# VISVESVARAYA TECHNOLOGICAL UNIVERSITY

BELAGAVI – 590018

2019–2020

**Project Phase 2 Report**

**on**

## " NETWORK INTRUSION DETECTION SYSTEM "

**Submitted in the partial fulfillment of the requirement for the VIII Semester Project**

**Work-15CSP85 for the award of degree of**

**Bachelor of Engineering in**

## "Computer Science and Engineering"

**by**


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| JAYA KUMAR M | 1GV16CS028 |
| LAXMIKANT M | 1GV16CS035 |

**Under the Guidance of**

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**(Formerly Golden Valley Institute of Technology)**

**Department of Computer Science and Engineering**

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# DR. T. THIMMAIAH INSTITUTE OF TECHNOLOGY

(Formerly Golden Valley Institute of Technology)

**Oorgaum Kolar Gold Fields – 563120**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING.**

## CERTIFICATE

Certified that the Project work entitled **"NETWORK INTRUSION DETECTION SYSTEM"** is a bonafide work carried out by **ABHISHEK PILLAI – 1GV16CS001, DHAMODARAN M – 1GV16CS016, JAYA KUMAR M – 1GV16CS028** and **LAXMIKANT M – 1GV16CS035** in the partial fulfillment for the award of degree Bachelor of Engineering in **Computer Science and Engineering** of the **Visvesvaraya Technological University, Belagavi** during the academic year 2019-2020. It is certified that all corrections/Suggestions indicated for the assessment have been incorporated in the report deposited in the department library. The Project phase-2 report has been approved as it satisfies the academic requirement in respect of Project Phase-2 15CSP85 prescribed for the Bachelor of Engineering Degree

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# ABSTRACT

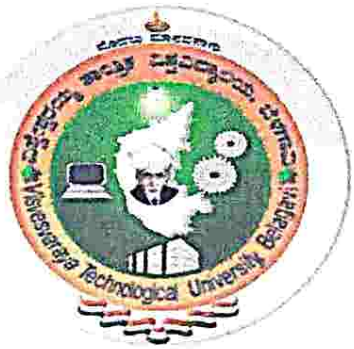
Network Intrusion have predominantly increased following the rapid growth of Network or Internet Technologies in different areas of Social Networking, E-Learning, E-Business etc. this has made the security of data from Malicious Hackers more Challenging. An Intrusion Detection System is a software or hardware used for monitoring the network and protecting it from the Intruder. With the rapid progress in the Internet-Based Technology, new application areas for Computer Network have emerged.

With the high increase of Network Traffic, Hackers and Malicious Users are devising new ways of Network Intrusion. In order to address this problem, an Intrusion Detection System is developed which will detect attacks in a Computer Network. In this project, the KDD Test datasets is analyzed using certain Machine Learning Algorithms (Bayes Net, J48, Random Forest, and Random Tree) to determine the accuracy of these algorithms by classifying these attacks into their respective classes. If the algorithm predicts that there is any Anomaly-Based Intrusion in the system, it alerts the IDS Administrator about the Intrusion.

Intrusion Detection System constantly monitors for any attacks in the network. It effectively prevents any damage on the network. It provides User Friendly Interface which allows easy Security Management System and it also helps us to classify the Attack.

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY

**BELAGAVI - 590018**
**2019 –2020**




**A Project Report**
**on**

# "Decision Making Model for Adaptive Crowdsourcing in Medical Data Platforms using Unsupervised Learning"

**Submitted in the partial fulfillment of the requirement for the VIII Semester project work phase II-15CSP85 for the award of degree of**

**Bachelor of Engineering**
**in**
**Computer Science Engineering**
**By**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Certified that the Project work entitled "*Decision Making Model for Adaptive Crowdsourcing in Medical Data Platforms Using Unsupervised Learning*" is a bonafied work carried out by **ABIDA KHANUM – 1GV16CS002, ARCHANA K P – 1GV16CS007, MADHUMITHA R – 1GV16CS038** and **NARMADA K - 1GV16CS042,** in the partial fulfillment for the award of degree of Bachelor of Engineering in **Computer Science and Engineering** of the **Visvesvaraya Technological University**, Belgaum during the year 2019-20. It is certified that all corrections/suggestions indicated for the assessment have been incorporated in the report deposited in the department library. The Project report has been approved as it satisfies the academic requirement in respect of **Project Phase II -15CSP85** prescribed for the Bachelor of Engineering Degree.

