002 emp8002 emp8002	S Haroni Gaveatya Sadhasiyam Meenakshi	Salary Cal Department HR Marketing Finance Technical	Culation Includent In Manager Marketing Manager Pinance Manager Python Developer	Head office Read office Read office Read office	Calculate	•
View Profile	Laws	2000 2 3 4 5	Employee 14   emp8001   emp8002   emp8003   emp8004   emp8005	S Thurani Gawahya Sadhasivam Meenakshi Vikaush	Salary Cal Department HR Marketing Financs Technical Inventory	Culation Includent In Manager Marketing Manager Pinance Manager Python Developer Inventory Monager	Head office	Calculate	•
View Padiar	Laws	1 2 3 4 5 6	Employees 14.   emp2001.   emp2002.   emp2003.   emp2004.   emp2005.   emp2005.	S Barren Therani Gosseatyo Sadhasivam Meenakshi Vikaosh Kala	Salary Cal Department HR Marketing Financs Technical Inventory HR	Culation Designation HR Nanager Harketing Manager Pithon Developer Linventey Manager HR Nanager	Homen   Head office   Head office	Calculate Calculate Calculate Calculate Calculate Calculate Calculate Calculate	ActivateWindows

Figure 8: Salary Calculation

## **PERFORMANCE ANALYSIS**

The existing and proposed systems are analysed. The problems can be easily rectified with this concept. Nearly 70% of the performance has been increased.

# **5.** CONCLUSION

Automated Access Communication System enables the communication between all the departments in the enterprises. This web application for sharing managing and controlling enterprise documents on internet/intranet.

# **6. FUTURE ENHANCEMENTS**

Automated Access Communication System has made enterprises more effective and efficient and has driven businesses to a new level. In future connect many branches of the enterprise. It includes cloud deployment. It is cloud adoption will continue to rise and become generally accepted with the most ERP systems. It reduced costs in capital expenditures and IT resources, the improved maintenance and flexibility.

## REFERENCES

[1] Zhang Yanhong, "ERP Implementation Process Analysis Based on the Key Success Factors".

[2] Wei Lui, "Modeling the Evolutionary ERP Cluser System".

[3] Feng Chen, Qinhua Wang, Qiang Wei, Changrui Ren, Bing Shao, Jinfeng Li, "Integrate ERP System into Business Process Management System".

[4] Shalmendra Chand, Shalmeet Lal. Shan Chen, Arti Devi, "Cloud ERP Implementation Using Edge Computing".

[5] Imaad Rizni, Guhanathan Poravi "Best of Breed : A Dashboard for Strategic Decision Makers".

## AUTHORS

Ms. S. Uppliammal doing final year MCA in Francis Xavier Engineering College

**Mr. D. Stanley** is working as Assistant Professor in the Department of Computer Applications, Francis Xavier Engineering College. He is having teaching experience of 11+ years. His area of interest is Cloud Computing with IOT

Ms. S. Sowmiya doing first year MCA in Francis Xavier Engineering College







# BRAIN TUMOR DETECTION USING IMAGE PROCESSING

Nithyasree C<sup>1</sup> Stanley D<sup>2</sup> Subalakshmi K<sup>3</sup>

<sup>1</sup>Department of Computer Application, Francis Xavier Engineering College, Tamil Nadu, Tirunelveli

<sup>2</sup> AP/Department of Computer Application, Francis Xavier Engineering College, Tamil Nadu, Tirunelveli

<sup>3</sup>Department of Computer Application, Francis Xavier Engineering College, Tamil Nadu, Tirunelveli

## ABSTRACT

Brain tumor extraction and its analysis are challenging tasks in medical image processing because brain image is complicated .Segmentation plays a very important role in the medical image processing.In that way MRI (magnetic resonance imaging) has become a useful medical diagnostic tool or the diagnosis o brain & other medical images.In this project, we are presenting a comparative study of three segmentation methods implemented or tumor detection .The method includes kmeans clustering using watershed algorithm . Optimized k-means and optimized c-means using genetic algorithm.

## Keywords

DBMS,ACID,DIP,RAID,RSA

## **1. INTRODUCTION**

With the improvement of modern medical standards, medical imaging technology plays an increasingly important role in daily medical diagnosis and medical research. Therefore, research on medical diagnostic image data is very important. As a tumor disease with frequent occurrence and complexity, brain tumor has become a key research topic in the medical field. The diagnosis of brain tumors is usually based on imaging data analysis of brain tumor images. Accurate analysis of brain tumor images is a key step in determining a patient's condition. However, the accumulation of doctors' personal medical knowledge, differences in experience levels, and visual fatigue can affect the correct analysis of image results. Therefore, how to accurately detect brain tumor images is very important. Magnetic Resonance Imaging (MRI) can provide information on the shape, size, and position of human tissues and organs without high ionizing radiation. The images obtained are very clear and precise. MRI greatly improves the diagnostic efficiency, avoids the operation of thoracotomy or laparotomy exploration, and provides a good guide for lesion localization and surgical treatment. Brain tumor MRI uses threedimensional multi-band imaging technology, and chest X-ray scanning, etc. Compared with 2D images, 3D multiband MRI can provide the coordinate position of the lesion area to assist the doctor to accurately locate the lesion area. In addition, MRI imaging can also obtain different structures of the same tissue using the unused development sequence. That is, a multimodal MRI image. Different modes can display different brain tumor features

