

**FACULTY PUBLICATION DETAILS**  
**ACADEMIC YEAR**  
**2016-2017**



ISSN: 0975-833X

Available online at <http://www.journalcra.com>

International Journal of Current Research  
Vol. 9, Issue, 04, pp.48586-48588, April, 2017

INTERNATIONAL JOURNAL  
OF CURRENT RESEARCH

## RESEARCH ARTICLE

### SCREENING OF SECONDARY METABOLITES IN *AERVA LANATA* AND THEIR EFFICIENCY AGAINST BACTERIAL PATHOGENS

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#### ARTICLE INFO

##### Article History:

Received 14<sup>th</sup> January, 2017

Received in revised form

19<sup>th</sup> February, 2017

Accepted 22<sup>nd</sup> March, 2017

Published online 20<sup>th</sup> April, 2017

##### Key words:

*Aerva lanata*, pathogen,  
Phytochemical and Antimicrobial activity.

#### ABSTRACT

*Aerva lanata* consists of different kinds of secondary metabolites such as steroids, alkaloids, flavanoids, saponins etc., that act as antimicrobial substances to control pathogens. The butanol extracts of *Aerva lanata* leaves were found to contain all kinds of secondary metabolites. The butanol extract (150 µg/ml) of *A. lanata* showed maximum inhibition 5.8 mm against *Klebsiella* Sp, 5.1 mm against *Staphylococcus aureus*, 4.5 mm against *Micrococcus* Sp. and 2.6 mm against *Pseudomonas* Sp. Followed by butanol, hexane, ethanol, chloroform and water showed their antimicrobial activity against test pathogens. *A. lanata* may be useful to control different antibiotic resistant strains due to the presence of active bioactive compounds.

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Citation: Amarnath, S., Narayanan, K. R., Venkataramanan, R. and Dhasarathan, P. 2017. "Screening of secondary metabolites in *Aerva lanata* and their efficiency against bacterial pathogens", *International Journal of Current Research*, 9, (04), 48586-48588.

## INTRODUCTION

*Aerva lanata* is commonly called as Polpala, in English it is a stone breaking plant. It is a bisexual, plant with alternate leaves, an indigenous medicinal plant of Asia, South America, and Africa. *A. lanata* is popular in treatment of diseases like malarial fever, dysentery, asthma, hypertension and diabetes etc., (Rajesh et al., 2011). Worldwide now a day's peoples are preferred, plant based drugs for any kinds of treatment due to lower side effects. Usage of plant based drugs increased every year as per WHO report (Aruna et al., 2013). *Aerva lanata* leaves have been assessed for cancer chemo preventive activity also in traditional treatment process (Chakraborty et al., 2002). All these kinds of activities observed due to the presence of secondary metabolites such as glycosides, betulin, α-amyrin etc., (Joshi, 2007). Many kinds of phytochemicals such as alkaloid, terpenoids, flavanoids, steroids etc., were responsible for inhibiting growth of pathogens. *Aerva lanata* is comprised of all the above phytochemicals that act as antimicrobial substances to control pathogens (Chowdhury et al., 2000). This plant is having minerals such as calcium, silicon, magnesium, carbon etc., helpful to recover various kinds of diseases (Ragavendran et al., 2012). Clinical microbiologists have two reasons to be interested in the topic

of antimicrobial plant extracts. First, it is very likely that these phytochemicals will find their way into the arsenal of antimicrobial drugs prescribed by physicians; several are already being tested in humans. Antioxidant, anti-diuretic, hepatoprotective, hypoglycemic works have been carried out in various medicinal plants as well as in *Aerva lanata* also, but mechanism of antimicrobial and immunomodulation studies are scanty. Hence, in the present investigation the phytochemical screening and their impact against human pathogens are analysed.

## MATERIALS AND METHODS

In the present study the plant *Aerva lanata* was collected in early morning without much disturbance in Ambasamudram, Tirunelveli District, Tamil Nadu, India using sterile polythene bag and knife and immediately transferred to the laboratory for further analysis. The plant material was shade dried for one week, then it was powdered with the help of mixer grinder and used for preparation of plant extraction.

### Preparation of extracts

Ten gram of powdered plant material was taken in clean sterile Soxhlet apparatus and extraction was done with 100 ml of different solvents (low polar to high polar) like hexane, butanol, ethanol, chloroform and water. After extraction the

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Research Journal of  
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Research Journal of Pharmacy and Technology

Year : 2016, Volume : 9, Issue : 11

First page : ( 1829) Last page : ( 1834)

Print ISSN : 0974-3618, Online ISSN : 0974-360X

Article DOI : 10.5958/0974-360X.2016.00372.3 (http://dx.doi.org/10.5958/0974-360X.2016.00372.3)

## A bioinformatics approach reveals the insecticidal property of Morinda tinctoria Roxb. against the cotton bollworm Helicoverpa armigera

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Online published on 2 March, 2017.

### Abstract

Botanical insecticides have been acknowledged as attractive alternatives to synthetic chemical insecticides for pest management they apparently pose little hazard to the environment or to human health. A number of plant substances have been considered for use as insect antifeedant and repellent. Studying the insecticidal property of plants against the insects is a difficult process. Hence we have done an insecticidal property analysis of phytochemicals derived from Chloroform, Ethyl acetate and Methanol extracts of root-bark and fruit of Morinda tinctoria against the cotton bollworm Helicoverpa armigera using bioinformatics approaches such as molecular structure property analysis, homology modeling and docking studies. Nine compounds from the root-bark and fruit extract of M. tinctoria were observed to strictly follow Tice rule and 8 compounds present in the extract and also known to have insecticidal property from literature were selected as ligands. The enzymes Acetylcholinesterase, Carboxylesterase and Protease of Helicoverpa armigera were decided as targets for the docking studies. The 3D structure of targets was modeled and the interaction between the enzymes and phytochemicals were studied using molecular docking studies in order to find effective insecticide.

### Keywords

Molecular docking, Morinda tinctoria, Insecticidal properties.

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# IMPLEMENTATION OF PUBLIC TRANSPORT SYTEM WITH JOURNEY PLANNER

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**Abstract:** Public transport system is an electronic system to provide real-time information for the passengers to display the arrival and departure timings of the buses. This will let the passengers when their bus will arrive and plan their journey accordingly, for planning a journey the public transport system provides the user to find the suggested journey's to commute between the source and the destination. The application should list the bus route number, fare details, distance and also allow the user to view the same in a map-view. Alternatively, the user can also key-in the bus route number to find relevant details of the source and destination. We have designed an incident capture systems that would display the details of all the bus services that would within a particular route by calculating the time taken by the buses that are about to arrive, route number, ETA in minutes, destination of the bus route and the direction when the user keys-in the bus stop name and also Public Transport System provides the passenger to fine the accurate time it would take for a bus to reach the stop, that the user would board to reach their desired destination.

**Keywords:** Eclipse Neon2, GPS, HTML CSS, MySQL, Strong authentication, Vehicle tracking algorithm.

## INTRODUCTION

The process of building systems has always been complex with system becoming larger, the costs and complexities get multiplied. So the need for better methods for developing systems is widely recognized to be effective and the applied model should meet a few basic requirements.

- The model should be structured and cover the entire system development process from feasibility study to programming, testing and implementation.

- The model should utilize established methods and techniques like database designs,

normalizations and structured programming techniques.

- The model should consist of building blocks, which define tasks, results and interfaces.
- The model should separate the logical system from the physical system.

- Documentation should be a direct result of the development work and should be concise, precise and as non-redundant as possible.

Based on the above requirements of the system model, system study has been made. Various methodologies have been applied for system study, evolving design documents, data modeling, input screen design and report design.

## 1.1 EXISTING SYSTEM

In Existing System Due to non-availability of prior information about the buses arrival schedule, people have to wait longer on bus stops especially in morning when they have to reach the offices in time. The buses are overloaded for most of the times which often results in some kind of fault occurrence in buses and people get late further.

## DISADVANTAGES OF EXISTING SYSTEM:

- The existing system only offers static data about the vessel in anchorage points and berths.
- It does not offer real time information.
- No module for public transportation is provided in the existing system.
- The existing system does not offer efficient methods for the exact timings of arrival of buses.
- Estimation Time of Arrival module (ETA) is not present.



## ERP FOR GROCERY SHOP

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Received 27 Feb. 2017; Accepted 20 March. 2017

## ABSTRACT

ERP is the integrated management of core business processes, often in real-time and mediated by software and technology. It can be used to collect, store, manage and interpret data from all business activities. This work focuses to develop an ERP for a grocery store. This ERP provides a package comprising different modules, such as accounting, purchase, inventory and sales. We develop web based ERP for Grocery store where all the important information like product availability, daily monthly sale, profit & loss are stored and access through web application.

**Index Terms:** ERP, software and technology

## Introduction

*Enterprise resource planning (ERP)* is business process management software that allows an organization to use a system of integrated applications to manage the business. It includes product planning, development, manufacturing, sales and marketing. Some of the most common ERP modules include those for product planning, material purchasing, inventory control, distribution, accounting marketing and finance.

## Literature Survey:

Now a day's, people are using internet as one of the basic need. Online is the new big thing. Everything from a small pin to large home furnishings items are available online for the transaction. People are having eased to buy everything they want. Buying things online is beneficial in so many ways. First of all it saves time, it is convenient. Shopping online saves logistics for you. The e-Commerce people deliver the product to your door steps. You have a lot of options to choose from. When you shop normally you have some constraints like brands, location, pricing. Shopping online gives you freedom to shop from anywhere throughout the country. All the brands are available, no location barriers, various options.

In paper [1] a review of the articles and business reports related to consumers' grocery shopping decision making process, in both offline and online retail channels. The intent was to acquire a

general as such the focus relies mostly on the decisional phase and influencing pre-decisional phase of the grocery shopper decision making process. Based on the outcome of the literature review performed, a conceptual framework that guided the design and performance of the empirical studies, aiming at providing answers to the proposed research questions, is also presented.

In paper [2] a prospect about online grocery shopping is shown where we can see that it has becomes more and more popular in recent years. To facilitate the purchase process, many online stores provide a shopping recommendation system for their consumers. So far, the generic recommendation systems mainly consider preferences of a consumer based on his/her purchase histories. Nevertheless, it is noted that there is nothing to do with the right timing to purchase a product from the view point of product replenishment or economic purchasing. Hence, we develop a new recommendation scheme especially for online grocery shopping by incorporating two additional considerations, i.e., product replenishment and product promotion. We believe that such a new scheme should be able to provide a better recommendation list which fit consumer desires, needs, and budget considerations and finally boost transactions.

In paper [3] we can learn about 3D shopping. Generally we can see that the online shopping has normal text and pictures but this website

## Face Recognition Using PCA

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**ABSTRACT:** Image processing plays a vital role in aspects of all science and technology. In this image processing concepts have great importance in application oriented research and project. The purpose of the proposed research work is to develop a computer system that can recognize a personization by comparing the characteristics of face to those of known individual. Human face recognition is an effective means of authenticating a person. Principal Component Analysis (PCA) is a classical feature extraction and data representation technique widely used in pattern recognition. It is most successful techniques in face recognition. Prototype is designed to work with web cameras for the face detection and recognizing system based on visual 2010 C#, and OpenCV. The proposed method have been evaluated using the Microsoft cognitive service API with Azure API of databases. This system can implement a better security of computational time to detect and recognize the human faces with big database.

**Keywords:-** Face detection, face recognition, image processing, PCA, Local binary patterns histogram (LBPH), Eigen faces, Fisher faces, Emotion Recognition, C#, visual studio, Face API.

### 1. INTRODUCTION:

When in this face recognition concepts we discuss various face recognition techniques and image processing concepts. In this we discuss different approaches in face recognition and various concepts used in face recognition. The goal is to implement the system for a particular face and distinguish it from a large number of stored faces with some real-time variations as well. Many

techniques can be used for face recognition but Principle Component Analysis is mostly followed and good technique. The key idea of the PCA method is to transform the face images into a small set of characteristics feature images, called eigenfaces, which are the principal components of the initial training set of the face images.

### 2. BACKGROUND WORK

#### Face Recognition

A face recognition system is a computer application for automatically identifying or verifying a person from a digital image or a video frame. One of the ways to do this by comparing selected facial feature from the image and a facial database.





# A Smart Healthcare Surveillance and Fall Detection System for Elderly People

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## Abstract:

In spite of the improvement in communication link and despite of all progress in advanced communication technologies, there are still very few problems which elderly people are facing just because there is no one to look after. Therefore there is a strong need to develop a wireless system which monitors the elderly people from time to time. The proposed system provides most secure system to elderly people. This also alerts the victim's neighboring people in assisting the victim by producing a beep sound. A n SMS message with the current location of and consciousness of the victim is sent to the physician and to the registered contacts. Immediate protection is provided to the victim with the implementation of air bag which opens up automatically when any sudden movement has been detected.

**Key Words:** wireless system, strong authentication, conscious detection, airbag, GSM.

## I. INTRODUCTION

With the increased changes in living habits of the person there arises multiple problems in health, mostly for the elderly ones. The proposed system assists elderly people when they move out of secure zone. Now a days the elderly people need more assistance for better surveillance. The System offers faster, reliable and effective processing in assisting elderly people. Proposed system provides three key aspects: accessibility to information, convenience of use and cost effective. The designed product is positioned on victim's body to monitor the following body parameters like heartbeat rate and moving directions of the person. From these sensors the signal is transmitted to microcontroller. The wired transmission is used for communication between sensors and microcontroller. The consciousness of the person can be detected with the help of the conscious switch which is supposed to be operated by the victim. When a person fall is diagnosed, the victims location is acquired by the global positioning system (GPS) and sent to the rescue center via the global system for mobile communication so that the end user can get immediate medical assistance. The collected signal are transmitted to doctor or hospital and to the pre-defined contacts with the current location and conscious data of the victim is sent for further analysis and accordingly medical treatments are given to victim. Power consumption will be low and lifetime of devices will be more. Moreover the system supports security and privacy concern as victim's health records contain sensitive data and they are to be stored securely. The victim's data will be maintained by the doctor and the victim's guardian.

## II. RELATED WORK:

K.C. Kavitha, A.Bazila Banu published that the primary function of this system is to constantly monitor patient's physiological parameters such as pulse rate, breathing rate, blood pressure rate and patient's body movement, and display the same information to the doctor. In this proposed system

transmitting module continuously reads patient's pulse rate or heart beat rate, breathing rate, patient body movement and blood pressure rate through a pulse sensor, airflow sensor, accelerometer and sphygmomanometer [1]. According to Sunil L. Rahane, Prof. Ramesh S. Pawase The paper presents monitoring system to monitor the physiological parameters such as Blood Pressure (BP), ECG, Body Temperature and Respiration etc. The wireless sensors send this signal to base station or control room of physician. The sensing data of each patient are stored in back-end server with each having its own ID. The system can detect abnormal condition of patients and send the SMS or e-mail to the physician [2].

## III. EXISTING SYSTEM:

With the arrival of population aging society, the health care of the elderly becomes more important. The fall detection algorithm is the core of the fall detection alarm system, so it is the key for the research and development of the fall detection system to analyze and select the appropriate algorithm for the detection of falling. It is one of the most important indicators of elder health monitor that it can quickly detect, alarm and shorten the time of rescue when senior falls down. Through analyzing the related fall detection algorithm to monitor the health of the elderly home or outside, and comparing their practicalities and pertinences.

## IV. PROPOSED SYSTEM:

A smart healthcare surveillance and fall detection system for elderly people provides a flawless security and a support for the elderly people. The proposed system is a novel algorithm as well as architecture for the fall accident recognition and corresponding wide area rescue system based on the third technology (3G) systems. When a land accident event is diagnosed, the user's location is acquired by the global positioning system (GPS) or the assisted GPS UNIT (A-GPS), and sent to the rescue center via the 3G communication network so that the end user can get medical assistance





# Online Smart Purohit Booking System Based On Category

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**ABSTRACT:** Today is the era of Online World. All the things are carried out online with the help of internet. Now all the things are stored and save in the database is stored online through internet. Though all the things accessed through online, the devotional work are not done in a smart way. Now a day every traditional work is made easy through web application based system, our ONLINE SMART PUROHIT BOOKING SYSTEM will also try to eradicate hurdles which were there in traditional purohit-customer relationship.

**KEYWORDS:** User, Admin, Purohit, Database, User-Purohit Management (UPM).

## I. INTRODUCTION

The Online Smart Purohit Booking system is basically computer reservation system. It is used to book purohit with great ease. In this system user can book a purohit for any occasion and also it provide nearby location for purohit of the user specified location. Once Purohit is booked the user will get regular alert e-mail messages until the event occur so he is aware of the event. In this project we have proposed one application which will be used to perform devotional work. It is a traditional tedious trial and error method. Now is the time to perform devotional work in a smart way. A web application is used for this purpose. All the Data is stored at central location i.e. Database. That Data is extracted by applying some constraints. User will get accurate result based on his/her search. User location is most important aspect. This is a never before application. It will help our society in the most important part of any devotional activity i.e. booking a Purohit. We are trying to connect Devotion and Technology with each other by the means of Devotional Application.

## II. LITERATURE SURVEY

In the Research paper by Oloyede M.O., Alaya S.M., Adewole K.S. "Development of an Online Bus Ticket Reservation System for transportation Service in Nigeria" [www.iiste.org](http://www.iiste.org) on 2014 it is given that, In Development of an Online Bus Ticket Reservation System for transportation Service in Nigeria, The use of bus traveling is a large growing business in Nigeria and other countries; the manual use of bus reservation is presently very strenuous and also consumes a lot of time by having to stay on a long queue. For this reason, an efficient system is to be proposed in this paper to ease the issue of bus reservation amongst indigenes within the country. The system is a web - based application that allows visitors to check bus availability, buy and pay bus ticket online.

In [3] there uses a data mining concept to contact with the Customer and also uses a Web mining concept. There are stages in web mining; authors have mainly focused on data preprocessing and applying KNN algorithm.

