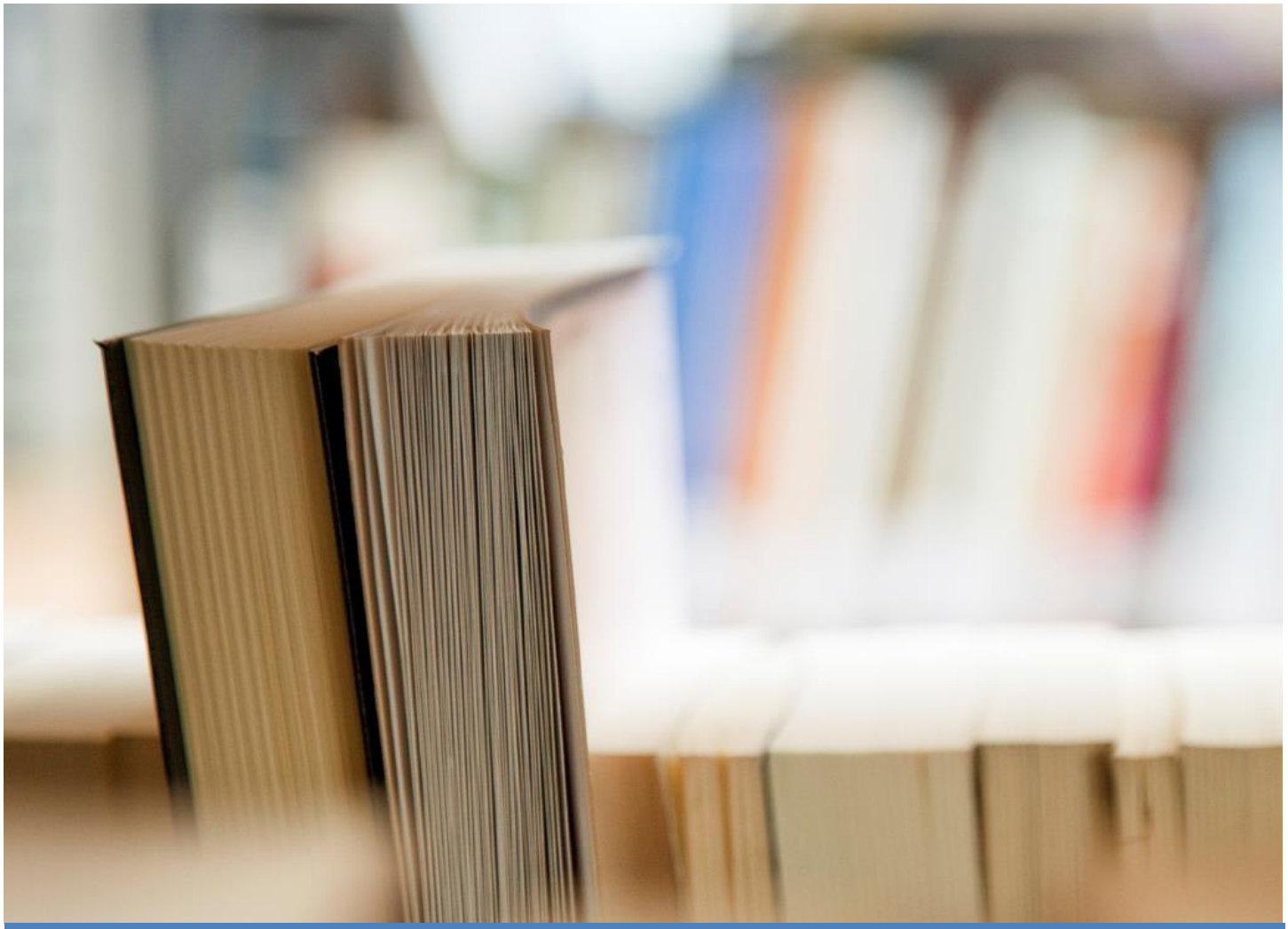
SRI VENKATESHWARA
COLLEGE OF ENGINEERING
BENGALURU



DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING

TECHNICAL MAGAZINE

MIND SPARK II 2016-17

Student Editors

Ms. Meera M Nair & Mr. Sagnik Goswami

DEPARTMENT VISION

Global Excellence with Local relevance in Information Science and Engineering Education, Research and Development.