Nishant Verma et al [2] proposed that region growing is region based image segmentation. Here the intensity of same image is grouped into one region using 4- connected neighbourhood or 8- connected neighbourhood. If the intensity belongs to the same seed, it belongs to one region and process is iterated. Region based geometric active contour models are more immune to noise in the MRI resulting in poor segmentation.Deepthi Murthy T.S et al [3] Using thresholding and morphological operations efficient brain tumour segmentation is carried out. But the threshold value used is global threshold, hence not fully automated needs human intervention. L. Ramya et al [4]A seeded region growing segmentation is used to detect the tumour in MRI brain image. Also skull removal procedure is employed using morphological operators to increase the accuracy of brain tumour detection. International Journal of Engineering Research & Technology (IJERT) ISSN: 2278-0181 Published by, www.ijert.org ICIATE - 2017 Conference Proceedings Volume 5, Issue 01 Special Issue – 2017

#### **Architecture Diagram**





#### **2. PROBLEM STATEMENT**

#### Modules

#### **K-Means Clustering**

K-means clustering aims to partition n observation into 'K' clusters in which each observation belongs to the cluster with the nearest mean.

#### **K-Means Clustering with Watershed**

- If variables are huge, then k-means most of the times computationally faster than ,if we keep k small. Watershed algorithm improves the primary results of segmentation of tumor done by kmeans.
- Defficult to predict k-value &k-means cannot find nonconvex clusters. Different initial partitions can results in different final clusters. This methods does not work well with clusters of different size and different density.

#### **MRI of Brain Images**

- This is the first step of our proposed project .In this the data is been provided that is the magnetic resonance images(MRI) that are been collected in their original format's that are (.ima, .dcm).
- Mostly the mri images are of .dcm (DICOM[13]) Digital imaging and communications in medicine. We have used file operations fopen(), fclose() available in matlab to read MRI images. Here the gray scale MRI images are been provided as input to the system. 3.2 Pre-Processing International Journal of Information Sciences and Application (IJISA). ISSN 0974-2255, Vol.11, No.1, 201

## **3. EXPERIMENT AND RESULTS**

#### **Output Screen**

me in all all the second budge budge budge	Reg 1 have been dealers on Regard	mage	
Report -	L HARRY IN THE		
and an and a second second	a manage from the second	a second s	
Contract and Contract of Contr		COMPANY AND A DESCRIPTION OF A DESCRIPTI	
	27	Contract of Contra	
	1.5. 11.16	ALC: NO DECIDENT	
	The second second second		
	and the second s		
	and ton tell	Contraction of the second s	
A Trans.			
top to the	a and a second to the		
and and here	27		
20.20.00	at a copy of another thank, store, water,	Jr. Bernet, opening (	
100	100 m log + short rager		
Hen. 7	- Contraction of Contraction		
ender produce advectory			

Figure 2 Input Form



Figure 3 File Detected Form

and total and t	and Alexandree Street	Charlen and a	chicem /
The second secon	Tumor Outlin	5 50 ×0	
No. Start Local a Second	0	-	
41m	1 2 Page 2 Pa		
Nos 85348 Michael Indexes 18 10 10 10 10 10 10 10 10 10 10 10 10 10	A - Second		
Ange Station	Reprint State State		10.1 14

Figure 4 Outline Form

Input image	Filtered image
0)	()
tumor alone	Tumor Outline
	0

#### Figure 5 Image Process



#### Figure 6 Filter Image

# 4. PERFORMANCE ANALYSIS

The exisiting and proposed system are analysed. The problem identified in exsiting is there are websites for the brain tumor detection applications which provide details about the brain tumor, but in those the user cannot register his problem so that the nearby doctors would approach him in some or the other way. A person who wants to attend the hospital for the brain tumortreatment has to go and visit only that particular hospital place physically. This makes him a main problem to travel again and again. The existing applications mainly focus on information displaying about the brain tumor and display the details of the e hospitals. Most of the applications available provide information only about the problem, there is no classified information about the detection without visiting the hospital. This assumption has prevented them from automating.Nearly 70% performance has been

increased

## **5.** CONCLUSION

we have developed an open source software to distinguish normal and abnormal brain MRIs. We are working on GUI, which is user friendly. It consist of eight steps, namely Input image, RGB to Grey, Edge Detection, Histogram, Thresholding, Segmentation and Tumor identify. Here several methodologies are exist for brain tumor detection of MRI image