In [7] it is given that, Location Based Services (LBS) need users to report their locations continuously. Existing privacy preserving methods have some limitations like they need fully trusted third party and they offer limited privacy. The authors focus on range and the SQL queries. That system supports other location queries without changing the algorithm.



# IOT Based Android Controlled Railway Level Gate Crossing

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**Abstract—** In the fastly developing country like ours, accidents in the railway level crossings are increasing day by day. No efficient steps have been taken so far in these areas and our paper deals with automatic railway gate operation through the Android application (I.e.,) the railway gate control at the level crossing replaces the gate operated by the lever it mainly deals with two things, firstly, it reduces the time for which the gate use being kept close and secondly, to provide safety to the road user. The arrival of the train is detected by the motion sensor placed on the side of the tracks. Hence, the time for which it is closed is less compared to manually operated gates. This railway gate control is performed by the Arduino. The operation is automatic so error due to manual operation is prevented...

**Index Terms—**Arduino, IR sensor, motor, led.

## 1. Introduction

Indian railways are in operation for more than 160 years and it covers the whole of India. The entire network covers 64,000 km of rail route. Safety is the main objective of our system. While analysing the daily newspapers, most of the accidents are occurred in railways that too in level crossing because of the carelessness of the human who are involved in controlling of gates. This is because, in the existing system, hand lever pulley is used to close and open gates.

To avoid such accidents by carelessness and to reduce the work load of gatekeepers, the gate can be controlled using Android device. The android device is connected with the microcontroller (here we used Arduino UNO) by means of a Bluetooth module embedded with the Arduino.

The embedded C language is used to write up the logic in the Arduino microcontroller. Infra-Red sensors are used to sense the arrival and departure of the train. Relay sensors are used to control the motor of gates. The android application in the android device controls the working of gates.

The Android application named "Train Gate Control System" is used to control the gates. The application contains Bluetooth connectivity, status of Bluetooth, command buttons such as open, close, train data(to display the arrival and departure of trains).

## 2. System Analysis

### 2.1 Existing system

The existing system of the railway gate control system is controlling the gate manually i.e. the human who is involved in controlling of gate has to lift the hand pulley using the lever. As days went on hand lever pulley is being replaced with automated switches. But this leads to several errorless.

Due to power cut or some other technical issues, gate could not be opened or closed which leads to lots of accidents. In the current system, the signal to the gate keeper is being sent by the station master who is controlling the train. In some cases, the signal being sent by station master could not be understood by gate keeper which also leads to accidents.

In second case, that is usage of switches to control the railway gates experiences lots of disadvantages such as power issues, signal issues etc., which leads to accidents.

Some existing system are:

- Intelligent level crossing safety control system
- Automated unmanned railway level crossing system
- Anti-collision and secured level crossing system

The following are the some disadvantages of existing system:

### 2.1.1 Disadvantages

- Lots of accidents
- Increased workload for gatekeeper since hand pulley is used
- High cost required to implement
- Power supply should be constant

### 2.2 Proposed system

In proposed system, the signal being sent by the station master will be replaced with IR sensors which in turn senses the train arrival and departure by buzzers. This in turn sends a notification message of train arrival and departure to the android application which controls the operation. The android application is controlled only by the railway authorities of the concerned railway station. The Arduino microcontroller which is connected to the android application by the help of Bluetooth module helps the system to attain its efficiency in controlling the operation of gates. The relay switches are used to control the motion of gates. The signal will be red until the train crosses the particular distance. On reaching the other surpassing end the LED will be switched to green as it denotes the train departure. An LCD is also interfaced with arduino microcontroller which is used to display the status of the gate whether it is opened or closed.

### 2.2.1 ADVANTAGES

- Higher reliability as it is not subjected to manual errors
- Highly economical than manual railway crossing system
- Communication between railway authority and railway track is effective
- Saving human life with miserable train accidents



# DESIGN OF SMART REFRIGERATOR USING RASPBERRY PI

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## ABSTRACT

In any conventional or standard refrigerator there is no system of automatically monitoring the food items. A smart refrigerator is one which possesses self-monitoring capability of food items and automatically detecting and alerting the consumer of the need to restock the food items with minimal human intervention. Thus the devices ought to be smart enough to recognize our needs. Hence smart refrigerator is designed to convert any existing refrigerator into intelligent cost effective appliances using sensors. In our system the smart refrigerator automatically detect the weight of the products, any gas leakage and any changes in the level of the liquid in a container using load cell sensor, gas sensor and ultrasonic sensor then the system will automatically inform the owner about the status of the smart refrigerator through short message service (SMS) using GSM mobile network.

## I. INTRODUCTION

**“TO EAT IS A NECESSITY, BUT TO EAT INTELLIGENTLY IS AN ART.”**

The necessity for any living form is food, water, air. Food provides the fuel for you to function, to move, to think, to grow and repair our body, basically if we don't eat we die. But to eat intelligently is an art, getting the right balance between quantity, quality and the combination of protein, carbohydrates, fats, minerals and vitamins, good crabs, bad crabs, good fats and bad fats, it's not only an art it is a science. As in today's situation, most of the people are working and have hectic schedule all the day. These entire factors have been considered for the design of smart refrigerator. Smart refrigerator is used to measure its contents automatically and if there are any changes in the

Content, it sends an SMS via GSM. It uses sensors like load cell, ultrasonic and gas sensor to detect and monitor its contents and sends user a notification via GSM mobile network. It uses Load cell sensor for measuring the weight of the products, Ultrasonic level sensor for measuring the level of the liquid in a container and gas sensor for monitoring the leakage of gas and changes inside the refrigerator will be sent to the user mobile phone via GSM mobile network. Since this design uses sensors for the automatic monitoring, it saves more time of the people using it. It uses GSM technique for the notification of inadequate products to the user mobile, this would be very helpful for the user because they may need not go to shop for each and every product that run off. Instead they can shop when it sends an alarm message, thus it requires no manual monitoring.



# DESIGN AND IMPLEMENTATION OF COLLEGE BUS MONITORING AND TRACKING SYSTEM

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## ABSTRACT

In daily operation of college transport systems, the movement of vehicles are affected by different uncertain conditions as the day progresses, the transport system which is been practiced in colleges have certain difficulties in daily routine. Millions of students commute between home and college every day. While there is much feasibility that makes the system reliable, yet there are some issues, such as unexpected delay in boarding the bus as the exact location is unaware, that makes the students to miss their daily classes. As many students escalate the college transportation, determining the total number of students and faculties has been practiced manually. This process requires a man power to determine the count on number of students entering and exiting the college bus. In recent times, drowsiness is one of the major cause of highway accidents. As every bus system is controlled by the driver, it is important that driver must be conscious every time the bus is active. It is significant that driver must be attentive to the road that makes the students to reach their destination safely. Henceforth, the system provides the efficient solution to overcome these issues. In overall the system is useful and safety.

**Keywords:** GPS(Global positioning system), Eye-Blink sensor, IR(Infrared rays) sensor.

## I. INTRODUCTION

In this fast moving world, everyone is in rush to reach their destination. In this case waiting for the bus is not reliable. This system propose smart bus tracking system for Students who rely on the college transport. Their major concern is to know the real time location of the bus for which they are boarding for. This system intends to find yet another solution to solve this problem by developing a bus safety system that will track the location of the bus through GPS and monitor the entry and exit of persons from the bus through an

energy efficient methodology. The proposed system will continuously sense the way in and way out of the person using IR sensor(Infrared rays), and eventually, the count is displayed on the LCD. In recent times, drowsiness is one of the major cause of highway accidents. This system is used to prevent and control when the vehicle is out of control. The drowsiness of the driver is identified by the eye blink closure and blinking frequency through infrared sensor worn by a driver by means of spectacles frame. If the drowsiness is detected, immediate buzzer alert is



## PORT MANAGEMENT SOFTWARE

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**Abstract:** Port Management Software, is aimed at the improvement of efficiency in service management supplied by a Ports. It is software which can be used by several ports and which enables us to offer solutions to every client's demands and needs. Port Management Software, is an Integrated Port Operation Management System which is highly customizable and allows a port to optimize its maritime operational activities related to the flow of vessels in the port service area. Port Management Software monitors the movement of ships and helps to devise an effective Traffic Management System that guides the ships to berth in ports which in turn reduces fuel consumption of the vessels, thus reducing the CO2 emissions levels in the ports, hence making the port environment eco-friendly.

**Keywords:** Carbon di oxide emission levels, Fuel Management, Port Management Software, Transport System, Traffic Management Software, Vessel Tracking.

### I. INTRODUCTION

Port Management Software (PMS), is a web application that aims to optimize the port activities. A web based application is a software package that can be accessed through the web browser. The software and database reside on a central server rather than being installed on the desktop system and is accessed over a network. PMS comprises different modules which operate together. The modules present are: Geotracking, Vessel traffic, Fuel Management system, CO2 emission. The conventional system uses communication via radios between the port authorities and vessels for intimation of arrival of ships and for the request and allocation of berths. Once the request is received by the port the usual checking of the vessels and their permit documents takes place. After the verification process the vessels are allocated berths by the port. The tugs and pilots are also allocated for the vessels during berth allocation. This entire process takes place only through radio communication between the members of the port and the vessel which is a time consuming process. This method also doesn't provide effective traffic planning thus higher amount of fuel consumption occurs. The effect of higher fuel consumption of vessels is greater emission of CO2 which pollutes the port environment. This time wasting, fuel consuming non eco-friendly process can be avoided by using Port Management Software.

#### A. Competitive Advantages:

- PMS provides complete Port Management Services online.
- Berthing and Deberthing operations can be carried out with much ease.
- Real time monitoring of Anchorage points, Berths,

Pilot points, Tugs and Pilots in the port area provides an efficient way to devise vessel routes.

- Fuel consumption is also monitored and the newly devised routes will result in reduction of fuel consumption, thus reducing CO2 emission levels.

### II. EXISTING SYSTEM

The existing systems functions using human communication via radio or other communicating mediums between the port authorities and vessels for intimation of arrival of ships and for the request and allocation of berths. Once the request is received by the port the usual checking of the vessels and their permit documents takes place. After the verification process the vessels are allocated berths by the port. The tugs and pilots are also allocated for the vessels during berth allocation

#### A. Limitations:

- The existing system only offers static data about the vessel in anchorage points and berths.
- It does not offer real time monitoring of the vessel.
- No module for fuel management is provided in the existing system.
- The existing system does not offer efficient methods to optimize the port activities.
- CO<sub>2</sub> emission detection module is not present.

### III. PROPOSED SYSTEM

PMS offers efficient methods to optimize the port activities such as anchorage, berthing and tugging. It provides dynamic updates about the location of the vessels in bay, anchorage and berths. PMS provides modules for fuel management and CO2 emission detection which helps the port to operate in an environment friendly manner. The software helps to computerize most of the important port activities.

#### A. Advantages:

- PMS offers efficient methods to optimize the port activities such as anchorage, berthing and tugging.
- It provides dynamic updates about the location of the vessels in bay, anchorage and berths.
- PMS provides modules for fuel management and CO<sub>2</sub> emission detection which helps the port to operate in an environment friendly manner.
- The software helps to computerize most of the important port activities.

### IV. SOFTWARE DESCRIPTION

Software Description is a technical specification of requirement of software product. This specifies the





# Intelligent Transport Software for Port

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## Abstract:

Intelligent Transport Software for Port is a web application that aims to optimize the port activities. It is a web based application in a software package that can be accessed through the web browser. The software and database reside on a central server rather than being installed on the desktop system and is accessed over a network. ITSP is software which can be used by several ports and which enable us to offer solutions to every client's demands and needs. ITSP is an Integrated Port Operation Management System highly customizable and covers most of port services, allowing management of the full life cycle for container visits.

**Keywords:** Carbon di-oxide discharge levels, Propellant Management, Intelligent Transport Software, Transport System, Ship Traffic Control, Container Tracking.

## I. INTRODUCTION

The process of building systems has always been complex with system becoming larger, the costs and complexities get multiplied. So the need for better methods for developing systems is widely recognized to be effective and the applied model should meet a few basic requirements. The model should be structured and cover the entire system development process from feasibility study to programming, testing and implementation. The model should utilize established methods and techniques like database designs, normalizations and structured programming techniques. The model should consist of building blocks, which define tasks, results and interfaces. The model should separate the logical system from the physical system. Documentation should be a direct result of the development work and should be concise, precise and as non-redundant as possible. Based on the above requirements of the system model, system study has been made. Various methodologies have been applied for system study, evolving design documents, data modeling, input screen design and report design.

### A. Competitive Advantages:

- ITSP provides complete Port Management Services online.
- Berthing and Deberthing operations can be carried out with much ease.
- Real time monitoring of Anchorage points, Berths, Pilot points, Tugs and Pilots in the port area provides an efficient way to devise container routes.
- Propellant management is also monitored and the newly devised routes will result in reduction of fuel consumption, thus reducing CO<sub>2</sub> discharge levels.

## II. EXISTING SYSTEM

There are certain features limiting the process of the present system. The drawbacks of the present system are listed below.

- The existing system only offers static data about the vessel in anchorage points and berths.
- It does not offer real time monitoring of the container.

- No module for fuel management is provided in the existing system.
- The existing system does not offer efficient methods to optimize the port activities.
- CO<sub>2</sub> emission detection module is not present.

### A: Limitations:

In this project the searching can be done for berth availability, number of anchorage points present, and tug details.

## III. PROPOSED SYSTEM

ITSP offers efficient methods to optimize the port activities such as anchorage, berthing and tugging. It provides dynamic updates about the location of the vessels in bay, anchorage and berths. ITSP provides modules for fuel management and CO<sub>2</sub> discharge detection which helps the port to operate in an environment friendly manner. The software helps to computerize most of the important port activities.

### A. Advantages:

- ITSP offers efficient methods to optimize the port activities such as anchorage, berthing and tugging.
- It provides dynamic updates about the location of the vessels in bay, anchorage and berths.
- ITSP provides modules for fuel management and CO<sub>2</sub> emission detection which helps the port to operate in an environment friendly manner.
- The software helps to computerize most of the important port activities.

## IV. SOFTWARE DESCRIPTION

Software Description is a technical specification of requirement of software product. This specifies the environment for development, operation and maintenance of the product.

**A. Technology Used:** To build the proposed system varies technology stacks where used. The important technologies and programming languages used are listed and defined below.





# A Smart Healthcare Surveillance and Fall Detection System for Elderly People

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## Abstract:

In spite of the improvement in communication link and despite of all progress in advanced communication technologies, there are still very few problems which elderly people are facing just because there is no one to look after. Therefore there is a strong need to develop a wireless system which monitors the elderly people from time to time. The proposed system provides most secure system to elderly people. This also alerts the victim's neighboring people in assisting the victim by producing a beep sound. An SMS message with the current location of and consciousness of the victim is sent to the physician and to the registered contacts. Immediate protection is provided to the victim with the implementation of air bag which opens up automatically when any sudden movement has been detected.

**Key Words:** wireless system, strong authentication, conscious detection, airbag, GSM.

## I. INTRODUCTION

With the increased changes in living habits of the person there arises multiple problems in health, mostly for the elderly ones. The proposed system assists elderly people when they move out of secure zone. Now a days the elderly people need more assistance for better surveillance. The System offers faster, reliable and effective processing in assisting elderly people. Proposed system provides three key aspects: accessibility to information, convenience of use and cost effective. The designed product is positioned on victim's body to monitor the following body parameters like heartbeat rate and moving directions of the person. From these sensors the signal is transmitted to microcontroller. The wired transmission is used for communication between sensors and microcontroller. The consciousness of the person can be detected with the help of the conscious switch which is supposed to be operated by the victim. When a person fall is diagnosed, the victim's location is acquired by the global positioning system (GPS) and sent to the rescue center via the global system for mobile communication so that the end user can get immediate medical assistance. The collected signal are transmitted to doctor or hospital and to the pre-defined contacts with the current location and conscious data of the victim is sent for further analysis and accordingly medical treatments are given to victim. Power consumption will be low and lifetime of devices will be more. Moreover the system supports security and privacy concern as victim's health records contain sensitive data and they are to be stored securely. The victim's data will be maintained by the doctor and the victim's guardian.

## II. RELATED WORK:

K.C. Kavitha, A.Bazila Banu published that the primary function of this system is to constantly monitor patient's physiological parameters such as pulse rate, breathing rate, blood pressure rate and patient's body movement, and display the same information to the doctor. In this proposed system

transmitting module continuously reads patient's pulse rate or heart beat rate, breathing rate, patient body movement and blood pressure rate through a pulse sensor, airflow sensor, accelerometer and sphygmomanometer [1]. According to Sunil L. Rahane, Prof. Ramesh S. Pawase The paper presents monitoring system to monitor the physiological parameters such as Blood Pressure (BP), ECG, Body Temperature and Respiration etc. The wireless sensors send this signal to base station or control room of physician. The sensing data of each patient are stored in back-end server with each having its own ID. The system can detect abnormal condition of patients and send the SMS or e-mail to the physician [2].

## III. EXISTING SYSTEM:

With the arrival of population aging society, the health care of the elderly becomes more important. The fall detection algorithm is the core of the fall detection alarm system, so it is the key for the research and development of the fall detection system to analyze and select the appropriate algorithm for the detection of falling. It is one of the most important indicators of elder health monitor that it can quickly detect, alarm and shorten the time of rescue when senior falls down. Through analyzing the related fall detection algorithm to monitor the health of the elderly home or outside, and comparing their practicalities and pertinences.