DEPARTMENT MISSION

M-1: Strive for academic excellence in Information Science and Engineering through student centric innovative teaching-learning process, competent faculty members, efficient assessment and use of ICT.

M-2: Establish Centre for Excellence in various vertical of Information Science and Engineering to promote collaborative research and Industry Institute Interaction through Life Long Learning.

M-3: Transform the engineering aspirants to socially responsible, ethical, technically competent and value added professional or entrepreneur through holistic education.

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

PEO-1. Graduates of ISE programme will perform technical and administrative role in the verticals of problem solving, design, analysis, development, visualization and budgeting under information science domain.

PEO-2. Graduates of ISE programme will enhance their professional expertise in quest for better career prospect through lifelong learning.

PEO-3. Graduates of ISE programme will lead and collaborate amid team of diversified professional with good communication skill and ethical values.

PEO-4. Graduate of ISE programme will investigate computing problems and innovate sustainable solutions for the society using modern tools with global perspective and local relevance.

PROGRAMME OUTCOMES (POs)

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to

one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES

PSO1 : Quick Learner: Ability to learn and effectively implement the Information Science and Engineering notions in less span of time using modern tools.

PSO2: Envision: Ability to visualize the operations of existing and future software applications.

PROJECT TITTLE

PRESERVATION OF VEGETABLES, FRUITS AND MEDICINES USING SMART REFRIGERATOR

ABSTRACT

Refrigeration is the process of heat-removal from a space in order to bring it to a lower temperature than surrounding temperature. Power consumption is one of the major issues in today's general life. Peltier module is one of the best solutions for this. The refrigeration is based on the peltier effect, which explains the cooling or heating that occurs when an electric current flows through the joint of two dissimilar materials. The heat emitted by the peltier modules is discharged into the freezer compartment, which leads to a significant improvement in the coefficient of operation. It helps to reduce power consumption. The work of heat transport is traditionally driven by mechanical work, but can also be driven by magnetism, laser or other means. The refrigerator uses the peltier effect to create a heat flux between the junction of two different types of materials.

STUDENTS NAME

JIBIL ROSE B PAROKKARAN	1VE13IS021
JISHA J	1VE13IS022
KAVYA S	1VE13IS023

PROJECT TITTLE

SMART VEHICLE ROUTING BASED ON ATTITUDINAL SEGMENTATION FOR SMART CITIES

ABSTRACT

Smart mobility management plays an important role in improving the quality of life and satisfying the various requirements of the residents in a smart city. In this context, the role of a smart phone as mobility behaviour sensor is a very great one. Users can interact with the smart phone application we developed, to gain route suggestions from their source to destination. The users are the provided with asset of questions about their transit choices. The answers to these questions are used to push the users into different groups or clusters. The users are then provided with the personalized route suggestions to their designations on the basis of the cluster to which they belong. The users are also provided with the time required to complete the journey and the total distance they will cover during their trip to their destinations.

STUDENTS NAME

ARUN P	1VE13IS008
ASHUTOSH KUMAR	1VE13IS010
LOHITH KUMAR C	1VE13IS027
MAYANK PANDEY	1VE13IS032

PROJECT TITTLE

AUTOMATION ATTENDANCE MANAGEMENT SYSTEM USING FACE RECOGNITION

ABSTRACT

The current era of recognition and data validation, feature extraction based authentication plays an important role. To provide a real time authentication and later validation, this proposed system has designed an attendance marking system with automatic feature extraction and machine learning based SVM classification for recognition and authentication. The proposed system is designed in MATLAB 2013 and higher compatibility version. This system improves the internal authentication system for attendance marking and retrieving the online status. The proposed system is worked and tested o real time images of selected and trained datasets and the extracted features are there by compared to retrieve a supporting value of the system. The efficiency and ratios of comparisons is achieved in the system dynamically using SVM classification and feature recognition techniques.