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# ABSTRACT

The volume of medical data generated by large hospitals is becoming increasingly large due to technological advancements. Oftentimes, medical records are collected and uploaded to the centralized medical record using modern mobile equipment's, such as smart phones, and via wireless access points (APs). Wireless Access points gets overloaded and often able to cater to such large volume of data generated from multiple devices, used by crowd sourced users like doctors, nurse, admin etc. Due to inefficient queue management, the buffers get overflow and data loss occurs. This research analyses this problem in detail and proposed effective strategies based on machine learning to improve the data management in Crowd sourcing based Medical data platforms.

Designing a solution to reduce congestion in the MU and AP for the case of medical data platforms and efficient queue management strategy at MU and AP to reduce buffer overflow and data loss which can be achieved by designing prioritized scheduling at AP to handle MU with different priorities and optimum energy management solution for MU and AP. The performance of prediction models maybe higher than the performance of random schedulers.

Our results may show the power of crowdsourcing for predictive modelling not only in quantity of obtained model, but also in its speed to achieve it. This method of acquiring data works well for large data collection.

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY

**BELAGAVI - 590018**
**2019 –2020**

**A Project Review Phase - II**
**on**

# "An Improved Classification Method For Categorizing Larger Online Customer Review Into Distinct Cluster For Deep Analysis"

**Submitted in the partial fulfillment of the requirement for the VIII Semester Project Work for the award of degree of**

**Bachelor of Engineering**
**in**
**Computer Science and Engineering**


**Submitted by**

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## *CERTIFICATE*

Certified that the **Project work** entitled *" An Improved Classification Method For Categorizing Larger Online Customer Review Into Distinct Cluster For Deep Analysis"* is a bonafied work carried out **byAsmafarheen N -1GV16CS008, Indhu G -1GV16CS027, K U Monisha-1GV16CS040 and Nivedha Y -1GV16CS046** in the partial fulfillment for the award of degree of Bachelor of Engineering in **Computer Science Engineering** of the **Visvesvaraya Technological University**, Belagavi during the year 2019-2020. It is certified that all corrections/suggestions indicated for the assessment have been incorporated in the report deposited in the departmental library. The Project report has been approved as it satisfies the academic requirement for the Bachelor of Engineering Degree.

24/8/2020 24/8/20 20/08/2020

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# ABSTRACT

With the rapid development in e-commerce websites millions of reviews are springing up in the web. Reviews are information or updates which are beneficial for both users and sellers. Usually reviews are in the form of unstructured data which are complex in nature and unorganized. This has become a challenging task for deep analysis. Sentiment analysis and opinion mining are carried out on reviews. These conventional classification models use supervised technique which involves only input to output mapping function.

In our project we bring out a approach to categorize large number of online customer reviews into distinct clusters based on similarity in the features. We bring about a idea to perform automatic segregation of reviews into clusters for deep analysis. Deep analysis is used by users to have better shopping experience and used by sellers to understand the insights of reviews inorder to improve their business.

We apply unsupervised clustering technique involving K-Means algorithm to perform clustering and validation is done to determine the accuracy of clusters formed and to know the goodness of algorithm used. Based on clusters formed a visual representation is done by generating statistics to give an overview of clusters formed and to know the weightage of each clusters.

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY**

Belagavi-590018

**2019–2020**

A

**Project Report**

on

# "POLARITY BASED SENTIMENTAL ANALYSIS TECHNIQUE FOR ONLINE USER MOVIE REVIEW USING SUPERVISED SCHEME"

Submitted in the partial fulfillment of the requirement for the VIII Semester

Project Report-15CSP85 for the award of degree

of

**Bachelor of Engineering**

in

**Computer Science and Engineering**

by


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The Project report has been approved as it satisfies the academic requirements in respects of the project prescribed for the Bachelor of Engineering Degree.