## IV. PROPOSED SYSTEM:

A smart healthcare surveillance and fall detection system for elderly people provides a flawless security and a support for the elderly people. The proposed system is a novel algorithm as well as architecture for the fall accident recognition and corresponding wide area rescue system based on the third technology (3G) systems. When a land accident event is diagnosed, the user's location is acquired by the global positioning system (GPS) or the assisted GPS UNIT (A-GPS), and sent to the rescue center via the 3G communication network so that the end user can get medical assistance



## WEB AND MOBILE BASED SMART PARKING APPLICATION

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**ABSTRACT:** This paper is to develop a Reservation based vehicle parking system to overcome the problem of unnecessary time consumption in finding parking spot in commercial parking areas. In this proposed system, we reserve the parking slots not only in shopping malls, theatres and offices but also in a busy area such as a local market or a bus stand etc. This is achieved by using the waste land that is surrounded the busy areas and the use of houses that has enough space for a vehicle to park. User can book the slot prior to his journey and he will be notified on the respective date. There is a real-time visual going on when the user wants to book a slot. He will know the slots that are booked and that are vacant. The landowners or the house owners who want to rent the land can also register easily using the application. Thus user can just reserve the slot using our application.

**KEYWORDS:** Android Application, Smart Parking System.

### I. INTRODUCTION

Searching for street parking in crowded urban areas creates many problems and frustrations for drivers. It has been shown that over 40% of the total traffic volume in urban areas is composed of vehicles cruising for parking. A long queue of cruising vehicles can cause serious congestion with the blocking of only a few streets. With the rapid proliferation of vehicle availability and usage in recent years, finding a vacant car parking space is becoming more and more difficult and time consuming. This results in a number of practical conflicts. Parking problems are becoming ubiquitous and ever growing at an alarming rate in every major city. The use of android technology combined with the recent advances in wireless applications could be the key to solve emerging parking problems. The main idea behind the ParkKing application is to help the user search for area where he wants to park and see if parking is available in the respective area and number of slots free in that area. The user can pre-book a slot in the area he desires if it is available some hours prior to his expected arrival. The user can search the parking slot through Android Application and pre-book the slot. Payment services are made available using Paytym. We also use unused land and the empty space that is available and turn the space into a parking lot by which the landowners are also benefited. Thus the application proposed in this paper makes the user hassle free as it reduces the time required for manually searching and waiting for empty slots to park the vehicle and also give the opportunity for the landowners to get profited by renting their free, unused land.

### II. RELATED WORK

The process of building system has always been complex with system becoming larger, the cost and complexities get

multiplied. So the need for better methods for deploying systems is widely recognized to be effective and the applied model should meet a few basic requirements. The model should be structured and cover the entire system development process from feasibility study to programming, testing and implementation. The model should separate the logical system from the physical system. The model should utilize established methods and techniques like database designs, normalizations and structured programming techniques. The model should consist of building blocks, which define tasks, results and interfaces. The model should separate the logical system from the physical system. Documentation should be a direct result of the development work and should be concise, precise and as non-redundant as possible. Based on the above requirements of the system model, system study has been made. Various methodologies have been applied for system study, evolving design documents, data modeling, input screen design and report design.

### III. EXISTING SYSTEM

There are certain features limiting the process of the present system. The drawbacks of the present system are listed below:

- There Is No Proper Space Given For The Vehicles To Be Parked.
- Many Vehicles Are Parked On The Road Which Causes Unwanted Traffic.
- There Is No Security Assured For Your Vehicle.

### IV. PROPOSED SYSTEM

The proposed system takes all the existing problems into account and presents an easy access to the free space that lies around us in an organized manner. The landlord owners who can register themselves to turn their waste land into a land that can be used by people. The customers who can use the services provided by the owners at their convenience.

### V. SYSTEM DESIGN

The system comprises of overall architecture and the components that involved in it.

#### ARCHITECTURE DIAGRAM

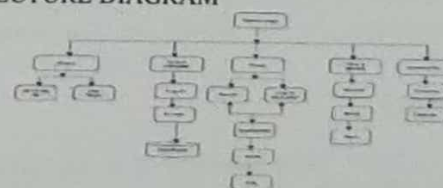


Fig 1.1 System Architecture for Smart Parking System



# DESIGN OF SMART REFRIGERATOR USING RASPBERRY PI

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## ABSTRACT

In any conventional or standard refrigerator there is no system of automatically monitoring the food items. A smart refrigerator is one which possesses self-monitoring capability of food items and automatically detecting and alerting the consumer of the need to restock the food items with minimal human intervention. Thus the devices ought to be smart enough to recognize our needs. Hence smart refrigerator is designed to convert any existing refrigerator into intelligent cost effective appliances using sensors. In our system the smart refrigerator automatically detect the weight of the products, any gas leakage and any changes in the level of the liquid in a container using load cell sensor, gas sensor and ultrasonic sensor then the system will automatically inform the owner about the status of the smart refrigerator through short message service (SMS) using GSM mobile network.

## I. INTRODUCTION

**“TO EAT IS A NECESSITY, BUT TO EAT INTELLIGENTLY IS AN ART.”**

The necessity for any living form is food, water, air. Food provides the fuel for you to function, to move, to think, to grow and repair our body, basically if we don't eat we die. But to eat intelligently is an art, getting the right balance between quantity, quality and the combination of protein, carbohydrates, fats, minerals and vitamins, good crabs, bad crabs, good fats and bad fats, it's not only an art it is a science. As in today's situation, most of the people are working and have hectic schedule all the day. These entire factors have been considered for the design of smart refrigerator. Smart refrigerator is used to measure its contents automatically and if there are any changes in the

Content, it sends an SMS via GSM. It uses sensors like load cell, ultrasonic and gas sensor to detect and monitor its contents and sends user a notification via GSM mobile network. It uses Load cell sensor for measuring the weight of the products, Ultrasonic level sensor for measuring the level of the liquid in a container and gas sensor for monitoring the leakage of gas and changes inside the refrigerator will be sent to the user mobile phone via GSM mobile network. Since this design uses sensors for the automatic monitoring, it saves more time of the people using it. It uses GSM technique for the notification of inadequate products to the user mobile, this would be very helpful for the user because they may need not go to shop for each and every product that run off. Instead they can shop when it sends an alarm message, thus it requires no manual monitoring.



# DESIGN AND IMPLEMENTATION OF COLLEGE BUS MONITORING AND TRACKING SYSTEM

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## ABSTRACT

In daily operation of college transport systems, the movement of vehicles are affected by different uncertain conditions as the day progresses, the transport system which is been practiced in colleges have certain difficulties in daily routine. Millions of students commute between home and college every day. While there is much feasibility that makes the system reliable, yet there are some issues, such as unexpected delay in boarding the bus as the exact location is unaware, that makes the students to miss their daily classes. As many students escalate the college transportation, determining the total number of students and faculties has been practiced manually. This process requires a man power to determine the count on number of students entering and exiting the college bus. In recent times, drowsiness is one of the major cause of highway accidents. As every bus system is controlled by the driver, it is important that driver must be conscious every time the bus is active. It is significant that driver must be attentive to the road that makes the students to reach their destination safely. Henceforth, the system provides the efficient solution to overcome these issues. In overall the system is useful and safety.

**Keywords:** GPS(Global positioning system), Eye-Blink sensor, IR(Infrared rays) sensor.

## I. INTRODUCTION

In this fast moving world, everyone is in rush to reach their destination. In this case waiting for the bus is not reliable. This system propose smart bus tracking system for Students who rely on the college transport. Their major concern is to know the real time location of the bus for which they are boarding for. This system intends to find yet another solution to solve this problem by developing a bus safety system that will track the location of the bus through GPS and monitor the entry and exit of persons from the bus through an

energy efficient methodology. The proposed system will continuously sense the way in and way out of the person using IR sensor(Infrared rays), and eventually, the count is displayed on the LCD. In recent times, drowsiness is one of the major cause of highway accidents. This system is used to prevent and control when the vehicle is out of control. The drowsiness of the driver is identified by the eye blink closure and blinking frequency through infrared sensor worn by a driver by means of spectacles frame. If the drowsiness is detected, immediate buzzer alert is



## Public Transport System

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### Abstract:

Public Transport System (PTS) is an electronic system to provide real-time information for the passengers to display the arrival and departure times of the buses. This will let the passengers know when their bus would arrive and to plan their journey accordingly, for planning a journey the public transport system provides the users to find the suggested journey's to commute between the source and destination. This application should list the bus-route number, fare details, distance and also allow the user to view the same in a map-view.

**Index Terms:** GPS, GPRS, Google map

### 1. INTRODUCTION:

In the way people move around their communities' public transportation systems is the main problem which play an increasingly important role. It is a very cost effective mode of transport. Due to cause of heavy traffic and roadwork etc., most of the buses are delayed in time. At the bus terminus people have to wait for long time without even knowing when the bus will arrive. Anybody who want to use the public transportation system, can't find the time of arrival of particular bus at the particular destination even at their homes and plan their departure from home accordingly. But due to unexpected delays in traffic congestion the bus arrival time cannot be guaranteed. Our main focus is to provide such a system to remote user which will reduce waiting time for bus and will provide him with all necessary details regarding the arrival/departure time of the bus, its real location and expected waiting time. So to find out the current location of a bus and the dynamic arrival time a systematic tracking system is required. For best tracking result, GPS and GSM technology can be used. For tracking a vehicle the GPS and GSM based system can provide all specifications that are necessary. Our proposed system can find the location of the bus and inform the central controller at the bus terminal. Once this information is uploaded in the server and then the commuter can access the information via the web based application using internet even at their homes or any work place. Additionally, our system also provides a web based application which is interfaced with Google Maps which displays all transmitted information to the end user along with location of the bus on the map. A web application has an internal global timer which refreshes the tracking application after every forty seconds and collects the latest location and other customized vehicle parameters and updates the end user with the latest information of the bus. By helping travelers move from single occupancy vehicles to public transportation systems, it can reduce traffic congestion as well as environmental impact. Our goal is to increase the public transportation and satisfaction of current public transportation users and help to motivate more people to ride. If remote users who wish to use public transportation had an easy way to see which bus is near to their

location and approximate time it will take to reach the particular stop, in real time, then they can make a more accurate decision of whether or not to wait at a stop. Our proposed system will provide pedestrians with this convenience. The location of bus is determined by using GPS and then the information is transmitted. The transmission can be terrestrial radio or cellular connection, satellite from the bus to a radio receiver, satellite or nearby cell tower. Once the location data along with other custom data is collected a wireless communication system is used for transmission purpose.

### 2. LITERATURE SURVEY:

For bus tracking many designs that have been proposed and implemented. In the case of implementation or in the case of the system design all proposed methods and implementations are unique. The real time bus monitoring system GPS module is installed on the buses for transmission of the real time location of bus to receiver boards which is installed on the bus stops. The centralized control unit get the GPS data of the bus location and it activating LEDs in the approximate geographic positions of buses on the route. The device will not require an external power source, it will be portable and sustainable and eliminate energy costs [1]. Abid Khan and Ravi Mishra proposed the embedded system which is a single board system having GPS and GSM modems and ARM processor to track vehicle. This system has large capability, low operation cost, strong expansibility [2]. Swati Chandurkar, Sneha Mugade, et al. proposed real time bus monitoring and passenger information system. The system gives current location of buses and estimated arrival time at different stops in their respective routes. The link updater is used to locate the bus position and the current route of the bus. The estimated arrival time is updated at control unit and shares this information to passengers using display board at bus stops [3]. S. P. Manikandan, P. Balakrishnan proposed the real time query system for public transport service using Zigbee and RFID is suitable to passengers demand and provide information such as bus location, bus number and number of persons inside the bus in real time. This system provides efficient as well as low cost public transport system [4]. Madhu Kumar, K. Rajashekhar, et



## IOT BASED FUEL EFFICIENCY MONITORING SYSTEM USING RASPBERRY PI

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**ABSTRACT:** The IOT based fuel efficiency monitoring system is for four wheeler, aimed at the improvement of efficiency in four wheeler especially in car. From our application, the user will come to know about their car efficiency in the graphical format. Mainly how the fuel is being consumed at various factors like increase in speed, worst road conditions, engine getting heat after long time frequent change of gear, during traffic, not having proper maintenance, also due to some bad petrol/diesel/oil in which the fuel is consumed more and it will give less mileage. In some cases the according to the driving and other factors the fuel is less consumed and mileage is give more. To find all this this system helps to track their mileage with the help of speed sensor and terrain sensor. From tracking the mileage the user will come to no about their car's efficiently properly and maintenance of the car is easy. Through our website the user can view their mileage graph. The graphical view makes the user to understand better. From this the proper analysis is made and maintained properly.

### I. INTRODUCTION

It is IOT based web application that aims to optimize the Fuel consumption by tracking the mileage graph in four wheelers especially in car. Our project is an IOT based web application. It enables you to control the fuel consumption of car by tracking the mileage graph of a car. A web based application is a software package that can be accessed through the web browser. The software and database reside on a central server rather than being installed on the desktop system and is accessed over a network. The system comprises different modules which operate together. The conventional system does not display the mileage graph, does not describes the factors why the fuel level decreases and the efficiency of fuel consumption. These can be implemented in fuel efficiency monitoring system. This is aimed to improve the efficiency of mileage in four wheeler devices especially in car thus fuel consumption in car can be maintained by tracking the mileage graph.

### II. RELATED WORK

Sachin S. Aher, Kokate R. D. proposed fuel monitoring and vehicle tracking system which explains In today's world, actual record of fuel filled and fuel consumption in vehicles is not maintained. It results in a financial loss. To avoid this we are implementing a microcontroller based fuel monitoring and vehicle tracking system. We have used the reed switch which works according to the principle of Hall Effect for

sensing the amount of fuel filled in the vehicle and amount of fuel consumed. Then this record is stored in the system memory. [1] S. Overington and S. Rajakaruna, worked on High Efficiency Control of Internal Combustion Engines in Blended Charge Depletion/Charge Sustainance Strategies for Plug-in Hybrid Electric Vehicles where it realizes a novel control strategy for the fuel consumption reduction in plug-in hybrid and hybrid electric vehicles having an internal combustion engine (ICE) and one or more motor/generators. The proposed control strategy combines power balancing and variable speed control to achieve a more efficient utilization of fossil fuel energy that is consumed overstandardized drive cycles. Furthermore, a high-efficiency region in the ICE performance map is utilized to aid with energy management decisions. [2] D. F. Opila, X. Wang, R. McGee, R. B. Gillespie, J. A. Cook, and J. W. Grizzle written on An Energy Management Controller to Optimally Trade Off Fuel Economy and Drivability for Hybrid Vehicles that describes Hybrid vehicle fuel economy performance is highly sensitive to the energy management strategy used to regulate power flow among the various energy sources and sinks. Optimal non-causal solutions are easy to determine if the drive cycle is known a priori.

### III. EXISTING SYSTEM

At present, there are no systems which help to identify the exact mileage of the four wheelers and view them in an graph format. It monitors approximate usage of fuel by the vehicle and Mileage is not efficiently and accurately calculated. Cars can only tracks the speed and kilometer through meters but does not keep a record of it. It does not offer daily monitoring of the mileage.

### IV. PROPOSED SYSTEM

The proposed system has an ability to accurately measure the Mileage of the car in the graph format. This application provides user, a Graph in the dashboard, by which the users are able to interpret their car's Mileage, speed, fuel consumption and finally time for maintenance. The user can also view at which time they get high mileage with less fuel consumption. They also know the difference between before maintenance and after maintenance of the car. It will be easy for the user to get the accurate measures instead of using meter. The main functions of the project are to collect the mileage calculating factors through sensors and through wireless network send those values to the module for calculation of mileage and displays the graph in the





# Construction of K-Connected Dominating Set Algorithm for Connecting the Wireless Nodes

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## Abstract:

In order to construct a distortion less connectivity among the wireless networks by optimizing the area-based connected dominating set over MANET by considering more heterogeneity, this paper proposes a novel k-connected dominating set construction and maintenance algorithm. The algorithm is divided into three phases: 1) Area Partition; 2) Area Expansion; 3) Area Connection. At last, the simulation is implemented with NS3 and the results are analysed in detailed with Message Overhead, Average end-to-end delay, Throughput and Packet Delivery Ratio.

**Keywords:** connected dominating set, distortion less connection, heterogeneity, MANET, wireless network.

## I. INTRODUCTION

A MANET (mobile ad hoc network) is a self-configuring infrastructure less network of mobile devices connected by wireless. Thus, MANET (mobile ad hoc network) is applied in ubiquitous network to create a smart space (e.g Smart Grid, a home or campus) called a ubiquitous stub environment where users can enjoy ubiquitous service in an "anytime, anywhere, on any device" manner. How to achieve good performance and keep load on the hosts as low as possible become main problem in MANET. Since MANET is an infrastructure less network, it does not have a centralized control. This becomes an main challenge in MANET. The other challenges of MANET are fading, path loss, blockage, interference due to the transmission impidents. Loss of packets during transmission in MANET. Broadcasting is an common approach which is used to solve routing problem, and a straight broadcasting by global flooding would lead to notorious broadcast storm problem, which flooding may result in excessive redundancy, contention and collision. K-CDS ( K-Connected Dominating Set ) is an promising approach to broadcast routing overhead by reducing rebroadcast or redundant broadcast, as the number of hosts responsible for routing is reduced to the number of hosts in backbone. Thus this paper is used to solve an MCDS (Minimum Connected Dominating Set) problem. To solve it, we meet the following challenges:

- How to design an effective algorithm for constructing KCDS over MANET.
- How to dynamically maintain KCDS if any path gets distorted over MANET.

To address those challenges, a novel K-CDS (K-Connected Dominating Set) construction, routes to nearest stronger path if any distortion occurs in the network during communication and all the possible paths where determined using the spanning tree algorithm. Our proposed K-CDS consists of three phases: 1)

Area Partition 2) Area Expansion 3) Area Connection. The simulation is implemented with NS3. And the results are analyzed in detail with Packet Delivery Ratio, Throughput, Average end-to-end delay and Message Overhead.