## **6. FUTURE ENHANCEMENTS**

The system can be further modified for the tumors which are having more fuzzier edges. By far deep neural networks, in particular convolution networks are rarely used in boundary detection problems. Hence, in future such neural networks can be proposed for this state of art application. Further this system can be extended for 3D boundary detection of brain tumor

#### References

- [1]. Akansha Singh, Krishna Kant Singh, "A Study Of Image Segmentation Algorithms For Different Types Of Images", International Journal of Computer Science Issues, vol. 7, Issue 5, pp 414- 417, 2010.
- [2]. Mansur Rozmin, Prof. Chhaya Suratwala, Prof. Vandana Shah,"Implementation Of Hard C-Means Clustering Algorithm For Medical Image Segmentation", Journal Of Informatio Knowledge andResearch in Electronics and Communication
- [3]. Rajesh Kumar Rai, Trimbak R. Sontakke, "Implementation of Image Denoising using Thresholding Techniques", International Journal of (IJCTEE), vol. 1, no. 2, pp 6-10. [4]. T.Kalaiselvi, S.Vijayalakshmi, K.Somasundara, "Segmentation of Brain Portion from MRI of Head Scans Using Kmeans Cluster", International Journal of Computational Intelligence and Informatics, vol. 1, no. 1, pp 75-79, 2011.
- [5]. S.S Mankikar, "A Novel Hybrid Approach Using Kmeans Clustering and Threshold filter For Brain Tumor Detection", International Journal of Computer Trends and Technology, vol. 4, no.3, pp 206-209,2013. Engineering, vol.2, no.2, pp 436- 440, Nov12-Oct13.
- [6]. American Brain Tumor association vol. 4, no.3, pp 206-209,2013. Engineering,
- [7]. National Brain Tumor Societyvol.2, no.2, pp 436- 440, Nov12-Oct13.
- [8]. The PPA is a coalition of pharmaceutical,
- [9]. Survivorship A-Z is a web-based resource.
- [10]. PAN Foundation www.panfoundation.org

#### **AUTHORS**

Nithyasree C doing final year MCA in Francis Xavier Engineering College

**D.** Stanley is working as Assistant Professor in the Department of Computer Applications, Francis Xavier Engineering College. He is having teaching experience of 11+ years. His area of interest is Cloud Computing with IOT

**Subalakshmi K** doing first year MCA in Francis Xavier Engineering College





# **AUTHOR INDEX**

R.Samyuktha and Dr.B.Gayathri	01
Kanakaveti Narasimha Dheeraj, Goutham. R. and J Arthi. L	07
M. Ananthi and Bharathram. P Rahul Narayanan. L	13
Anshumaan Mishra And Fancy	23
RexyJ and VelmaniP, Rajakumar T.C	35
Anciline JeniferJ and Piramu PreethikaSK	47
D.Louisa Mary ,Dr.M.Ramakrishnan	57
B Sudha Devi and Dr.D.S Misbha	65
Udhaya Nila and J. Abalin Luther Aathi Vignesh	73
M. Ahamed Fysal and P.Sahaya Jenitha S.Ganapathy Subramanian	81
Selvi, P.Sahaya Jenitha and Sivanesh	91
Lokesh, P.Sahaya Jenitha and Sivanesh	103
N.Shahul Ashfar and J.Abalin Luther and L.Antro James	113
N. Ramesh Kannan and S.Sujitha S,Ganapathy Subramanian	121
Robin and P. Sahaya Jenitha and Santhosh	129
Muthu Krishnan.S and Angeline Ranjithamani,D Deepa.C	137
Roshini and D. Angeline Ranjithamani, Deepa	145
S.PaulPushpa and D.AngelineRanjithamani, S.Sowmiya	157
K Rabiyathu Basaria and S Sujitha K Nambi Natchiar	169
MuthuselviM, D. Angeline Ranjithamani and AbinayaV	181
Nivetha M and Sujtha S, Abinaya V	193
Subha J and Sujitha S, Subalakshmi K	203
Indira G and Sujitha S ,Subalakshmi K	211
GuruSharmila S Arul Amalraj A Subalakshmi K	219
V.Selva Bhuvaneshwari and D.Angeline Rangithamani K,Aathi Vignesh	225
H.Mohamed Masood and J.Abalin Luther, R.Kejapriya	233
Padmanaban and S. Sujitha, M. Muppidathi@Priya	239
K.Venkatesh Prabu and S.Sujitha, M.Muppidathi@Priya	251
A.Subash and P. Sahaya Jenitha, Allen Steve	259
K.Parvathi and S.Sujitha, Allen steve	269
N.Anna lakshmi and P.Sahaya Jenitha, T.Marivjayakumar	277
S.Kokila and J.Abalin Luther ,T.Marivijayakumar	289
J.Esther Jenslin and P.Sahaya Jenitha, S.Sri Selva Meenakshi	297
UppliammalS and Stanley D, S.Sowmiya	309
Nithyasree C and Stanley D, Subalakshmi K	319