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# ABSTRACT

Now a days the age of internet has changed the way people express their views and opinions on various platforms like Facebook, Twitter, LinkedIn, Instagram and other internet websites. Social media and other online platforms contain a huge amount of the data in the form of tweets, blogs, and updates on the status, posts, etc. Sentiment analysis is a process of computationally identifying and categorizing people opinions expressed in any social media in a form of piece of text, especially in order to determine whether the writer's attitude towards a particular topic or product is positive, negative or neutral.

Sentiment analysis is the analysis of emotions and opinions from any form of text. Sentiment analysis is also termed as opinion mining. Sentiment Analysis aims to determine the polarity of emotions like happiness, sorrow, grief, hatred, anger and affection and opinions from the text, reviews, posts which are available online on these platforms.

In this work we conduct sentiment analysis on movie reviews using Machine LearningalgorithmsNaive Bayes and Logistic Regression. Also we can measure the performance by computing the accuracy of each machine learning techniques and compare two techniques and show the best. This Experimental result shows that the proposed system is well suitable to train the text set and classify the new text command belongs into positive or negative polarity with higher accuracy.

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY

BELAGAVI - 590018

2019–2020

**A Project Phase-2 Report**

**on**

## "A SYSTEMATIC APPROACH TO ENHANCE THE PERFORMANCE FOR STOCK MARKET PREDICTION "

**Submitted in the partial fulfillment of the requirement for the VIII Semester Project Work phase 2-15CSP85 for the award of degree of**

**Bachelor of Engineering**

**in**

**"Computer Science and Engineering"**

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Certified that the Project work entitled "A Systematic Approach To Enhance The Performance For Stock Market Prediction" is a bonafide work carried out by DIVYA J-1GV16CS019, HARSHITHA N A-1GV16CS022, HARSHITHA R-1GV16CS023, JYOTHSNA A S-1GV16CS031 in the partial fulfillment for the award of degree Bachelor of Engineering in Computer Science and Engineering of the Visvesvaraya Technological University, Belagavi during the academic year 2019-2020. It is certified that all corrections/suggestions indicated for the assessment have been incorporated in the report deposited in the department library. The Project report has been approved as it satisfies the academic requirement in respect of **Project work phase 2-15CSP85** prescribed for the Bachelor of Engineering Degrees.

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# ABSTRACT

Stock market is a widely used investment scheme promising high returns but it has some risks. An intelligent stock prediction model would be necessary. Stock market prediction is a technique to forecast the future value of the stock markets based on the current as well as previous information available in the market. Stock market prediction is important issue in financial market since, information related to stock market is incomplete and indefinite in nature, making it challenging task to predict future economical performance.

To improve the stock market prediction that requires a forecasting model that combines multiple prediction models. Ensemble learning performs the single learning model and discovers the regularities in dynamic and non-stationary data.

Single level neural network ensembles are used for the prediction problem but fails in accuracy. This Project, introduced a novel two level ensemble learning approach based on Linear Regression(LR) for stock market prediction with the increasing the prediction accuracy. The Evaluation of proposed Ensemble based Model using three input datasets such as, time series datasets, gold price datasets and BSE index datasets shows that proposed model performs better than individual classifiers.

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY

**BELAGAVI - 590018**
**2019–2020**


**Project Phase II Report on**

## "A NEOTERIC METHOD OF IMMUTABLE DIGITAL CERTIFICATE USING BLOCKCHAIN"

**Submitted in the partial fulfillment of the requirement for the VIII SemesterProject Work-15CSP85 for the award of degree of**

**Bachelor Of Engineering**

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**"Computer Science and Engineering"**