## II. RELATED WORK

For this problem the existing theoretical analysis suggests that the throughput for each node declines rapidly towards zero as the number of node rises. Therefore many solutions deal with the issues on how to build the large sized ad hoc networks. Among these methodologies, network clustering is one of the investigated approaches. The basic idea is to partition the nodes into some groups which organize the network with several logical areas. There is an extensive literature on construct of MCDS over MANET, such as Approximation algorithm, a MCDS-based algorithm designed by Das, Greedy algorithm and so on. However it is hard to gain global topology information in large- sized networks that centralized approaches are not well suited for large-sized networks. Additionally the algorithm finds a rough CDS and then prunes some redundant nodes using two rules (Rule 1 and 2), Dai and Wu later generalized pruning rule by using K-neighbor coverage, called Rule k [7], to further reduce CDS size, fault tolerant k-connected m-dominating set where either every node itself or its m-neighbors are in set, and removal of k-1 nodes will not disconnect the induced graph of set. A multicasting protocol is based on zone routing. Extending the zone routing protocol (ZRP) presented by Hass and Pearlman, Wang and Olariu designed a novel hybrid routing protocol, called two zone routing protocol (TZRP). Chen proposed a zonal algorithm for weakly connected dominating set (WCDS) construction. Liang presented a hybrid virtual backbone routing (VBR) framework for ad hoc networks with a variable-sized zone hierarchy. Bo proposed an area algorithm for WCDS construction. Later Bo extended his previous work by proposing a novel zone algorithm (maximum degree) with constant approximation ratio, further reduced linear time and message



## Data Analytics on Solar Energy Using Hadoop

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**ABSTRACT:** Missing data is one of the major issues in data mining and pattern recognition. The knowledge contains in attributes with missing data values are important in improving regression correlation process of an organization. The learning process on each instance is necessary as it may contain some exceptional knowledge. There are various methods to handle missing data in regression correlation. Analysis of photovoltaic cell, Sunlight striking on different geographical location to know the defective or connectionless photovoltaic cell plate, we mainly aim to showcasing the energy produced at different geographical location and to find the defective plate. And also analysis the data sets of energy produced along with current weather in particular area to know the status of the photovoltaic plates. In this project, we used Hadoop Map-Reduce framework to analyze the solar energy datasets.

**Keywords:** missing data, genetic algorithm, regression correlation.

### INTRODUCTION

Missing data is the missing form of information about phenomena, which is important, and it is the information in which we are interested. The existence of missing data is one significant problem in data quality. Data quality plays a major role in machine learning, data mining and knowledge discovery from databases. Machine learning algorithms handle missing data in a quite naive way. To avoid biasing in induced hypothesis missing data treatment should be carefully handled. Imputation is a process that replaces the missing values in instance by some reasonable values. The case substitution is the method developed for dealing with missing data in instances and it is having some drawbacks when applied to the data mining processes. The methods, such as substitution of missing values by the attribute mean or mode should be cautiously handled to avoid inclusion of bias.

#### 1.1 Randomness of Missing Data

Missing data randomness is classified [1] in three classes.

**Missing completely at random (MCAR):** Missing values are scattered randomly across all instances. In this type of randomness, any missing data handling method can be applied without risk of introducing bias on the data. It occurs when the probability of an instance having a missing value for an attribute does not depend on either the known values or the missing data. Differences on attributes establish that the two groups do not differ significantly.

**Missing at random (MAR):** Missing at random (MAR) is a condition, which occurs when missing values are not randomly distributed across all observations but are randomly distributed within one or more classes (ex. missing more among whites than non-whites, but random within each). The probability of an instance with a missing value for an attribute may depend on the known values, and not on the value of the missing data itself.

**Not missing at random (NMAR):** Not missing at random is the most challenging form, occurs when missing values are not randomly distributed across observations. It is also called as non-ignorable missingness. The probability of an instance with a missing value for an attribute might depend on the value of that attribute.

#### 1.2 Handling Missing Data

Missing data handling methods are categorized as follows **Ignoring data:** This method throw-outs all instances with missing data. There are two core methods to discard data with missing values. The first one is known as complete case analysis. It is available in every one of statistical packages and is the default method in many programs.

The next method is recognized as discarding instances or attributes. This method determines the level of missing data on each instance and attribute, and deletes the instances or attributes with high extents of missing data.



# IOT BASED SMART LED STREET LIGHTING SYSTEM

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**Abstract:** Smart led street lighting system aims for designing and executing the advanced development in IOT for energy saving of street light, the best solution for electrical power wastage is automation of street light, the manual operation of the lighting system is completely eliminate. A method for modifying street light illumination by using sensor at minimum electrical energy consumption ,when object presence is detected, street lights glow at their brightest mode, else they stay in the dim mode during night time Internet of things (IOT) is used to visualize the real time updates of street processing and notifying the changes occur. This shall reduce heat emissions, power consumption, maintenance and replacement costs and carbon dioxide emissions.

**Keywords:** Arduino node mcu (ESP8266),IR Sensor, LDR sensor, bylnk application

## I. Introduction

Streetlights are an integral part of any developing locality. They are present on all major road-ways and in the suburbs too. Every day, streetlights are powered from sunset to sunrise at full strength, even when there is no one around. On a global scale, millions of dollars are spent each day on these street lights to providethe required electrical energy. This paper gives the best solution for electrical power wastage. Also the manual operation of the lighting system is completely eliminated. The energy consumption in entire world is increasing at the fastest rates due to population growth and economic development and the availability of energy sources remains woefully constrained. We use the word "smart" because the system not only provide power to the street lights but also helps in detecting the direction of movement of the pedestrian and helps him by means of illuminating the path of movement till the near next street light. A simple and effective solution to this would be dimming the lights during off peak hours. Whenever presence is detected, the lights around it will glow at the normal (bright) mode. This would save a lot of energy and also reduce cost of operation of the streetlights. We can check the status of street light on internet using IOT (Internet of things) from anywhere in real time and solve the issues if happen during the processing.

## RELATED WORK:

**Intelligent wireless street light control and monitoring system** Author :B. K. Subramanyaml . K. Bhaskar Reddy, P. Ajay Kumar Reddy.

This paper proposes on intelligent wireless street light control, which integrates new technologies, offering ease of maintenance and energy savings. Using solar panel at the lamp post By using LDR it is possible to save some more power and energy, and also we can monitored and controlled the street lights using GUI application, which shows the status of the lights in street or highway lighting systems.[1]

**Design of Wireless Framework for Energy Efficient Street Light Automation**

Author:P.Nithya, N.Kayalvizhi

This paper suggested an Intelligent management of the lamp posts by sending data to a central station by ZigBee wireless communication. With the suggested system, maintenance can be easily and efficiently planned from the central station, allowing additional savings. This streetlight control system helps in energy savings, detection of faulty lights and maintenance time and increase in life span of system.[2]

## II. EXISTING SYSTEM:

In the existing system, the street lights are switched on and off manually by the public itself, This involves a disadvantage in the way that at many times the public forget to switch it OFF, This is overcome in our proposed system.

## III. PROPOSED SYSTEM:

In our proposed system, we make use of the property of LDR, which is its resistance varies with respective to the light intensity, In our proposed system the night and day is identified using LDR, Then during the day time the street light will be switched off and then during the night time street light will be switched on automatically, IR sensor is used to detect the presence of vehicle in the Road, If the crowd of the vehicle is low in the street then it will be sensed using IR sensor and light will be switched off, If the vehicle is present in the street then light will be turned on.



# Android Application For Visually Impaired

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**Abstract—** The basic idea is that anyone who have this specific application in their mobile can use their mobile independently by just speech recognition. They can also take a snapshot of the things which they want to know and the texts in that snapshot will be converted into speech/voice and will be presented to the user using it. Furthermore, the user can even send or receive SMS without handling the device itself. The user has to speak the thing which he/she wants to send and just say the name to whom it has to be sent. Similarly if any SMS has been received, the application will read out the message along with the person from whom it has been received. Thus the proposed application uses Tesseract and Optical Character Recognition (OCR) for overcoming the above difficulties which helps the visually challenged people a lot in their day to day needs

**Index Terms—** optical character recognition (ocr), tesseract

## 1. Introduction

To assist the blind people the following invention relates to the technology that is been developed. Thus this acts as an alternative for their eyes. World Health Organization conducted a survey and states that 285 million people are visually impaired. Out of these 246 million have low vision and 39 million are blind. And 82% of people who are blind is been stated to be aged above 50. The problems faced by the visually impaired are that they cannot read an article, newspaper, books without anyone's help. This can be a difficulty to develop their knowledge from what's happening in the world. To overcome this kind of issues still there is no any kind of solution but with our android application this can be easily solved. Like Printout text, the same way the message or notification received by the blind people's android smartphone cannot be read by them, till now no one came with any kind of solution to this problem but our launcher gives the complete support to the user to hear all the notification received in his/her mobile.

## Related Works

Four authors Kuei-ChunLiu, Ching-Hung Wu, Shau-Yin Tseng and Yin-TeTsai published an assistive system for impaired people in IEEE on 26-28 Oct. 2015. It has likewise been intended for outwardly debilitated individuals who need assistive devices for working advanced gadgets with the goal that they could get and apply computerized data while learning, living and working. The per user, which changes advanced data to content and after that to voice by TTS(text-to-discourse), is broadly used to help outwardly impeded persons to work gadgets.

This paper concentrated on planning and actualizing an assistive framework for outwardly debilitated persons while utilizing Android PDAs. The framework, Voice Helper incorporates open sources furthermore improves numerous elements of them. Voice Helper incorporates the message per user, content document per user, OCR per user, voice dialer and outwardly debilitated dialer to encourage day by day exercises for outwardly disabled persons. The working environment of voice partner is coordinated and confirmed by outwardly impeded persons. Internet access required.

Text Fairy is a current android application in Google play store by the creator Renard Wellnitz and among the a lot of OCR application including Office Lens application (which Integrates into OneNote and One Drive). With this convenient application, the client can Convert an image To content, rectify the perspective of a picture, Edit removed content, duplicate content to clipboard, use content in Other applications and proselyte the filtered page to PDF.

This application can examine message from pictures on your gadget or output content from photographs taken immediately by the camera. Be that as it may, this application just changes over picture to content which is no utilization for outwardly debilitated individuals as opposed to basic individuals who utilizes scanner. The best part is the OCR of Text Fairy is truly precise and top that off with the way that Text Fairy is Free (of cost and advertisements) and additionally open source and you will be having the making for one of the best OCR applications on the Google Play Store. The primary inconveniences of content pixie is that pictures must be sharp with great lighting, the application can't read penmanship and content must be dark on a white foundation without Indian dialects.

## 2.2 Proposed system

The targeted people of our application are facing problems like reading a text printed in books, newspapers, etc. due to the absence of vision. So they are always dependent on someone to read something which is in need to know by them. In Day-To-Day Life everyone needs to operate a smartphone by themselves but in this case they can't use their phone even though talkback option available in phones for them to use only in an emergency case rather than an entertainment one. So this also requires



# IoT Based Remote Controlled Robot using Android

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## Abstract:

Home security is becoming popular due to its numerous benefits. Home security refers to providing security to the house in the absence of the house keeper. The present security facility does not contain all the security gadgets together for protection. This project has the facility for detecting the temperature for fire and motion detection using the temperature and the motion sensors connected to the arduino board attached to the line robot. The main objective of this project is to make the home secured and also make things affordable to the common people.

**Keywords:** sensors, arduino

## I. INTRODUCTION

Providing security to the people is being an issue till now. Even though the security alarms, fire alarms, smoke alarms, CCT cameras etc for many rooms these are not affordable by common peoples. And again for checking out the camera we need to login and see the motion. We cannot keep an eye on the monitor for a whole day. And therefore we need a kit which is affordable and which does not requires any human monitoring. Such a kit is designed in this project.

## EXISTING SYSTEM

The security gadgets and sensors are used for projecting the houses for e.g. malls, companies etc. The security systems like fire alarm and other gadgets are not presents in all the houses. They are not affordable by the common peoples. Apart from using these gadgets they are not present in a same machine. For fire alarm different gadgets are used and for security purposes different gadgets are being used which makes the cost even more.

## PROPOSED SYSTEM

For making the system even more affordable and accessible by the common people who cannot afford security system I their houses they can use this robot toy. This gadget (robot toy) is controlled using an android application present in the mobile which not only controls the toy but also updates the information like temperature for finding any fire accidents has taken place in the house. And also uses the motion sensor for finding the unpleasant motion or movement in the house like robbery in the absence of the owner. The gadget works on the processes called as line following to enter all the room in the house to keep an eye on all the rooms in house.

## II. LITERATURE SURVEY

### 1. Smart Home Automation: A Literature Review

Vaishnavi S.Gunge, Walchand Institute of Technology, Solapur.

The work deals with discussion about different intelligent home automation systems and technologies from a various features standpoint. The work focuses on concept of home automation where the monitoring and control operations are

facilitating through smart devices installed in residential buildings.

### 2. A Survey on Internet of Things Based Home Automation System

Pooja N.Pawar<sup>1</sup>, B.E Student, Dept. Of CSE, IJRCCCE a low cost and user friendly smart home system, which uses an Android application to communicate with the cloud and provides switching functionalities, is presented. Unlike the similar system which uses either of the Bluetooth module network, the proposed system uses Internet of Things (IoT) for monitoring and controlling the Electrical applications demonstrate the effectiveness and feasibility of the system.

## HOME SECURITY SYSTEM

The home security system refers to providing security the home from not only any third party presence but also from the fire accident that takes places in the absence of the house owner.

**MOBILE:** The user sends the command START from the registered phone number to the kit to make the robot move. Registered number refers to the number what we have given in the coding.

**GSM MODULE:** The GSM Module receives the signal from the registered number and sends the command to the arduino board which controls the action of the kit.

**ARDUINO BOARD:** The board receives signal from the GSM Module and starts the kit. If it receives any disturbance the kit moves or else till the user sends STOP command the kit moves.

**SENSORS:** There are two sensors used here they are temperature sensor and a motion detector. The other two IR sensors are used to make the robot move in a line. This process of making the robot to move in a line is called as line follower. When the motion is detected by the motion detector then the robot sends a obstacle detected message and stop moving. When the robot detects a fire then the robot sends a fire detected message to the registered phone number and the robot stops.





## Web Application MCQ

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### Abstract:

This Project is basically aimed in providing latest technologies & trends to the College sector service, so that college can store there student's records like details of student, attendance & semester marks which can be viewed by Administrator. It is a comprehensive student information management system developed from the ground up to fulfill the needs of independent Colleges as they guide their students to success. The Education Edge integrated information management system connects operations in the College environment Admissions and Registration, Marks Reports, Attendance Reports, Course Details, Semester details. This reduces data error and ensures that information is always up-to-date throughout the College.

### I. INTRODUCTION:

ERP (Enterprise Resource Planning) system is built on the basis of information technology, using modern enterprises, advanced management ideas, and all the resources and information of enterprise; and it provides all-round and systematic platform on decision-making, planning, control and operating results of achievements. This is an enterprise information management system for college level enterprise. ERP system is information system as well as management theory and designing or processing of information from different resources. College management module like attendance management, time-table management, student/staff information management is important in college level enterprise management. Accounting Management Module enterprises are an important part of resource flows, and one of ERP systems' important part. Main components: one is based on the needs of the enterprises to carry out the attendance process, including student daily information of attendance of each lecture; the other is the management of time-table, notices, etc. Management of student data and transactions through conventional methods which results in an erroneous output and hence affects the efficiency of an institution. The problem results in, wastage of time, huge paperwork and finally inability and ineffectiveness of work. ERP software applications to improve the performance of organizations for resource planning, management control and operational control. ERP software consists of multiple software modules that integrate activities across functional departments - from project planning, order tracking to financial accounting in an Educational Business Organization

### II. SYSTEM SPECIFICATION

#### Hardware Requirements

- Processor :Core i3/i5/i7
- RAM :2-4GB
- HDD :500 GB

#### Software Requirements

- Platform: Windows Xp/7/8
- Front End :Php
- Back End :MYSQL
- Server :XAMP SERVER

### III. EXISTING SYSTEM:

Manual Process of this requires a lot many of records to maintain. College authorities need to take care to store each and every student details and also there examination details. Manual process requires man power. Existing System is manual process. Data Security is not provided in this system. Integrating data is also a problem in this system. It is not User friendly system.

### IV. PROPOSED SYSTEM:

Proposed system is web application. In this application student details are maintained efficiently admin has a facility to view the student details, edit the details. semester details and marks details are also maintained in this system. This has an enhanced facility. It is a fast, affordable, low-risk solution with easy implementation and lower maintenance and operational costs.

### V. MODULES

This Project contains the following Modules

- Admin Module
- Authentication
- Search
- Display

#### Module Description

##### Admin Module:

Admin is the Super User of the system who maintains the details of the system. Admin Module contains the following sub modules: Course Details, Branch Details, Semester Details, Subject Details, Student Registration, Student Attendance, Student Marks, Student Update Marks, and Student Details Update

##### Authentication Module:

This module contains all the information about the authenticated users. User without his username and password can't enter into the login if he is only the authenticated user then he can enter to his login and then he will have authorization based upon their roles.

##### Search:

Different search facilities are provided to Admin and students in this system. Normally search can be done on different





# Exam Cell Automation System

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## Abstract:

Exam Cell Automation System is developed for the college to simplify examination hall allotment and seating arrangement. It facilitates to access the examination information of a particular student in a particular class. The purpose of developing exam hall seating arrangement system is to computerized the traditional way of conducting exams. Another purpose for developing this software is to generate the seating arrangement report automatically during exams at the end of the session or in between the session. The scope of the project is the system on which the software is installed, i.e. the project is developed as a web based application, and it will work for a particular institute. Mostly students are facing many problems for finding the exam hall and their seats respectively. A newly invented concept can aid for the students for checking their exam halls. This helps them to identify the floor or get directions to their respective halls without delays. The Students details have information about all the students who attend the examination. It contains the name of the student, Branch of the student and their names. Hall Details have total number of halls available in the institution and the name of the hall and the examination timings details have total timing allotted to students and hall etc. The project keeps track of various details in modules such as, Students Details, Examination Timing Details, and Hall Details with the proper descriptions.