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**Mrs. LEELAVATHY S R**

**Sign. Of the H.O.D**
**Dr. S. SREEDHAR KUMAR**

# ABSTRACT

Blockchain technology is a open distributed ledger that holds immutable data in a secure and encrypted way and ensure that transactions can never be altered. It also has the features of the decentralized and incorruptible database that has high potential for a diverse range of user. Blockchain is one of the approaches that have the possibility to enhance transparency, equality, immutable and security on the internet. It is a distributed database of record that can be either public ledger of digital issues

The certificate issuing authorities are compromised for the security credentials due to lack of authentication and antiforge mechanism .we adopt blockchain technology to overcome the problem of certificate forgery which will confirm users similar to digital signature with his/her identity and accessing authorization. With the immutable property of blockcahin technology the digital certificate can be made anti-counterfeit and verified easily. Digital certificate are also known as public key certificate. There is a high need for a mechanism that can guarantee that the information in such a document is original, which means that document has originated from authorized source and is not false.

Using this system it reduces the likelihood of certificate forgery. Companies or organization can thus inquires for any information on any certificate user .It reduces the loss risk of various type of certificate. This system saves on paper, cuts management cost and provides accurate, transparent and reliable information on digital certificate.

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY

**BELAGAVI - 590018**
**2019–2020**


**A Project Report**
**on**

## "AN IMPROVISED VERSION OF COLOR IMAGECLASSIFICATION USING UNSUPERVISED CLUSTERING TECHNIQUE"

**Submitted in the partial fulfillment of the requirement for the VIII Semester Project Work-15CSP78 for the award of degree of**

**Bachelor Of Engineering**
**in**
**"Computer Science and Engineering"**
**by**


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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING.

## CERTIFICATE

Certified that the Project work entitled *"AN IMPROVISED VERSION OF COLOR IMAGE CLASSIFICATION USING UNSUPERVISED CLUSTERING TECHNIQUE"* is a bonafied work carried out by **MADHUMITHA G -1GV16CS037, PAVITHRA P – 1GV16CS048** and **SATHISH KUMAR M – 1GV15CS083** in the partial fulfillment for the award of degree Bachelor of Engineering in **Computer Science and Engineering** of the **Visvesvaraya Technological University, Belagavi** during the academic year 2019-2020. It is certified that all corrections/Suggestions indicated for the assessment have been incorporated in the report deposited in the department library. The Project report has been approved as it satisfies the academic requirement in respect of **Project work Phase-II 15CSP78** prescribed for the Bachelor Of Engineering Degree.

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Name of the Examiners
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# ABSTRACT

In this day and age, image classification becomes attractive method for learning multilevel features and representation of data. In this work, we propose the idea for image classification by k-means clustering algorithm. Firstly, we preprocess our images as there are many variations in the foreground and background of input images. Then we use unsupervised clustering technique called k-means for clustering our input images. We use elbow method to find the number of clusters to perform k-means on our dataset. The goal of our project is to develop a system that classifies images and improving the comparison speed by effectively applying K-means clustering algorithm. We also hope that our proposed method can provide very effective real world application.

# Visvesvaraya Technological University

## Belagavi, Karnataka-590 018

2019-2020

**PROJECT PHASE-II REPORT**

**On**

**"AUTONOMOUS CAMERA BASED EYE CONTROLLER WHEELCHAIR SYSTEM USING RASPBERRY PI"**

**Submitted in partial fulfillment of the requirement for the VII semester Project phase II 15CSP78 for the award of the degree of**

**Bachelor of Engineering**

**in**

**Computer Science and Engineering**

**By**


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**Under the Guidance of**

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**2019-2020**


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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

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| **Mrs. PREMALATHA D** | **Dr. S.SREEDHAR KUMAR** | **DR.SYED ARIFF** |
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# ABSTRACT

A novel technique is implemented for the eye controlled based independent and cost effective system. The purpose of Eye movement based control electric wheelchair is to eliminate the necessity of the assistance required for the disabled person. And it provides great opportunity of the disabled to feel of independent accessible life. The implemented system will allow the disabled person to control the wheelchair without the assistance from other persons. In this system controlling of wheelchair carried out based on Eye movements. The camera is mounted in front of the user, to capture the image of any one of the Eye (either left or right) and tracks the position of eye pupil with the use of Image processing techniques. According to the position of the eye, wheelchair motor will be directed to move left, right and forward. In addition to this, for the safety purpose ultrasonic sensor is mounted in front of wheelchair to detect the obstacles and automatically stop the wheelchair movement. To make system cost effective for monitoring, a Raspberry pi board allowed to access the system without displaying unit.

Key words- Image Processing, Open Computer Vision Library, Python, Raspberry Pi, Wheelchair.

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY

BELAGAVI - 590018

2019 - 2020

**A Project Review Phase - II**

**on**

## "An Improved Classification Method For Categorizing Larger Online Customer Review Into Distinct Cluster For Deep Analysis"

**Submitted in the partial fulfillment of the requirement for the VIII Semester Project Work 15CSP85 for the award of degree of**

**Bachelor of Engineering**

**in**

**Computer Science and Engineering**

Submitted by


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| **Mrs. VINUTHA B A** | **Dr. S. SREEDHAR KUMAR** | **Dr. SYED ARIFF** |

# ABSTRACT

With the rapid development in e-commerce websites millions of reviews are springing up in the web. Reviews are information or updates which are beneficial for both users and sellers. Usually reviews are in the form of unstructured data which are complex in nature and unorganized. This has become a challenging task for deep analysis. Sentiment analysis and opinion mining are carried out on reviews. These conventional classification models use supervised technique which involves only input to output mapping function.

In our project we bring out a approach to categorize large number of online customer reviews into distinct clusters based on similarity in the features. We bring about a idea to perform automatic segregation of reviews into clusters for deep analysis. Deep analysis is used by users to have better shopping experience and used by sellers to understand the insights of reviews inorder to improve their business.

We apply unsupervised clustering technique involving K-Means algorithm to perform clustering and validation is done to determine the accuracy of clusters formed and to know the goodness of algorithm used. Based on clusters formed a visual representation is done by generating statistics to give an overview of clusters formed and to know the weightage of each clusters.

# Visvesvaraya Technological University

## Belagavi, Karnataka-590 018

2019-2020

**PROJECT PHASE-II REPORT**

**On**

**"DEVELOPING SMART LAB USING IOT"**

**Submitted in partial fulfillment of the requirement for the VII semester Project phase II 15CSP78 for the award of the degree of**

**Bachelor of Engineering**

**in**

**Computer Science and Engineering**

**By**


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| **SHYAM S** | **1GV15CS088** |
| **CHARLES A** | **1GV17CS401** |
| **RAMYA S** | **1GV17CS402** |


**Under the Guidance of**

**Dr. CHARAN K V**

**Associate Professor, Department of Computer Science Dr. TTIT.**


**2019-2020**


## Dr. T. THIMMAIAH INSTITUTE OF TECHNOLOGY

**(Formerly Golden Valley Institute of Technology)**

**Department of Computer Science Engineering**

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# Dr. T. THIMMAIAH INSTITUTE OF TECHNOLOGY

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## CERTIFICATE

Certified that the **PROJECT PHASE-II** entitled **" DEVELOPING SMART LAB USING IOT "** is a bonafied work carried out **by RUFUS LEON B (1GV15CS076), SHYAM S (1GV15CS088), CHARLES A (1GV17CS401) and RAMYA S (1GV17CS402)** in the partial fulfillment for the award of degree of Bachelor of Engineering in **Computer Science and Engineering** of the **Visvesvaraya Technological University, Belagavi during the year 2019-2020**. It is certified that all corrections/suggestions indicated for the assessment have been incorporated in the report deposited in the departmental library. The project phase-I has been approved as it satisfies the academic requirement in respect of **Project** prescribed for the Bachelor of Engineering degree.

| Signature of Guide | Signature of HOD | Signature of Principal |
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| **DR. CHARAN K V** | **Dr. S.SREEDHAR KUMAR** | **DR.SYED ARIFF** |