**Index Terms:** Exam Cell Automation System, Login page designing, student's details, and Reporting

## I. INTRODUCTION

Examination Cell Automation System is developed for the college to simplify the allocation of halls. It facilitates to access the examination information of a particular student in a particular department. The information is sorted information alphabetically, which will be provided by the teacher for a respective department. Here the admin updates the student details, exam timings, hall details, staff details and available space in the hall. So the automated system will give the seating details to the students whose details were listed in the spreadsheet.

### 1. PURPOSE

The purpose of developing exam cell automation system is to computerize the traditional way of conducting the exams. Another purpose for developing this software is to generate the seating arrangement report automatically during exams at the end of the session or in between the session.

### 2. SCOPE

The scope of the project is the designing a web interface and it will be given to a college for future use.

## II. SYSTEM ANALYSIS

### 1. EXISTING SYSTEM

Existing system is very slow and inefficient. Report generation is also not an easy task in the current situation. Also if the report is generated then calculations are done manually that leads to more errors. There is a lot of manual work involved in current system and mistake in one detail can lead to wrong generation of page. No proper collection of requirements leads a huge problem for this system. This system is to enhance manual work and also more energy is wasted to allocate the seating arrangement.

### 2. DISADVANTAGES OF EXISTING SYSTEM

- Current system is manual so all the records are maintained manually. So the seating arrangement of students cannot be determined if updating is not done.
- Time Consuming
- Less Efficient
- More manual Work Required
- Less Accurate
- Not User Friendly

## III. SOFTWARE ENVIRONMENT

### 1. FRONT END

#### VISUAL STUDIO.NET

Visual Studio .NET is Microsoft's visual programming environment for creating web services based on the use of Extensible Mark Up Language (XML). The product suite provides a visual interface for identifying a program as a web service, forms for building a user interface (including support for mobile device interfaces), features for integrating existing application data, and for debugging. Visual Studio .NET comes with the .NET Framework, including the common language runtime, and includes several programming languages including Visual Basic, Visual C#.

### BACK END

#### SQL SERVER EXPRESS

Microsoft SQL Server Express, a freely downloadable and distributable version of Microsoft's SQL Server relational database management system, comprises a database specifically targeted for embedded and smaller-scale applications. The product traces its roots to the Microsoft Database Engine (MSDE) product, which was shipped with





# Online Buspass Generation System using Web Application

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## Abstract:

Online Bus pass generation is useful for students who are facing problems with the current manual work of bus pass registration and renewal. The students need to register by submitting their details through online. After registration an OTP code will be send to student's mail. The administrator will verify the student details and if they are satisfied they will approve bus pass. The pass will be generated and send to student's mail. The student can login with their college idno and password and then renewal can be performed.

## I. INTRODUCTION:

Our project is created to provide timesaving, comfortable and safe services for stuents. Due to the drawbacks that are present in the existing system, we got the idea of doing this project of generating the buspass through online which can help students in a better way. In the existing system student had to do each and every process manually, but our project helps student to make their work faster and easy. Students can buy the bus pass through the internt. This system is also used the to save the students time. The students can pay to buy bus pass through Credit Card and Netbanking.

## II. RELATED WORK:

Online Bus pass generation system is already implemented in Andhra Pradesh as "Andhra Pradesh State Road Transport Corporation". The pass application form is available online. Online Bus pass Generation system is helpful as it reduces the paper work, time consumption and makes the process of getting

Bus pass simple and fast. The different kind of information is provided about the buses, eligibility criteria, fare and timings etc. We will get the pass reservation facility, fare and timings of the buses. In this pass application forms are not available through online. The process has to be followed manually. Hence time consumption is more.

## III. PROPOSED SYSTEM:

Our work introduces a new method of generating the Bus pass through online. In our system verification can also be done by sending an otp to student mail. Then the payment can also be done through net banking. There are many modules in our project. They are

1. Registration
2. Verification
3. payment
4. Pass generation
5. Renewal of pass

## IV. ARCHITECTURE DIAGRAM:

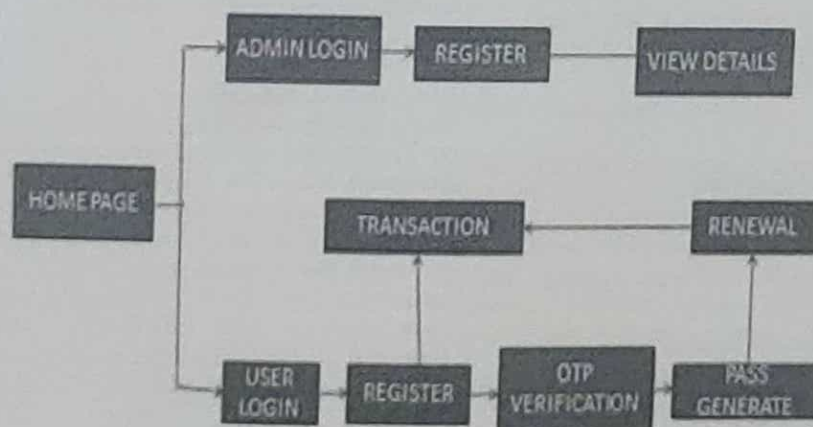


Figure.1. Architecture diagram



## PRESERVATION OF SOURCE CODE IN PRIVACY MODE BY USING DUMMY BASED APPROACH

K.G.Vinithe<sup>1</sup>, E.Vinotha<sup>2</sup>

**ABSTRACT:** In scenarios such as healthcare applications, patients are monitored using wireless body area networks (WBANs). Transmitting the generated events without hiding the distribution or even the rate of the generation of such data breaches patient's privacy to the adversary. In this paper, we augment dummy packets with original ones to change the statistical behavior of the source behavior and thus mislead the adversary. The former is known as data-oriented privacy and employs encryption methods to protect data, while the latter is known as context-oriented privacy, which focuses on preservation of the contextual information such as the location and the time when a message is generated. The presented method models the original packets and dummy ones with a preemptive resume 2-priority queueing system and then using information theory attempts to maximize the Fano lower bound of the best estimation of the adversary's speculation.

### I. INTRODUCTION

A reliable method of preserving the rate privacy that copes with the flow conservation law is to transmit original packets augmented with probabilistically dummy ones so as to change the observable aggregated traffic rate. In the latter case, in spite of the protection that data encryption might provide, there are many aspects related to the statistical behavior of the source that remain unprotected by conventional security mechanisms. Complement to the data encryption methods, other techniques are required to protect such contextual information to preserve the privacy of the sources and have been the focus of attention of research studies during the past few years. The former is known as data-oriented privacy and employs encryption methods to protect data, while the latter is known as context-oriented privacy, which focuses on preservation of the contextual information such as the location and the time when a message is generated. The main contributions of this research have been listed below. 1) A model using preemptive resume priority queue is presented that captures the behavior of augmented dummy packets to the original ones. Knowing the fact that dummy packets increase the rate and thus may shift the system to unstable situation we obtain conditions of the stability of the system. 2) Assuming that the adversary overhears the output channel and uses the optimum estimator, we obtain a lower bound for the error probability of the estimation of the adversary's estimation to quantifies the source rate privacy. Thus, we make sure that adversary's estimation has a probability error which is higher than the obtained lower bound. We then prove that when the number of running applications of the source (with distinct rates) becomes large, the probability of the error of the adversary's estimation approaches one. 3) Knowing the fact that

augmenting dummy packets incurs various costs to the system, we formulate a multi objective optimization problem. The cost function of the optimization problem is the weighted sum of augmenting dummy communication cost and privacy degree. 4) We augment dummy packets to the original ones such that the statistical behavior of original packets such as delay's probability distribution function is intact. This makes sure that the functionality of the source's data is not perturbed by the dummy packet which is essential for on-time delivery of messages in mission critical and real time applications. In terms of implementing the dummy's augmentation extra buffer is not needed.

### II. SYSTEM REQUIREMENTS

#### A. SOFTWARE REQUIREMENTS

Front End	:	Java
Environment	:	Eclipse
Back End	:	My-SQL
Operating System	:	Windows XP

#### B. HARDWARE REQUIREMENTS

Processor	:	Pentium IV
RAM	:	512 MB
Hard Disk	:	80 GB

### III. PROBLEM DEFINITION

Knowing the fact that augmenting dummy packets incurs various costs to the system, we formulate a multi objective optimization problem. The cost function of the optimization problem is the weighted sum of augmenting dummy communication cost and privacy degree. This problem is equivalent to a corresponding maximization of a multi-objective function that is the linear combination of adversary's entropy and the communication cost.

### IV. MODULES

#### A. NETWORKCONNECTIVITY-

A datanetwork is a telecommunication network which allows computers to exchange data. In computer networks, networked computing devices exchange data with each other using a data link. The connections between nodes are established using either cable media or media. In this module data is send through wireless network .so data the data is not visible to anyone. Network computer devices that originate, route and terminate the data are called network nodes Nodes can include hosts such as personal computers, phones, servers as well as networking hardware.

**B. DUMMY PACKET-** Dummy-based approach to preserve the privacy of the source node's rates. Dummy packets are super imposed with the original ones in the communication



International Journal for Research in Applied Science & Engineering  
Technology (IJRASET)

# An Efficient File Retrieval from Cloud Servers Using Multi Keyword Sets

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**Abstract:** A Huge number of information proprietors have moved our information into cloud servers. Cloud information proprietors like to outsource archives in an encoded shape with the end goal of protection safeguarding. Hence it is vital to creating proficient and dependable cipher text seeks procedures. One test is that the relationship between archives will be ordinarily hidden during the time spent encryption, which will prompt critical hunt exactness execution corruption. They all get to the information from cloud utilized the catchphrase based inquiry. Approach bunches the records Based on the base importance edge, and after that parcels, the subsequent groups into sub-groups until the imperative on the most extreme size of the bunch is come to. Here we proposed the safe multi catchphrase positioned look from the encoded information from the cloud. It opens operations like an upgrade, erase, and the addition of archives. Here utilizing tree structure and shapeless scan strategy for recover the information from the cloud. These sorts of the strategy used to take care of the issue of watchword speculating assault. Here we proposed the Blowfish system for the encryption procedure. Here to diminish measurable assaults, apparition terms are added to the record vector for blinding list items. The proposed plan can accomplish linear search, semantic search, K gram1 and K gram2 searches and the query item like a number of record recovery additionally manages erasure and inclusion of reports adaptable.

**Keywords:** Cloud search, Multi – Keyword, cipher text search, ranked search

## I. INTRODUCTION

As Cloud Computing gets to be predominant, more touchy data are being concentrated into the cloud, for example, messages, individual wellbeing records, government archives, and so forth. By putting away their information into the cloud, the information proprietors can be calmed from the weight of information stockpiling and upkeep in order to appreciate the on-request fantastic information stockpiling administration. Nonetheless, the way that information proprietors and cloud server are not in similar trusted area may put the outsourced information at hazard, as the cloud server may never again be completely trusted. It takes after that touchy information typically ought to be scrambled preceding outsourcing for information security and battling spontaneous gets to. In any case, information encryption makes successful information usage an extremely difficult errand given that there could be a lot of outsourced information records. Also, in Cloud Computing, information proprietors may impart their outsourced information to a substantial number of clients. We show useful procedures for legitimate combination of pertinence scoring strategies and cryptographic systems, for example, arrange saving encryption, to ensure information accumulations and records and give efficient and exact inquiry capacities to safely rank-arrange archives in light of a question[1]. As an underlying endeavor, we persuade and take care of the issue of supporting productive positioned watchword hunt down accomplishing powerful use of remotely put away encoded information in Cloud Computing[2]. They give question seclusion to inquiries, implying that the untrusted server can't learn much else about the plaintext than the query output; they give controlled looking, so that the untrusted server can't hunt down a subjective word without the client's approval[3]. Utilizing our component Alice can send the mail server a key that will empower the server to recognize all messages containing some specific watchword, yet learn nothing else. We define the idea of open key encryption with catchphrase hunt and give a few developments[4]. we motivate and solve the problem of supporting efficient ranked keyword search for achieving effective utilization of remotely stored encrypted data in Cloud Computing[5]. The individual customers may need to simply recoup certain specific data archives they are involved with in the midst of a given session. A champion among the most understood courses is to explicitly recoup reports through catchphrase based chase instead of recuperating all the mixed records back which is absolutely unfeasible in dispersed registering circumstances. Such watchword based pursuit procedure permits clients to specifically recover documents of intrigue and has been generally connected in plaintext seek situations, for example, Google look. Sadly, information encryption limits client's capacity to perform watchword pursuit and in this manner makes the customary plaintext hunt strategies inadmissible down Cloud Computing. Other than this, information encryption





## Public Transport System

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### Abstract:

Public Transport System (PTS) is an electronic system to provide real-time information for the passengers to display the arrival and departure times of the buses. This will let the passengers know when their bus would arrive and to plan their journey accordingly, for planning a journey the public transport system provides the users to find the suggested journey's to commute between the source and destination. This application should list the bus-route number, fare details, distance and also allow the user to view the same in a map-view.

**Index Terms:** GPS, GPRS, Google map

### 1. INTRODUCTION:

In the way people move around their communities' public transportation systems is the main problem which play an increasingly important role. It is a very cost effective mode of transport. Due to cause of heavy traffic and roadwork etc., most of the buses are delayed in time. At the bus terminus people have to wait for long time without even knowing when the bus will arrive. Anybody who want to use the public transportation system, can't find the time of arrival of particular bus at the particular destination even at their homes and plan their departure from home accordingly. But due to unexpected delays in traffic congestion the bus arrival time cannot be guaranteed. Our main focus is to provide such a system to remote user which will reduce waiting time for bus and will provide him with all necessary details regarding the arrival/departure time of the bus, its real location and expected waiting time. So to find out the current location of a bus and the dynamic arrival time a systematic tracking system is required. For best tracking result, GPS and GSM technology can be used. For tracking a vehicle the GPS and GSM based system can provide all specifications that are necessary. Our proposed system can find the location of the bus and inform the central controller at the bus terminal. Once this information is uploaded in the server and then the commuter can access the information via the web based application using internet even at their homes or any work place. Additionally, our system also provides a web based application which is interfaced with Google Maps which displays all transmitted information to the end user along with location of the bus on the map. A web application has an internal global timer which refreshes the tracking application after every forty seconds and collects the latest location and other customized vehicle parameters and updates the end user with the latest information of the bus. By helping travelers move from single occupancy vehicles to public transportation systems, it can reduce traffic congestion as well as environmental impact. Our goal is to increase the public transportation and satisfaction of current public transportation users and help to motivate more people to ride. If remote users who wish to use public transportation had an easy way to see which bus is near to their

location and approximate time it will take to reach the particular stop, in real time, then they can make a more accurate decision of whether or not to wait at a stop. Our proposed system will provide pedestrians with this convenience. The location of bus is determined by using GPS and then the information is transmitted. The transmission can be terrestrial radio or cellular connection, satellite from the bus to a radio receiver, satellite or nearby cell tower. Once the location data along with other custom data is collected a wireless communication system is used for transmission purpose.

### 2. LITERATURE SURVEY:

For bus tracking many designs that have been proposed and implemented. In the case of implementation or in the case of the system design all proposed methods and implementations are unique. The real time bus monitoring system GPS module is installed on the buses for transmission of the real time location of bus to receiver boards which is installed on the bus stops. The centralized control unit get the GPS data of the bus location and it activating LEDs in the approximate geographic positions of buses on the route. The device will not require an external power source, it will be portable and sustainable and eliminate energy costs [1]. Abid Khan and Ravi Mishra proposed the embedded system which is a single board system having GPS and GSM modems and ARM processor to track vehicle. This system has large capability, low operation cost, strong expansibility [2]. Swati Chandurkar, Sneha Mugade, et al. proposed real time bus monitoring and passenger information system. The system gives current location of buses and estimated arrival time at different stops in their respective routes. The link updater is used to locate the bus position and the current route of the bus. The estimated arrival time is updated at control unit and shares this information to passengers using display board at bus stops [3]. S. P. Manikandan, P. Balakrishnan proposed the real time query system for public transport service using Zigbee and RFID is suitable to passengers demand and provide information such as bus location, bus number and number of persons inside the bus in real time. This system provides efficient as well as low cost public transport system [4]. Madhu Kumar, K. Rajashekhar, et



# Data Integrity Checking Protocol with Dynamic Public Verifiability

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## ABSTRACT

Cloud Computing is one of emerging technology nowadays. Checking the data integrity remotely is became a decisive part in cloud computing. Newly, lengthy of works pointing on providing data dynamics and public verifiability for this type of protocols. The previous protocols are also able to provide these features but only with the help of third-party auditor and without security of data. With Reference, F. SEBE [1] propose a remote data integrity checking protocol that supports data dynamics. From this, we adapt protocol to support public verifiability and proposed a public verifiability without the help of third-party auditor along with security of that protocol does not leak any private information to third-party verifiers. Through an Analysis, we show an error free and security of the protocol. And going through theoretical and experimental results, we displayed that the proposed protocol has a good performance.

**Keywords :-** Data integrity, data dynamics, public verifiability.

## I. INTRODUCTION

Storing tons and tons of data on the cloud has become a trend nowadays. A prolific number of clients store their crucial data in remote servers in the cloud, without leaving a snaps in their local computers. The data stored in the cloud is so important that the clients must guarantee it is not lost or corrupted. While it is easy to check data integrity after downloading the data to be checked, downloading bulk amounts of data just for ensuring data integrity is a waste of communication bandwidth. Hence, many works [1], [2], [4], [5], [6], [7], [8] have been done on designing remote data integrity checking protocols, which allow data integrity to be checked without completely downloading the data.

Remote data integrity checking is introduced in Ref [10], [11], which standalone propose RSA-based protocols for resolving this problem. After that Shah. [12] Propose a remote storage auditing method based on precomputed challenge-response input pairs. Recently, many works [1], [3], [4], [5], [6], [7], [8], [9], [13], [14], [15] focus on providing three advanced features for remote data integrity checking protocols: data dynamics [5], [6], [8], [14], public verifiability [3], [8], [9], [14], and privacy against verifiers [9], [14]. The Protocols [5], [6], [7], [8], [14] which works data dynamics at the block level, including operations like insertion, modification, and block deletion. The protocol of [3] supports data append operation.