# ABSTRACT

The "Internet of Things" radically changes the view of the "Internet" by embracing every physical object into network. The vision of "IoT" promises to enhance the capabilities of objects and forms a smart environment so that people will benefit from the IoT revolution. As the global population grows, the resources on earth are depleted quickly. In order to have a sustainable earth, governments around the world put a lot of efforts to advocate the reduction of carbon production as well as to emphasize the benefits of reducing the consumption of energy. The proposition has been promoted on campus of educational institutions as well. Smart campus is a trendy application in the paradigm of the IoT. This research adopts the concept of the "Internet of Things" to construct a green campus environment which will realize the idea of energy saving. The architecture of the construction of green campus is established and three application systems have been developed as well. The efforts of this work allow the campus to manage the computer labs and the air conditioners more efficiently. The sensor network will save more energy since data are reported periodically and the analysis will be carried out in time to locate the problems.

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY

BELAGAVI - 590018
2019–2020

A Project Report
on

## "A GENERATIVE MODEL – CHATBOT USING DEEP LEARNING"

Submitted in the partial fulfillment of the requirement for the VIII Semester
Project Work- 15CSP85 for the award of degree of

**BACHELOR OF ENGINEERING**
**IN**
**COMPUTER SCIENCE AND ENGINEERING**

by


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Certified that the Project work entitled *"A GENERATIVE MODEL-CHATBOT USING DEEP LEARNING"* is a bonafide work carried out by SWATHI KAMALINI.M - 1GV15CS038, SADIYA KOUSAR - 1GV16CS060, AISHWARIYA.K - 1GV15CS003 and MANIGANDAN -1GV16CS404 in the partial fulfillment for the award of degree Bachelor of Engineering in Computer Science and Engineering of the Visvesvaraya Technological University, Belagavi during the academic year 2019-2020. It is certified that all corrections/suggestions indicated for the assessment have been incorporated in the report. The seminar report has been approved as it satisfies the academic requirement in respect of project15CSP85 prescribed for the Bachelor of Engineering Degree.

Signature of the Guide
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## Abstract

The most fundamental communication mechanism for interaction is dialogues involving speech, gesture, semantic and pragmatic knowledge. Various researches on dialogue management have been conducted focusing on standardized model for goal-oriented applications using machine learning and deep learning models. This project designs a dialog based intelligent human interaction. A knowledge repository is available at background and dialog based human interaction system facilities getting information from it in question and answer mode.

The concept of intelligent human interaction is implemented for the managing college admissions.

The communication of potential students with a university department is performed manually and it is a very time-consuming procedure. The opportunity to communicate with on a one-to-one basis is highly valued. However, with many hundreds of applications each year, one-to-one conversations are not feasible in most cases. The communication will require a member of academic staff to expend several hours to find suitable answers and contact each student. It would be useful to reduce his costs and time. The project aims to reduce the burden on the head of admissions, and potentially other users, by developing a convincing chatbot. A suitable algorithm must be devised to search through the set of data and find a potential answer. The program then replies to the user and provides a relevant web link if the user is not satisfied by the answer

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY

BELAGAVI - 590018

2019 - 2020

A

PROJECT REPORT

On

## "A New Approach for Improving MRI Image Pixel Quality Using Unsupervised Concept"

Submitted in the partial fulfillment of the requirement for the VIII Semester Project Work 15CSP85 for the award of degree of

**Bachelor of Engineering**

in

**Computer Science and Engineering**

Submitted by


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Carried at

**Dr. T. THIMMAIAH INSTITUTE OF TECHNOLOGY**

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## CERTIFICATE

Certified that the Project work entitled **"A New Approach for Improving MRI Image Pixel Quality Using Unsupervised Concept"** is a bonafied work carried out by **PRASHANTHI K - 1GV16CS051, SHAKTHI AMARTHA AR - 1GV16CS064 , SHYLASHREE S - 1GV16CS409 and SOWMYA G - 1GV16CS073** in the partial fulfillment for the award of degree Bachelor of Engineering in **Computer Science and Engineering** of the **Visvesvaraya Technological University, Belagavi** during the academic year 2019-2020. It is certified that all corrections/Suggestions indicated for the assessment have been incorporated in the report deposited in the department library. The Project report has been approved as it satisfies the academic requirement in respect of Project work Phase-2 15CSP85 prescribed for the Bachelor of Engineering Degree.

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| Signature of the Guide | Signature of the Guide | Signature of Principal |
| Dr. S. SREEDHAR KUMAR | Mrs. REVATHI S | Dr. SYED ARIFF |
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# ABSTRACT

Machine Learning combined with Image Processing has demonstrated truly life impacting potential in healthcare - particularly in the area of medical diagnosis with its pattern recognition technique. The MRI images shows several anatomical structures of an Organ. But normal MR images are not suitable for fine analysis. When there are any anomalies like tumours, cysts etc. Segmentation, Detection and Extraction of infected area from MR image is of primary concern for physicians. More importantly, it is tedious, time taking task and accuracy depends on their experience only. MRI images might also have image degradation such as blurring, noise, colour contrast imperfection which affects segmentation process.

Since it is very difficult to have clear vision about structures within organs using simple imaging techniques our main objective is Clustering. It is used for biomedical image segmentation as it uses unsupervised learning. This improves quality of MRI images by identifying desired patterns and partitioning the image into classes with similar intensities(pixel) based on image features. We also measure and compare effectiveness over different MRI Images.

Improving MRI image quality really help the physicians to perform deep investigations and accurate analysis. This also reduces time for Segmentation which is an essential and challenging task to several clinical and research applications as it gives clear visual of image. The clustering approach divides image into many parts which will aid in extracting features and classify as Normal or Tumorous. Improving quality will help in understanding and in study of various anatomical structures.

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY

BELAGAVI - 590018
2019-2020

## A PROJECT PHASE-11 REPORT

*"User verification of smart phones in a non intrusive manner using Machine learning technique"*

**Submitted in the partial fulfillment of the requirement for the VIII semester Project phase-2 for the award of the degree of**

**Bachelor of Engineering**

**in**

**"Computer Science and Engineering"**

**by**


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**Under the Guidance of**

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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING.**

## CERTIFICATE

Certified that the mini project work entitled ***"User verification of smart phones in a non intrusive manner using machine learning technique"*** is a bonafied work carried out by **Sharanya.S(1GV16CS065),Shree Lakshmi.JR(1GV16CS066), SushmaRani.VS(1GV16CS077),Sneha.V (1GV15CS090)** in the fulfillment for the award of degree of Bachelor of Engineering in **Computer Science and Engineering** of the **Visvesvaraya Technological University, Belagavi** during the academic year 2019-2020.

It is certified that all corrections/suggestions indicated for the assessment have been incorporated in the report deposited in the departmental library.

The project phase-1 has been approved as it satisfies the academic requirement in respect of PROJECT prescribed for the Bachelor of Engineering degree.

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| **Sign. of the Guide** | **Sign. of the H.O.D** | **Sign of Principal** |
| **Mrs. SOPHIA S** | **Dr. S SREEDHARKUMAR** | **Dr. SYED ARIFF** |
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Name of the Examiners

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Signature with date

1. 20/08/2020

# ABSTRACT

Machine learning is the scientific study of algorithms and statistical models that computer systems use to perform a specific task without using explicit instructions, relying on patterns and inference instead. It is seen as a subset of artificial intelligence. Machine learning algorithms build a mathematical model based on sample data, known as "training data", in order to make predictions or decisions without being explicitly programmed to perform the task. Machine learning algorithms are used in a wide variety of applications, such as email filtering and computer vision, where it is difficult or infeasible to develop a conventional algorithm for effectively performing the task.

Smartphone user verification is important as personal daily activities are increasingly conducted on the phone and sensitive information is constantly logged. The commonly adopted user verification methods are typically active, i.e., they require user's cooperative input of a security to gain access permission. To alleviate this imposition on to the users and to provide additional security, the new nonintrusive and continuous mobile user verification framework that can reduce the frequency required for a user to input his/her security token. Design and implement a non intrusive user authentication mechanism for smart phone, Measure and compare the effectiveness of the system in terms of energy consumption and privacy and accuracy of user authentication.