In addition, [1] can be easily adapted to support data dynamics. Protocols in [9], [13] can be adapted to support data dynamics by using the techniques of [8]. On the other hand, protocols in [3], [8], [9], [13], [14], [15] support public verifiability, by which anyone (not just the client) can perform the integrity checking operation. The protocols in [9], [13], [14], [15] support privacy against third-party verifiers. We compare the proposed protocol with selected previous protocols (see Table 1).

In this paper, we have the following main contributions:

- We propose a remote data integrity verifying protocol for cloud storage, which can be taken as an adaptation of SEBE's protocol [1]. The proposed protocol inherits the support of data dynamics from [1], and supports public verifiability and privacy against third-party auditors, while at the same time it does not required to use a third-party auditor.
- We have given a security analysis of the proposed protocol, which displays that it is secure against the external port server and private against third-party verifiers. .
- We have theoretically analysed and experimentally tested the capacity of the protocol. Both theoretical analysis and experimental results demonstrate that our protocol is efficient.



## Book Bank Automation System

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**Abstract:** In this project, the process of ordering books in a book bank by the student is automated. At present, this project is designed for the engineering colleges following Anna University syllabus, only for a few common branches of engineering such as IT, CSE, Civil, and Mech. The student has to first register into the system with the following details: Name, Password, DOB, College, Dept, Semester, Email, Phone number. On registration, the student will be provided with a unique student registration ID which is auto generated by the system. Using the name and password, the student can log into the system. In the student profile page, all the details of the students are displayed. From this page, the student can navigate to the request books page, where he can select his department the semester, and the books that he needs. Once he chooses the books and submits the request, the system will reserve the book and send him an automated email regarding the book chosen, and the date of issue. The administrator can log into the system, add new book details, edit the existing book details, and also edit the student details. When the student comes personally to receive the books, the admin updates the student profile that the student has received the books. This application was coded using Java Servlets, JSP, for the server and client side scripting, MySQL 2005 as the rear end, HTML as the front end.

### I. Introduction

#### What is Web Application?

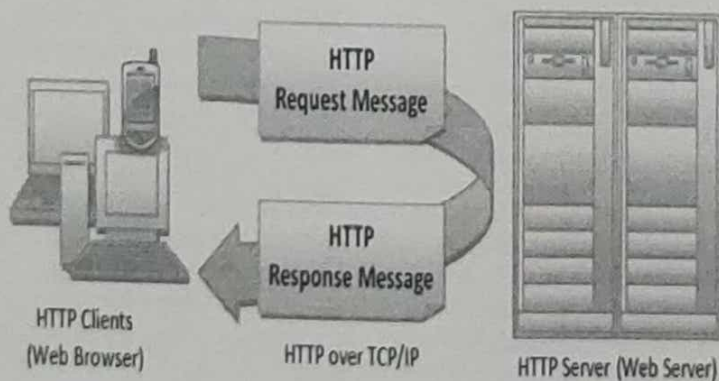
Web application or web app is an application program that is stored on a remote server and delivered over the internet. Web applications are accessed over a network connection using HTTP and run on a compatible browser. In some web applications, a small part of the program is stored in the user's desktop, but processing is done over the internet on external server. The main concepts involved are:

➤ HTTP

➤ Java Server Pages

#### HTTP:

The Hypertext Transfer Protocol (HTTP) is an application protocol for distributed, collaborative, and hypermedia information systems. HTTP is the foundation of data communication for the World Wide Web. Hypertext is structured text that uses logical links (hyperlinks) between nodes containing text. HTTP functions as a request-response protocol in the client-server computing model. A web browser, for example, may be the client and an application running on a computer hosting a website may be the server. The client submits an HTTP request message to the server. The server which provides resources such as HTML files and other content, or performs other functions on behalf of the client, returns a response message to the client. The response contains completion status information about the request and may also contain requested content in its message body.





# Data DEDUPLICATION Security with Dynamic Ownership Management

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## ABSTRACT

To provide security of deduplication system with higher reliability in which the data are distributed across multiple cloud server. Deduplication technique eliminating redundant data and storing only a single copy of data. By using hash table algorithm, the security requirement of data confidentiality and reducing space storage are also achieved. It converts a range of key values into a range of indexes of an array. It performs a basic operations of a search, insert and deletion. As a result, security analysis demonstrates that our deduplication system are secure in the proposed system. To protect the confidentiality of sensitive data while supporting deduplication, the hash table algorithm technique has been proposed to encrypt the data before outsourcing. To better protect data security, Different from traditional deduplication systems, the differential privileges of users are further considered in duplicate check besides the data itself. We also present several new deduplication constructions supporting authorized duplicate check in cloud architecture.

**Keywords:-** PoW, KP

## I. INTRODUCTION

Cloud computing provides seemingly unlimited "virtualized" resources to users as services across the whole Internet, while hiding platform and implementation details. Today's cloud service providers offer both highly available storage and massively parallel computing resources at relatively low costs. As cloud computing becomes prevalent, an increasing amount of data is being stored in the cloud and shared by users with specified *privileges*, which define the access rights of the stored data. One critical challenge of cloud storage services is the management of the ever-increasing volume of data. To make data management scalable in cloud computing, deduplication has been a well-known technique and has attracted more and more attention recently.

Data deduplication is a specialized data compression technique for eliminating duplicate copies of repeating data in storage. The technique is used to improve storage utilization and can also be applied to network data transfers to reduce the number of bytes that must be sent. Instead of keeping multiple data copies with the same content, deduplication

eliminates redundant data by keeping only one physical copy and referring other redundant data to that copy. Deduplication can take place at either the file level or the block level. For file level deduplication, it eliminates duplicate copies of the same file. Deduplication can also take place at the block level, which eliminates duplicate blocks of data that occur in non-identical files. Although data deduplication brings a lot of benefits, security and privacy concerns arise as users' sensitive data are susceptible to both insider and outsider attacks. Traditional encryption, while providing data confidentiality, is incompatible with data deduplication.

Specifically, traditional encryption requires different users to encrypt their data with their own keys. Thus, identical data copies of different users will lead to different cipher texts, making deduplication impossible. Hash table algorithm has been proposed to enforce data confidentiality while making deduplication feasible.

It encrypts/decrypts a data copy with a convergent key, which is obtained by computing the cryptographic hash value of the content of the data



## Alumni Interaction System

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### ABSTRACT

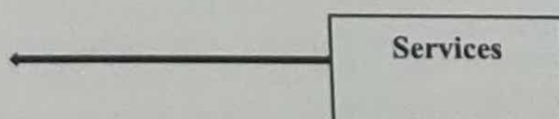
The main aim of the project is to build an interaction between alumni, admin and the students .A system that will be able to manage alumni data of a college and provide easy access to the same. The alumni will also be interested to maintain relations with their institutions. Alumni can communicate to the students regarding job opportunities and the students can share the department technology activities to the alumni. 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 Data, database, admin view.

### I. INTRODUCTION

The greatest asset any Institution can have is the Alumni system. Alumni are the people who represent the Institution in the real world.

Alumni website is created for the students that have graduated from the Institution. This is a web based application that allows former students to take advantage of the benefits and services that a Institution offers after graduation. The alumni network is becoming important in the development of the institution because of their vast potential that benefits both the Institution and the students. There are many benefits for being an alumni member of a college or Institution, some of these benefits are: keeping a person inform on the events that are organized by the Institution, and when some important events will be holding in the Institution. Another benefit is that information concerning a former student can easily be received and other members of the alumni community can be located without much stress. The student and alumni can communicate each other.



### II. EXISTING SYSTEM

The existing system is built with numberless excel sheets that are created by each user. These sheets may be collated by an alumni organization and shared with all the alumni but this activity may not be frequent. The system is difficult to maintain on a regular process and it also have a privacy issues.

### III. DISADVANTAGES OF EXISTING SYSTEM

- It cannot be used frequently.
- Data can be losses.
- This system cannot maintain regularly.
- There is security and privacy problem may occur.
- This is a large process to maintain all user details.

### IV. ROPOSED SYSTEM

The proposed system will be web based applications so it can be accessed by alumni and students with the help of admin. It enables quick and easy communications. Each user will be responsible for updating their own information's .Alumni will be able to organize meetings and find out about job opportunities using this system.



# Relevance Feature Discovery for Text Mining Using Feature Clustering

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## ABSTRACT

It is difficult to obtain the quality of relevance feature discovery in text mining because of large data patterns. Most existing popular text mining and classification methods have adopted term-based approaches. However, they have all suffered from the problems of polysemy and synonymy. However, pattern-based approaches yields better result than term-based approaches. So, we decided to implement a pattern based approach in our paper. This paper explains about the pattern-based approach in large text patterns. It discovers both positive and negative patterns in text documents as higher level features and deploys them over low-level features (terms). This paper uses Clustering technique to discover the relevant and irrelevant documents. It also classifies terms into categories and updates term weights based on their specificity and their distributions in patterns. Substantial experiments using this model on RCV1, TREC topics and Reuters-21578 show that the proposed model significantly outperforms both the state-of-the-art term-based methods and the pattern based methods.

**Keywords :** Text Features Classification, Fclustering, Pattern-Based Approach, Term-Based Approach, Feature Discovery.

## I. INTRODUCTION

Data mining is the computational process of discovering patterns in large data sets involving methods at the intersection of artificial intelligence, machine learning, statistics, and database systems. It is an interdisciplinary subfield of computer science. The overall goal of the data mining process is to extract information from a data set and transform it into an understandable structure for further use. Relevance feature discovery (RFD) is to find the useful features available in text documents, including both relevant and irrelevant ones, for describing text mining results. Relevance Feature Discovery is particularly challenging task in modern Information analysis. Examples for Relevance feature Discovery are Business analysis, Medical analysis, and social networking analysis. There are two challenging issues in using pattern mining techniques for finding relevance features in both relevant and irrelevant documents. The first is the low-support problem. Given a topic, long patterns are usually more specific for the

topic, but they usually appear in documents with low support or frequency. If the minimum support is decreased, a lot of noisy patterns can be discovered. The second issue is the misinterpretation problem, which means the measures (e.g., "support" and "confidence") used in pattern mining turn out to be not suitable in using patterns for solving problems.

In this paper, we have demonstrated pattern-based approaches such as Fclustering and KNN classification model and figured out the accuracy. For In classification, we have implemented KNN model and in Clustering we have used k-means clustering. And we have compared both of the models to find out its accuracy.

## II. METHODS AND MATERIAL

### 1. DATA

We used two popular data sets to test the proposed model: 20 newsgroups, a very large data collection and this dataset is a collection of approximately 20,000



## A Survey on Sentiment Analysis on Social Network Data

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### ABSTRACT

Sentiment analysis is an area of research in educational as well as commercial field. The word sentiment denotes the moods or attitude of the person to some particular domain. Therefore it is also known as opinion mining. Opinions of a person may differ from another person. Opinion mining also leads to the particular impersonations on the domain, not facts since the sentiment analysis are mostly topic based. Sentiment classification involves the classification of the polarity and the emotions. Sentiments can be analyzed and classified either by machine learning techniques or by lexicon based techniques. Sentiment analysis allows an user to get a clear idea regarding the "customer satisfaction and dissatisfaction" which For example, "public opinion on new launch of google's phone" etc. In the commercial world, consumer's feelings or opinion towards some product or product are very significant for its sell. Therefore in decision making and in real world applications, sentiment analysis plays a major role. Twitter is considered to be the one of the most populous social networking site where millions of users share their suggestions and opinion about the several fields like politics, products, personalities etc. Many study works are done in the arena of sentiment analysis. But then they are only beneficial in modeling and tracing public opinions. Since the exact reasons behind the sentiment variations are not known and Therefore such variations are not useful in decision making. Sentiment analysis has several applications in various fields like political domain, sociology and real time event detection like Tsunami. Earlier studies were done to model and track public opinions. But then with the advancement in technology, today we can use it for interpreting the reasons of the sentiment change in public attitude, mining and summarizing products reviews, to solve the polarity shift problem by performing dual sentiment analysis. Here we use different algorithms/models like Naïve Bayes (NB) classifier, Support Vector Machine (SVM) algorithm and so on.

**Keywords :** Opinion Mining, Sentiment Analysis, Polarity, Emotions.

### I. INTRODUCTION

Sentiment Analysis is used to detect the polarity and emotions of the text. It is also known as opinion mining as it derives the opinion of the public about a particular topic or the user about some brand. It also determines whether a part of script is positive, negative or neutral. For example, what is the opinion about the topic global warming by the people who uses twitter. There are billions of opinions and ideas on the topics global warming. Some publics openly states their opinion on the topic which may be either positive, negative or neutral. We can also get the exact ideas of why people think global warming must be taken into a serious issue, by extracting the exact word indicating the positive or negative opinion. This kind of extraction and analysis can be done at various levels like document level,

phrase level or sentence level. In case, if the sentence cannot be identified as either positive or negative or if the sentence consists of positive as well as negative sentiments at word level, then the entire sentence would becomes neutral at the sentence level. By the way of the sentiment analysis on topics in social networking sites, many politicians and firms use twitter to track their situation in politics and to monitor their products and services. The foremost advantage of sentiment analysis was to find out whether the opinion about a particular topic is positive, negative or neutral. But the opinion of the same user may vary from time to time so this may not be useful in decision making. Therefore, a system for interpreting the sentiment analysis and its variation was in need to build to exactly consider and analysis the sentiment variations. Here we have considered different methods for



## International Journal of Computer Science and Mobile Computing

A Monthly Journal of Computer Science and Information Technology

ISSN 2320-088X

IMPACT FACTOR: 6.017



*IJCSMC, Vol. 6, Issue. 4, April 2017, pg.5 – 8*

# SURVEY ON EFFICIENCY OF ASSOCIATION RULE MINING TECHNIQUES

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**ABSTRACT:** Association rule mining is the technique that can discover set of frequent items in a transaction. It also helps in generating ruleset. These rulesets are the fundamental part of machine learning process. Here we discuss about APRIORI, ELCAT and OPUS. This paper aims at discussing the process carried out in the association rule mining techniques also the merits, demerits and applications of the algorithm.

**KEYWORD:** Association Rule Mining, Apriori, Eclat, Opus

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## I. INTRODUCTION

Data Mining is the process of discovering knowledge. It is the process of extracting information from available raw data. The data are stored in databases. There are various kinds of data that can be used in data mining which includes transactional data, statistical data etc. Data mining includes various techniques for each purpose. Techniques include Association rule mining, classification and prediction, regression etc.

Association rule mining techniques are widely used in discovering hidden correlations and relationship between set of items in a transaction. It includes every transaction in the database during the discovery process. It also reveals the set of strategies that can be followed or neglected in the field for respective development.



## Categorization of Drugs Using SVM Classification

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### ABSTRACT

In recent years, social media have emerged as major platform for sharing information in medical field. Twitter is used as a prominent social media to share their experience based on drugs and disease. These experiences are mined, extracted and analyzed can be converted into drugs or service improvement based on observations derived from user behavior. The medical information shared by users on the social media is valuable and trustable. We focused on analyzing the drugs related tweets using polarity. The drugs and disease related tweets are extracted from twitter using twitter4j API. The collected tweets are classified using svm classification and polarity. The final solution here is analysis of drugs and disease related tweets based on the svm classification

**Keywords:-** KDD, LDA

### I. INTRODUCTION

Data Mining is popularly known as Knowledge Discovery in Databases (KDD), refers to the nontrivial extraction of implicit, previously unknown and potentially useful information from data in the databases. It is based on Exploration & analysis, by automatic or semi-automatic means of large quantities of data in order to discover meaningful patterns. Large amount of data in various field like Logistics, Financial, Health data, Social media, Scientific data is analysed. Data Mining is used to analyze social media information. Social media has made a tremendous change in normal life of a person in the society. There are various social networking website such as Facebook, Twitter, ScienceStage, SocialVibe, ShareTheMusic etc. The social network information can be used very usefully. Twitter is most popular social networking website. When the user post tweets, those tweets are publicly visible by default, but one can restrict message delivery to just their followers. Users can do group posts by topic or type by use of hashtags – words or phrases prefixed with a “#” sign. Similarly, the “@” sign is followed by a username is used for mentioning or replying to other users. Today, Twitter being a social media could be a useful measure of public awareness and reaction to disease and drugs information released by users. With the popularity of social media, twitter has become an popular

source of data for consumers to share their experience based on drugs and diseases.

User can interact the system through user interface. New user have to create an account by giving the username and password, the registered user can directly login and can enter into the system

### II. EXISTING SYSTEM

In the existing system, the physicians and pharmacists post the messages related to new drugs which have released in the market recently in web forum. Even the consumers are allowed to post their experience after using the drugs. The system integrates both text and data mining techniques to automatically extract important text features from the posts first, and then classify the posts into positive/negative examples based on a few pre-identified ADR related posts Filtering mechanism is done using text classification. Using partially supervised classification and Latent Dirichlet Allocation modeling, the messages are being categorized. The LDA is a generative probabilistic model that uses a small number topics to describe a collection of documents and it effectively reduce the dimension of the texts. This system assist Food and Drug Administration (FDA) in identifying ADR(Adverse Drug Reaction) messages on web forum and result can be used as early warning system.





## Student Helpdesk System

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### Abstract:

A Student helpdesk system is used to provide user assistance to the students and staff members. Student Helpdesk system provides a simple interface for maintenance of student information. It can be used by educational institutions to maintain the records. The creation and management of accurate up-to-date information is critically important. Student Helpdesk deals with all kinds of information regarding the student. The system utilizes user authentication and displays information that are necessary for individual student. The system features a complex logging systems to track all the user access and ensure the conformance of data access guidelines and are expected to increase the efficiency of Student Helpdesk System. Thereby, it decreases the efforts needed to access and deliver the information.

### I. INTRODUCTION:

A student web portal would allow students to access profiles, marks, attendance details and materials from one convenient location, using a single user ID and password. They would be able to customize the portal.