The nonintrusive user verification framework to work together with active authentication to achieve a better trade-off between security and usability in smartphone access control .This applications raise security for IoT devices and security for smartphones.

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY

**BELAGAVI – 590018**

**2019-2020**

**Project Report**

**On**

## "ATTENDANCE MONITORING USING FACE RECOGNITION AND RFID TAG"

**Submitted in the partial fulfillment of the requirements for the completion of 8th**

**Semester of B.E Degree**

**In**

**"Computer Science and Engineering**

**By**


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| **SARATH KUMAR S** | **1GV17CS403** |
| **SUMAN M** | **1GV17CS404** |


**Carried at**

**Dr. T.THIMMAIAH INSTITUTE OF TECHNOLOGY**

**Under the guidance of**

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**Assistant Professor**

**Dept. of CSE, Dr. TTIT, KGF**

**2019-2020**


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## CERTIFICATE

Certified that the **Project phase-II** entitled **"ATTENDANCE MONITORING USING FACE RECOGNITION AND RFID TAG"** is a bonafied work carried out by **SURAJ R-1GV16CS076, SARATH KUMAR S-1GV17CS403** and **SUMAN M- 1GV17CS404** in partial fulfillment of the requirement for the completion of 8th semester of Bachelor of Engineering in **Computer Science and Engineering** of **Visvesvaraya Technological University, Belagavi** during the academic year 2019-20.The Project report has been approved as it satisfies the academic requirements in respect to the **Project phase-II**-15CSP78 prescribed for Bachelor of Engineering degree.

5/8/2020

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**MRS.SANTHOSH KUMARI**

**Sign. of the H.O.D**

**DR. S SREEDHAR KUMAR**

# ABSTRACT

We are living in a world where everything is automated and linked online. The internet of things, image processing, and machine learning are evolving day by day. Many systems have been completely changed due to this evolve to achieve more accurate results. The attendance system is a typical example of this transition, starting from the traditional signature on a paper sheet to face recognition.

This method of developing a comprehensive embedded class attendance system using facial recognition with controlling the door access. The system is based on Raspberry Pi that runs Raspian (Linux) Operating System installed on micro SD card. The Raspberry Pi Camera, as well as a 5-inch screen, are connected to the Raspberry Pi. By facing the camera, the camera will capture the image then pass it to the Raspberry Pi which is programmed to handle the face recognition by implementing the Local Binary Patterns algorithm LBPs. If the student's input image matches with the trained dataset image the prototype door will open using Servo Motor, then the attendance results will be stored in the MySQL database.

The database is connected to Attendance Management System (AMS) web server, which makes the attendance results reachable to any online connected web browser. The system has 95% accuracy with the dataset of 11 person images. The system is based on Raspberry Pi as the hardware.

This system is programmed using both Python for face recognition system and PHP for attendance management system website. Moreover, it is provided with a prototype door using Servo motor which would open for the recognized student to pass every time the recognition is successful. The attendance is stored in MySQL Database and with internet connection provided; the results are accessed from any computer web browser. Each lecturer required to log-in to the AMS website to access his/her attendance sheets. Raspberry Pi is chosen for its small size and affordable price.

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## CERTIFICATE

Certified that the **Project Work** entitled *"THE DESIGN OF A TRUSTWORTHY EFFICIENT AND SECURE ELECTION BALLOT VOTING SYSTEM."* is a bonafide work carried out **by ZARA KHAN.N (1GV16CS085), AYESHA.M (1GV17CS400), MAJREEHA SULTANA.I (1GV15CS041), RAINA FATHIMA (1GV15CS072)** in the partial fulfillment for the award of degree of Bachelor of Engineering in **Computer Science and Engineering** of the **Visvesvaraya Technological University, Belagavi in the year 2019-2020.** It is certified that all corrections/suggestions indicated for the assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirement in respect of **Project-15CSP85** prescribed for the Bachelor of Engineering degree.

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Signature with Date

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