Our project team was asked to report on why the college should develop such a student web portal; interview students, staff, and faculty to assess their level of interest in a portal and ensure that those who develop the portal understand the features these stakeholders feel a portal should have; investigate best practices at other colleges that have already deployed student web portals; and suggest management models for the portal project. We were also charged with presenting three possible user interfaces, and recommend names for the student web portal.

The central goal of the web portal to transform the day-to-day operations of the college by reducing paperwork; putting more information services and transactions online; and streamlining access to information and content. A student web portal would collect these student services and functions into a single website, making it easy for students to find and use the services.

We used a combination of surveys, focus groups, and one-on-one interviews to gather information from students, faculty and from key personnel at other institutions that have operational student portals.

The student wants a portal that is easy to use; that is secure and protects student privacy; and that is linked to a roles database so that information can be targeted to particular groups of students. The roles database is crucial to the success of a portal, as it will allow students, staff and faculty with similar interests to identify each other. Students, faculty and staff expressed several concerns about a portal, including the need for the project to be sufficiently funded.

### II. EXISTING SYSTEM

It focuses only on managing student information and displaying mark details. It uses a number-step framework to get the information. This system does not offer multiple accesses to enrich the student satisfaction. So, Time complexity is more and tedious process.

#### DISADVANTAGES

- Very difficult manage details about staff and student.
- We cannot identify problem because we need to check each and everything and solve the problem at starting state
- Less communication between staff and student.
- We cannot control over all the organization at a time.

### III. PROPOSED SYSTEM

Centralized control of students and faculty members. Each sub-system has authentication, where allowing authorized users to create or update information in that system. Faculty can easily upload the informations. It gives a multiple access in a single page. Here; the User can access the information easily. The system has been designed with optimum navigation and best site of dynamics. It is used to provide user assistance to the students as well as staff.

#### ADVANTAGES

- The system demands greater levels of communication between college, student and faculty members to have optimum use of resources.
- Easy to manage the all staffs and student details.
- Very easy retrieve information about student and staff
- At a time, we can control the student and staff information.



# Secure Data with Key Managers by Using Shamir Scheme and AES Algorithm

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## ABSTRACT

Network security consists of policies and practices used to prevent and monitor unauthorized access, misuse, modification or denial of a network. The intent of a risk analysis is to identify the components of the network, evaluate the importance of each component, and then apply an appropriate level of security. Network security consists of both public and private, that are used in everyday jobs. Normally any environment is used to store data and encryption is the most effective way to achieve data security. To read an encrypted file, you must have access to a security key or password that enables to decrypt. Here two algorithms are used, (a) Shamir's  $(k, n)$  threshold scheme and (b) AES (Advanced Encryption Standard) Algorithm. Shamir's  $(k, n)$  threshold scheme is used for the management of keys that uses  $K$  shares out of  $n$  to rebuild the key during decryption. AES Algorithm is used for Encryption and Decryption process. This Algorithm makes the system more dependable against hacking and failure of one of the key managers. According to the length of the key the security will be more stronger. Our proposed system provides better solution to user who needs maintenance of data by securely.

Keywords: - AES, Chiper

## I. INTRODUCTION

Network security is a big topic and is growing into a high profile (and often highly paid) Information Technology (IT) specialty area. Security-related websites are tremendously popular with savvy Internet users. The popularity of security-related certifications has expanded. Esoteric security measures like biometric identification and authentication – formerly the province of science fiction writers and perhaps a few ultra-secretive government agencies. Yet, with all this focus on security, many organizations still implement security measures in an almost haphazard way, with no well-thought-out plan for making all the parts fit together. Computer security involves many aspects, from protection of the physical equipment to protection of the electronic bits and bytes that make up the information that

Representing system characteristics and capabilities as utility, causes the user to focus on aspects directly related to data (security, transmission, processing). by certain vendors requires high level of trust and security Data being the principal asset for organizations

To avoid unauthorized access to data, access control mechanism must be enforced. Moreover, data leakage and data privacy strategies must be

employed so that only authorized users can access and utilize data. Encryption techniques provide a secure privacy and confidentiality of stored data.

### Security Terminology

#### Attack

In the context of computer/network security, an attack is an attempt to access resources on a computer or a network without authorization, or to bypass security measures that are in place.

#### Audit

To track security-related events, such as logging onto the system or network, accessing objects, or exercising user/group rights or privileges.

#### Breach

Successfully defeating security measures to gain access to data or resources without authorization, or to make data or resources available to unauthorized persons, or to delete or alter computer files.

#### Brute force attack



## International Journal of Computer Science and Mobile Computing

A Monthly Journal of Computer Science and Information Technology

ISSN 2320-088X

IMPACT FACTOR: 6.017



IJCSMC, Vol. 6, Issue. 4, April 2017, pg.56 – 60

# AUTOMATIC SLIDE CREATION FROM PUBLICATIONS USING ILP METHOD

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**Abstract:-** The totally accessibility from claiming web documents done electronic manifestations obliges a programmed system to mark the documents for An predefined set from claiming topics, the thing that may be known as programmed content classification (TC). Through as long as decades, it need been seen an extensive amount for propelled machine Taking in calculations with location this testing assignment. Those created presentation slides camwood make utilized Likewise drafts to assistance those presenters get ready their formal slides On a snappier manner. A novel framework called PPSGen may be suggested on location this errand. Documents are typically quelled eventually Tom's perusing the "bag-of-words": namely, every expression alternately phrase happens over documents when alternately more times may be viewed as similarly as a characteristic. It to start with utilizes the relapse technique with figure out the vitality scores of the penalties Previously, an academic paper, et cetera exploits the basic straight customizing (ILP) system with produce well-structured slides by selecting What's more adjusting enter expressions and penalties. This paper proposes a novel framework called PPSGen on produce presentation slides starting with academic papers. We prepare a sentence scoring model dependent upon svr Furthermore utilize the ILP system with adjust and extricate magic expressions and penalties to generating those slides. Test Outcomes indicate that our technique could produce considerably preferred slides over conventional systems.

**Keywords:** Slide Generation, Content Mining, Text classification.

## I. INTRODUCTION

Slides bring been a viable and mainstream method for presentation from claiming majority of the data. Done a number conferences Furthermore meetings, a presenter takes those support about slides with display as much partake) energizes a deliberate path (pictorial). Previously, later a considerable length of time for those accessibility for huge numbers product devices such as Microsoft PowerPoint, open office Presenter and so forth. , to not difficult preparation about slides, their use need expanded enormously. Anyhow these instruments help main in the organizing of content (stylizing, slug focuses etc), at not clinched alongside get ready the substance itself.

A client need will begin starting with scratch Furthermore it will be a period devouring undertaking. In this work, we recommend an instrument that generates slides to the presentation with significant focuses What's more all fundamental figures, tables What's more graphs from a specialized foul paper. Likewise it will be evident; such sort of an instrument recoveries chance What's more lessens that exertion by giving work to a fundamental presentation, which camwood make further tuned/upgraded similarly as last presentation.



# E-Commerce: Merchandise Suggestion using Microblogging Information of Consumer

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**Abstract:** The Web makes superb open doors for organizations to give customized online administrations to their clients. Recommender frameworks intend to consequently create customized recommendations of items administrations to clients (business or person). In spite of the fact that recommender frameworks have been very much contemplated, there are still two difficulties in the improvement of a recommender framework, especially in genuine B2B e-administrations. In Proposed a suggestion system using the quick dissemination and data sharing ability of a huge client organize. The proposed strategy [described as the client driven recommender framework (CRS)] takes after the cooperative separating (CF) rule yet performs appropriated and nearby looks for comparative neighbors over a client organize with a specific end goal to create a suggestion list.

**Keywords:** E-commerce, Product recommendation, User data analysis, Data classification.

## I. INTRODUCTION

Web mining or Knowledge Discovery is the way toward examining information from alternate points of view and outlining it into valuable data. This data can then be utilized to build income, cuts costs, or both. A product made with web mining as its essential topic ought to permits clients to break down information from a wide range of measurements or points, classify it, and abridge the connections recognized. In fact, web mining is the way toward discovering connections or examples among many fields in vast social databases.

This venture is an augmentation of one of the well known sub-classes of web mining: "Showcase Basket Analysis (MBA)", which is a demonstrating system giving understanding into the client obtaining designs. A market wicker container is made out of the thing sets which are bought in a solitary trek to the store. MBA essentially tries to discover the relationship between the things acquired in this wicker bin. As an advertising apparatus it is utilized to mine out the regular thing sets in a vast no: of exchanges. In this way it is likewise called "Visit Item-set Mining".

With the current touchy development of the measure of substance on the Internet, it has turned out to be progressively troublesome for clients to discover and use data and for substance suppliers to group and inventory archives. Customary web indexes frequently return hundreds or thousands of results for a hunt, which is tedious for clients to peruse. On-line libraries, web crawlers, and other expansive archive storehouses (e.g. client bolster databases, item determination databases, public statement chronicles, news story files, and so forth.) are developing so quickly that it is troublesome and expensive to arrange each report physically. Keeping in mind the end goal to manage these issues, a look towards mechanized strategies for working with web archives so they can be all the more effectively perused, sorted out, and classified with negligible human intercession. As opposed to the profoundly organized forbidden information whereupon most machine learning strategies are relied upon to work, web and content records are semi-organized. Web documents have especially portrayed structures, for instance, letters, words, sentences, sections, fragments, complement marks, HTML names, and whatnot. It is evaluated that as much as 85% of all propelled business information, the dominant part of it web-related, is secured in non-sorted out associations

Creating enhanced strategies for performing machine learning procedures on this endless measure of non-forbidden, semi-organized web information is along these lines exceedingly alluring. Bunching and arrangement have been valuable and dynamic ranges of machine learning research that guarantee to help us adapt to the issue of Graph-Theoretic Techniques for Web Content Mining data over-burden on the Internet. With bunching the objective is to isolate a given gathering of information things (the informational index) into gatherings called groups to such an extent that things in a similar bunch are like each other and not at all like the things in different groups. In bunching strategies no named illustrations are given ahead of time to preparing (this is called unsupervised learning). Under characterization we endeavor to dole out an information thing to a predefined classification in view of a model that is made from pre-grouped preparing information (managed learning). In more broad terms, both bunching and grouping go under



## **A novel approach for new-born authentication and verification using multi-biometric features.**

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### **Abstract**

In this paper a novel approach for new born babies authentication and verification are done using multi-biometric features, which are, mother's fingerprint and baby's foot print. The decision on recognition is done taken on fusion in which the feature vectors are extracted for query images independently, at matching score level, and are then compared to the database templates for each biometric trait. Based on the proximity of feature vector and template, each of the subsystem computes its own matching score. These individual scores are further combined together as a total score and are passed to the decision module. Thus, the multimodal system is proposed through finger and foot print fusion and recognition. The system proposed is tested using database images collected which comprise of different mother's fingerprints and babies' footprints. The overall system accuracy is found to be 96% with 0.001% and 1.23% false match rate and false non match rate respectively.

**Keywords:** Biometric features, Fingerprint, Matching, Verification.

*Accepted on September 23, 2016*

### **Introduction**

Biometrics is a wide area and highly researched topic to improve for identification and verification for security reasons. Biometric systems can be used as either identification or verification based on the application.

The usage of online footmarks over the other individualities similar to ear, face, fingerprint, and palm pattern for the babies is well conversed in [1]. Biometric recognition of baby's footmark feature which comprehends online image capture from two different kinds of background conditions and the shortcomings of offline method are also explained in [2]. The knowledge gained from the unimodal system has been used to produce multimodal system which includes another biometric attribute. Hence, the identification of babies was carried out using serial mode of integration of the footprint of the baby and fingerprint of the mother [3]. The retrieval and verification process was done to create the identity with N+1 computation.

Reliable verification schemes are required for various applications to verify the identity of an individual requesting the service. Examples of such applications include security for building access, computer systems, laptops, cellular phones

and automatic teller machines. In the absence of vigorous verification schemes, these systems are susceptible to the tricks of a deceiver [4].

An overview of multimodal biometrics has been presented by Ross et al. and they also have suggested various levels of fusion, possible scenarios, and different modes of operation, integration strategies and design issues [5]. Using the mixture of multiple classifiers significant amount of work has been carried out. For increasing the overall performance, most of such works emphasize on fusing 'weak' classifiers [6]. They have proposed a hybrid fingerprint matcher which fuses minutiae and reference point location. Ross et al. have proposed a methodology to tally level fusion [7]. On face, fingerprint and hand geometry using product rule and coupla method Investigational results have been presented. From the investigation results it is found that both fusion rules show improved performance than individual recognizers. Guiyu has presented a novel fusion approach for individual identification using palm print and face biometrics [8]. The work reflects the feature level fusion scheme. The tenacity of the suggested paper is to analyse whether the integration of face and palm print biometrics can attain greater performance which might





## Asian Research Consortium

Asian Journal of Research in Social Sciences and Humanities  
Vol. 6, No. 10, October 2016, pp. 473-482.

ISSN 2249-7315

A Journal Indexed in Indian Citation Index

DOI NUMBER: 10.5958/2249-7315.2016.01028.5

Category: Science and Technology

Asian Journal  
of Research in  
Social Sciences  
and  
Humanities

www.ajrsh.com

# Detection of COPD and Asthma using SOC in FPGA with Labview

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## Abstract

In this paper, a new method of respiratory rate monitoring and Lung-disease analysis are done using LabVIEW. The respiratory rate of the lung-disease patients are being measured using visual assessment method. This method provides approximate value of respiratory rate, which is not suitable to analyze the lung-based diseases.

To overcome the drawbacks of visual assessment method, we propose a LabVIEW-based respiratory monitoring system. The proposed monitoring system measures the accurate respiratory rate of lung-disease patients by using LabVIEW software, which gets the input from pressure sensor and altera DE2 board. The FPGA processor is configured with an inbuilt ADC as a system on chip (SoC). The output is also analyzed to detect different lung-related diseases such as Chronic Obstructive Pulmonary Disease (COPD) and ASTHMA. Hence, the proposed system displays the respiratory rate of the patient and also indicates the status of two respiratory diseases.

**Keywords:** System on chip (SoC), Field Programmable Gate Array (FPGA), Laboratory Virtual Instrumentation Engineering Workbench (LABVIEW), Respiratory Rate Monitoring, Vacuum Pressure Sensor.





# Image Forgery Detection Using Blind Detection

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**ABSTRACT:** Today manipulation of digital images has become easy due to powerful computers, advanced photo-editing software packages and high resolution capturing devices. Verifying the integrity of images and detecting traces of tampering without requiring extra prior knowledge of the image content or any embedded watermarks is an important research field. An attempt is made to survey the recent developments in the field of digital image forgery detection and complete bibliography is presented on blind methods for forgery detection. Blind or passive methods do not need any explicit prior information about the image. First, various image forgery detection techniques are classified and then its generalized structure is developed. An overview of passive image authentication is presented and the existing blind forgery detection techniques are reviewed. The present status of image forgery detection technique is discussed along with a recommendation for future research.

**KEYWORDS:** JPEG Compression; Quantization; Quad tree; Discrete Cosine Transform; k-dimensional tree; seed region.

## I. INTRODUCTION

Nowadays, it has become easier to duplicate and manipulate such content without degrading the quality because of the development of increasingly sophisticated digital processing tools. In addition, computer graphics can now generate images with a photorealistic quality level, so it is expected that confidence in the reliability and veracity of digital images or videos will decline. The potential negative impact on some applications (e.g. criminal investigations) is obvious; therefore image or video forensics is becoming increasingly important.

Tampering with, or forging, an image involves making subtle changes to the image's gray levels. Generally, such changes are imperceptible to the human eye, but some tiny variations can be detected by computer processing techniques. Generally, the most commonly performed operations in image tampering are: Deleting or hiding a region in the image, adding a new object into the image, Misrepresenting the image information, Region duplication or region cloning is a very common practice of image tampering, where a continuous portion of pixels in an image are pasted to a different location to conceal undesirable objects or contents in the original image.

In recent years, several methods have been proposed to detect region duplication for the purpose of image forensics. These methods are based on finding pixel blocks that are exact copies of each other in an image. Such methods are most effective for the detection of region copy-paste, where a region of pixels is pasted without any change to another location in the image.

## II. RELATED WORK

In [1], authors describes a novel multipurpose watermarking scheme, in which robust and fragile watermarks are simultaneously embedded for copyright protection and content authentication. On the other hand, for the purpose of image authentication, this approach can locate the part of the image that has been tampered with and tolerate some incidental processes that have been executed. In [2], authors exposit image processing units that inherit images in raster bitmap format only so that processing is to be carried without knowledge of past operations that may compromise image quality (e.g. compression). Hence, to carry further processing, it is useful to not only know whether the image has





ISSN(Online): 2320-9801  
ISSN (Print): 2320-9798

## International Journal of Innovative Research in Computer and Communication Engineering

(An ISO 3297: 2007 Certified Organization)

Website: [www.ijirce.com](http://www.ijirce.com)

Vol. 5, Special Issue 3, April 2017

# Chromosome Abnormality Detection Using K-Means Algorithm

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**ABSTRACT:** The proposed system classifies the human chromosomes and detects chromosomal disorders automatically without human supervision. Chromosome image is acquired and processed, features are extracted and k-means algorithm is used for classification. Based on the classification, the numerical abnormality in chromosome is diagnosed. The typical number of chromosomes in a human cell is 46. The chromosomes are classified according to their length, width, area, entropy, standard deviation and are compared with the original values of normal chromosomes, such that changes in their dimensions are made as abnormalities in their structure. Identification, classification and presentation of 24 classes into a single picture is defined as Karyotyping. K-mean algorithm is used for classification. Any deviation from the normal karyotype, in terms of chromosome number or structure is known as chromosomal abnormality.

**KEYWORDS:** Karyotype, k-mean, Chromosome abnormality, Syndrome.

### I. INTRODUCTION

Chromosomes are complex structures located in the cell nucleus, basically the "packages" that contain the DNA. They contain thousands of genes, which govern our physical and medical characteristics, such as hair colour, blood type and susceptibility to disease. Under the microscope, chromosomes appear as thin, thread-like structures. They all have a short arm and long arm separated by a primary constriction called the centromere. The short arm is designated as 'p' and the long arm as 'q'. Normal human beings have 22 pairs of chromosomes (designated as chromosomes 1-22) and one pair of sex chromosomes; females have two X chromosomes, while males have one X and one Y chromosome. Thus a normal human cell contains 46 chromosomes.

A Chromosome band is defined as a section of a chromosome, which shows relatively darker or lighter stain as compared to the neighboring sections of the same chromosome. All the twenty four pairs of chromosomes have a specific band pattern. Figure 1 shows the Karyotype image of a Female Chromosome.

Human chromosome analysis is an essential task in cytogenetic, especially in prenatal screening and genetic syndrome diagnosis, cancer pathology research. One of the aims of chromosome analysis is the creation of karyotype, which is used to analyze the characteristics of chromosomes and to predict many genetic disorders.

Problems that are faced by the technicians in analyzing the human chromosomes are: (1) Count the number of chromosomes (taking into consideration of overlapping and touching chromosomes), (2) In order to get correct results, this process might be repeated many times with different types of cells. Thus, both the time and effort to accomplish these tasks are relatively long.





# Design of Alpha/Numeric Microstrip Patch Antenna for Wi-Fi Applications

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**Abstract** The Microstrip Patch Antenna's (MPA's) find usability in several day to day applications. They hold several advantages like low-profile structure, low fabrication cost, and they support both circular as well as linear polarizations, etc. This paper proposes MPA for Wi-Fi applications where it is used within the 2.4 GHz range of frequencies (IEEE 802.11). Although various antenna designs are currently prevalent to support the existing systems, in-order to overcome the bandwidth limitations, Alpha-Numeric (Alphabets and Numbers) Microstrip Patch Antennas are proposed in this paper. The MPA's are designed with 2.4 GHz as their resonant frequency. The simulation results based on the essential antenna performance analysis parameters like Return Loss, Gain, Radiated Power and Directivity are discussed. The antenna's are designed with a thickness of 1.5 mm, height of 70 mm and width of 60 mm, the substrate material of the antenna's is Flame Retardant 4 (FR4) and its relative permittivity is 4.4. The designs for all the Microstrip Patch Antennas are simulated using Advanced Design System 2009 (ADS) software.

**Keywords** Wi-Fi • ADS • FR4 • Microstrip patch antenna (MPA) • Radiation loss • Directivity

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## A TELE-OPERATED QUADCOPTER WITH COLLISION AVOIDANCE SYSTEM

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### ABSTRACT

A quadcopter is an Unmanned Aerial Vehicle used in several applications like search and rescue, military surveillance etc., A human operator is required to navigate the quadcopter in domestic applications but, in some danger prone areas and GPS denied areas, where human cannot enter the area, the navigation may be difficult to the operator as it should not collide with the obstacles in its path. To overcome this limitation, we present an approach called automatic collision avoidance system so that the operator can rely on it to avoid collisions and can simply concentrate on the navigation of the quadcopter which we also can call as Tele-Operated. This can be achieved by installing sensors on all directions and an FPV camera system to provide a video information to the operator.

**Keywords:** Arduino Uno, Automatic Collision Avoidance, FPV (First Person View), Sharp IR sensor, UAV (Unmanned Aerial Vehicle).

### I. INTRODUCTION

The UAV's are advancing with their various applications. The main advantage of drone is that it is unmanned vehicle. It can be operated from a remote location and also can be used either with GPS and also without GPS in GPS denied areas such as in military operations. An UAV plays a major role assisting in surveillance, search and rescue operations etc., By adjusting the thrust of particular rotors the direction of the quadrotor can be changed. The Pitch, Roll, Yaw axes are principle axes for movement of

the quadrotor. The motors speed will be controlled by the Electronic Speed Controllers by the principle of Pulse Width Modulation. A microcontroller will control all the signals from the radio transmitter to receiver. Thus by providing a best flight.

### II. EXISTING PROJECT

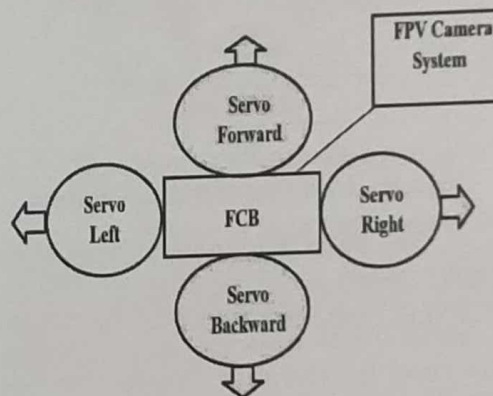


Fig 1. Block Diagram of Existing Project

In the existing system quad copter was used to capture the videos and images. Fig 1 shows the block diagram of existing project. The user can view the video or pictures and understand the situation in the area. Thus making the quad copter useful during the time of disasters and military operations for infiltration. The simplicity of this design makes the quad copter as an aerial vehicle without any application. The microcontroller helps to control the motor which receives the command from the transmitter to switch the motor speed as per the configuration setup by the software.



# RECOMMENDED CORRELATION ANTICIPATED FOR CHOROGRAPHY & NON CHOROGRAPHY NEXUS

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**Abstract:** Social networks are a popular way to model the interactions among the people in a group or community. It focuses on non-temporal cold start link prediction problem and we use the term cold start link prediction to refer a non-temporal version of problem. It allows people to have their own accounts to manage friends, upload videos and can view videos according to their particular state of mind. In this process, the YouTube like application is created and the common interest between the users are identified to suggest the new link prediction. Also, the videos are classified based on the individual user interest which makes the user to access the videos easily at times. We introduce cold start link prediction as the problem of predicting the structure of a social network when the network itself is totally missing while some other information regarding the nodes is available.

## 1. INTRODUCTION TO PROJECT

Large real-world networks exhibit a range of interesting properties and patterns. Many types of networks and especially social networks are highly dynamic they grow and change quickly through the additions of new edges which signify the appearance of new interactions between the nodes of the network. Thus, studying the networks at a level of individual edge creations is also interesting, and in some aspects more difficult than global network modelling. Identifying the mechanisms by which such social networks evolve at the level of individual edges is a fundamental question that is still not well understood, and it forms the motivation for our work here. We consider the classical problem of link prediction where we are given a snapshot of a social network at time  $t$ , and we seek to accurately predict the edges that will be added to the network during the interval from time  $t$  to a given future time  $t_0$ . More concretely, we are given a large network, say Facebook, at a time  $t$  and for each user we would like to predict what new edges (friendships) that user will create between  $t$  and some future time  $t_0$ . The problem can be also viewed as a link recommendation problem, where we aim to suggest to each user a list of people who has common interests (i.e., entertainment, comedy, horror). The user can also upload videos and they can also watch according to their particular state of mind. From the technical point of view, it is not clear how to develop a method in a principle way, which combines the features of nodes (i.e., user profile information) and edges (i.e., interaction information) with the network structure. A common, but somewhat unsatisfactory approach is to simply extract a set of features describing the network structure (like node degree, number of common friends, shortest path length) around the two nodes of interest and combine it with the user profile information.

## 2. EXISTING SYSTEM

Existing system focus on information starved link prediction and attempts to predict the possible link between cold-start users and existing users which is inefficient. Also retrieving the videos with respect to the individual interest is difficult.

## 3. DISADVANTAGES

- The main disadvantage of this project is that the user may miss some information with respect to their interest.
- Cold start problem occurs. It simply means that the circumstances around the engine are not optimal to produce the final prediction.

## 4. PROPOSED SYSTEM

The MyPlay video Application takes all the existing problems into account and presents an easy access to the relevant videos. The cold-start recommendation method is used to find the common relation between them and suggest the users pointing to that relation in an effective manner. It provides a hierarchical structure which helps to predict the missing links in networks and provides semantic based friend recommendation system for social networks.

There are five different categories of interest fields available which includes animation, comedy, entertainment, horror and adventurous. The user can select any of these interests according to their particular state of mind which helps the users to get the relevant information.

## 5. ADVANTAGES

- In this proposal the connection between existing user and new user will be very effective.
- It fills the connections between nodes of existing users and cold-start users.



# BELBIC Control of DSTATCOM for Voltage Regulation

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**Abstract:** In the DSTATCOM controlled distribution feeders, the DC capacitor voltage balancing plays an imperative role to regulate the voltage at Point of Common Coupling (PCC). To perform faster compensation using this device, the load current has to be tracked accurately. Further, the dc capacitor voltage has to be maintained constant for perfect current tracking. The dc capacitor voltage is generally regulated with the use of conventional PI controller. In this study, two types of controllers have been proposed viz., fuzzy tuned PI controller and a Brain Emotional Learning Based Intelligent Controller (BELBIC). Apart from dc capacitor voltage regulation, these controllers improve the transient performance of the capacitor voltage as well. The DSTATCOM controlled distribution system taken up for study is modeled with a non linear load and an unbalanced load. As far as the reference currents of this system are concerned, they are generated using instantaneous symmetrical component theory. For performance comparison, the response of the system is obtained with fuzzy tuned PI controller and BELBIC controller. The simulated results validates that the BELBIC controller exhibits superior performance characteristics than the conventional PI and the fuzzy tuned PI controller. The control algorithm is evaluated using DSP (dSPACE 1104) and the results are studied under unbalanced non linear load conditions.

**Keywords:** power systems, artificial intelligence, Bio control, PI controller, fuzzy control, reactive power, compensator

## 1. INTRODUCTION

In the recent days, there has been a considerable interest in power quality. This is mainly due to the increase in non linear loads such as power electronic converter based adjustable speed drives, electronic ballasts etc., which have deteriorated the power quality. The power quality problems mainly include harmonics in currents, unbalance in load voltage and excessive neutral current apart from voltage sag and swell (IEEE std., 1992; Akagi et al., 2007). Therefore, compensation of reactive power for non-linear and unbalanced load is an important issue in the present power distribution systems. The distribution static compensator (DSTATCOM) is one type of custom power device used for reactive power compensation, load balancing and harmonic mitigation in the distribution systems (Chen et al., 2008). The main purpose of a DSTATCOM is to supply or absorb reactive power from the grid for improving power factor and voltage regulation. With change in control approach, the DSTATCOM can also be used as an active filter and a dynamic uninterruptible power source. It may be noted that the active filter in this context does the work of filtering the lower order harmonics apart from reactive power compensation. DSTATCOM is a Voltage Source Converter (VSC) based Flexible AC Transmission Systems (FACTS) device. When operated in a current control mode, it can improve the quality of power by eliminating harmonic content of load, balancing source currents for unbalanced loads apart from mitigating the poor load power factor

(Ghosh et al., 2002; Ghosh et al., 2003; Ledwich et al., 2002; Ghosh et al., 2000).

In a DSTATCOM, the DC capacitor voltage balancing plays a crucial role. When the DSTATCOM performs compensation, the transient performance of the dc capacitor depends on the computational speed of the losses in the inverter. The fuzzy tuned PI controller and Brain Emotional Learning Based Intelligent Controller (BELBIC) are proposed to estimate the losses in the dc capacitor and improve the performance of the DC capacitor voltage. The fuzzy tuner is used to vary the Proportional and Integral gains of the controller during the transient period to correct for any discharge in capacitor voltage. The performance of the dc capacitor voltage is enhanced compared to a conventional PI controller. In the next method, the fuzzy tuned PI controller is replaced with BELBIC. Using BELBIC, the dc capacitor voltage exhibits a reduction in maximum overshoot, faster settling time, and the transient response is improved. To demonstrate the effectiveness of the controllers, the system is modeled in MATLAB and the results exhibits a superior performance for BELBIC compared to the fuzzy tuned PI and conventional PI controllers.

## 2. DSTATCOM MODEL AND CONTROL

The schematic diagram of the DSTATCOM controlled distribution feeder is shown in Fig.1. The loads are connected at the Point of Common Coupling (PCC) as shown in Fig.1. The DSTATCOM consists of Voltage Source Converter



# EXPERIMENTAL INVESTIGATION ON M-SAND WITH STEEL FIBRE IN SELF COMPACTING CONCRETE

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**ABSTRACT:** Natural river sand is expensive due to excessive cost of transportation from natural sources. Also large-scale exploitation of these sources creates environmental problems. As environmental transportation and other constraints make the availability and use of river sand less attractive, a substitute or replacement product for concrete industry needs to be found. River sand is most commonly used fine aggregate in the production of concrete poses the problem of acute shortage in many areas. Whose continued use has started posing serious problems with respect to its availability, increases in cost and environmental impact. In such a situation the Manufacture Sand can be an economic alternative to the river sand and which is cost effective. This study presents the behavior of self compacting concrete (SCC) with the replacements material. The fine aggregate is partially replaced with Manufacture sand. In addition to that steel fibers are to be added in proper proportion. Suitable dosage of super plasticizers are also should be added for achieving increased workability. The objective of the investigation is to develop a reinforced concrete beam with manufacturing sand as partial replacement for fine aggregate. Then the results are to be compared with the conventional beams.

**Keywords:** M-sand, Testing, Analyzing the strength.

## INTRODUCTION

The development of Self-Compacting Concrete (SCC) has recently been one of the most important developments in the building industry. The purpose of this concrete concept is to decrease the risk due to the human factor, to enable the economic efficiency, more freedom to designers and constructors and more human work. It is a kind of concrete that can flow through and fill gaps of reinforcement and corners of moulds without any need for vibrations and compacting during the pouring process. Because of that, SCC must have sufficient paste volume and proper paste rheology. Paste volumes are usually higher than for conventionally placed concrete and typically consist of high powder contents and water-powder ratios.

The main advantage of using SCC is that it offers high homogeneity, fluidity and less segregation, minimal concrete voids and uniform concrete strength. Since low cement ratio is adopted it is possible to achieve early strength, quicker remoulding and faster use of elements and structures. The impact due to the use of vibrators is eliminated by the use of SCC in construction. Compaction of SCC is carried out in all parts of the formwork, including the hardly accessible parts, without any additional external force and no gravitational force, that is as a result of self weight of concrete.

The filling ability and stability of SCC in the fresh state can be defined by four key characteristics: passing ability, flow ability, segregation resistance and viscosity. Such properties are achieved by addition of chemical additives to the concrete. The growing use of concrete in special architectural configurations and closely spaced reinforcing bars have made it very important to produce concrete that ensures proper filling ability, good structural performance and adequate durability.

The improved construction practice and performance, combined with the health and safety benefits, make SCC a very attractive solution for both precast concrete and civil engineering construction. The elimination of vibrating equipment improves the environment on and near construction and precast sites where concrete is being placed, reducing the exposure of workers to noise and vibration.

It cannot be sacrificed to attain high strength. High ultimate strength is generally accompanied by a low W/C ratio. Good quality fine particles of waste materials or by-products particularly mineral admixtures and super plasticizer make the cement concrete sustainable with improved long term performance because of least permeability and very slow chemical reaction with harmful compounds present in the concrete.

## MANUFACTURED SAND

Fine aggregate is an essential component of concrete. The most commonly used fine aggregate is natural river sand. The global consumption of natural sand is very high due to the extensive use of concrete in various civil engineering structures. In particular, the demand of natural sand is quite high in developing countries owing to their rapid infrastructural growth. The term 'natural sand' is used to identify the material traditionally recovered from geologically recent deposits of sand.

Therefore, the construction industries of developing countries are in stress to identify alternative materials to lessen or eliminate the demand for natural sand.

These materials act as a rock flour or filler and have advantages in the concrete mix. The effect of this material on water demand still requires careful monitoring and needs to be considered in mix design. The filler grade content of these fine materials is reduced by washing it with water to produce a clean, saleable 'sand' product. M-Sand stands for Manufactured Sand. M-sand is crushed aggregates produced from hard granite stone which is cubically shaped with grounded edges, washed and graded with consistency to be used as a substitute of river sand, which often exceeds the permissible limit of 15% specified by IS:383-1970.





16-17 52  
*Int. J. Chem. Sci.*: 14(2), 2016, 1099-1104  
ISSN 0972-768X  
[www.sadgurupublications.com](http://www.sadgurupublications.com)

## COMBUSTION CHARACTERISTICS OF A DI DIESEL ENGINE FUELED WITH SAFFLOWER METHYL ESTER

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### ABSTRACT

The performance of safflower methyl ester and its blend with diesel in a Kirloskar engine has been presented in this paper. Engine performance (brake specific fuel consumption, and brake thermal efficiency) and combustion were analyzed, evaluate and compute the behavior of the diesel engine running on safflower methyl ester. The reductions in brake specific fuel consumption and increasing of brake thermal efficiency together with increase brake power, makes the blend of safflower methyl ester a suitable alternative fuel for diesel

**Key words:** Safflower methyl ester, Engine performance, Combustion.

### INTRODUCTION

The realization that conventional fossil fuels are non-renewable has led to search for more environment friendly and renewable fuels. Among various options investigated for diesel fuel, biodiesel obtained from vegetable oils has been recognized by the world. Several countries including India have already begun substituting the conventional diesel by a certain amount of biodiesel. Worldwide biodiesel production is mainly from edible oils such as soybean, sunflower and canola oils. Some edible oil and non edible seeds available are required to be tapped for biodiesel production. With abundance of forest and plant based edible oils being available in country such as *Pongamia pinnata* (karanja), *Jatropha curcas* (*Jatropha*), *Madhuca indica* (mahua), *Shorea robusta* (Sal), *Azadirachta indica* A Juss (neem) and *Hevea brasiliensis* (rubber). Not much attempt has been made to use esters of these non-edible oils as substitute for diesel except *Jatropha*. Moreover, there are plenty of wastelands available in worldwide, which can be utilized for growing such oil seed crops. Few investigators have already obtained biodiesel from some of these oils<sup>1-5</sup>. As compared to

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