STUDENTS NAME

BHANUPRIYA K.V	1VE13IS009
CHAITRASHREE N	1VE13IS014
ARPITHA B.M	1VE13IS007

PROJECT TITTLE

IOT GARBAGE MONITORING SYSTEM

ABSTRACT

IoT garbage monitoring system was proposed to design an electronic system. In order to provide solution to irregular waste disposal system. The designed system makes use of ultrasonic sensor to detect level of the waste in the dustbin. This sensor is further fed to the controller which would help the GSM module to send the notification to the respective authority regarding the status of the bin. The main objective of the designed system is to provide a solution for the waste management system. The project tries to simplify the problems associated with existing system by having sensor associated with each bin and monitoring the status of bin.

STUDENTS NAME

MEGHANA B S	1VE13IS034
LAVANYA H V	1VE13IS025
RAJESWARI R	1VE13IS031

PROJECT TITTLE

NUTRIDIS: AN ANDROID APPLICATION FOR HEALTHY LIVING

ABSTRACT

Mobile devices are increasingly becoming an indispensible part of people's daily life, facilitating to perform a variety of useful task. Recently, there is a need of application which minimizes time consumption by combining the facilities such as searching anything about the disease, booking appointments using same applications. Many applications are there from which we can either book appointments or search about the disease or display the vents that is organized by the hospital. This application has been designed to provide information about the disease, book appointment of any doctor and see the vents that are organized by the different hospitals. Also, this application has been designed in such a way that fake doctor or hospital can't have an account as the hospital that register is verified by the admin and the activated and the hospital adds the doctor. In case, if any doctor no more works for that hospital the hospital blocks him. If the hospital can't be verified by the admin, the admin has an authority to block the hospital. Moreover, it makes the task of the user easier and faster.

STUDENTS NAME

ASHMITA RUNGTA	1VE13IS009
MADHURI SAXENA	1VE13IS029
MALLIKA G C	1VE13IS030

PROJECT TITTLE

IOT-BASED HOME MONITORING AND ALTERING SYSTEM

ABSTRACT

In this era of digital revolution, we are surrounded by smart devices that are capable of making decisions on their own without human interventions. Now modern house are gradually shifting from conventional switches to centralized control system. For both sensing and controlling the system in a real time uses global system for mobile communications (GSM). Our home can also be made smart by implementing a real-time home automation system that monitors parameters like power consumption and human presence. In this paper, the method of monitoring and providing safety in and around the house from unknown people is done through internet of things. The main concerns in home safety are the gas leakage in the kitchen and intruders at the entrance. As a solution to this, door authentication is implementing to keep track of the intruders and to notify the owner though text messages. Any smoke or fire is detected by placing smoke sensors and alerts through a buzzer. The above mentioned features of home safety and security are implemented using arduino uni board.

STUDENTS NAME

SHRAVYA NAGESH 1VE13IS046

SUSHMITHA K 1VE13IS047

PROJECT TITLE

COMPUTATION OFFLOADING IN MOBILE CLOUD ENVIRONMENT TO ENHANCE THE BATTERY LIFETIME OF ANDROID MOBILE DEVICES

ABSTRACT

Smartphones have gained enormous popularity over the past few years. Smartphones are now capable of supporting a wide range of applications, many of which demand an ever increasing computational power. Running complex applications on smartphones could result in poor performance and shortened battery life because of their limited resources. So it creates a challenge to increase the energy efficiency and performance enhancement as there are resource-constrained devices. Mobile system has limited resources, such as battery life, network bandwidth, storage capacity, and processor performance. These restrictions may be alleviated by computation offloading: sending heavy computation to resourceful servers and receiving the results from these servers. Many issues related to offloading have been investigated in the past decade. Together with an explosive growth of the mobile applications and emerging of cloud computing concept, mobile cloud computing (MCC) has been introduced to be a potential technology for mobile services. MCC integrates the cloud computing into the mobile environment and overcomes obstacles related to the performance, environment and security in mobile computing.

STUDENTS NAME

KUMARI RASHMI 1VE13IS024

MEERA M NAIR 1VE13IS033

PRIYA 1VE13IS038

PROJECT TITLE

NON –DEGRADABLE WASTE SEGREGATION USING ROBOTS

ABSTRACT

Waste management is a big challenge in urban areas for most of the countries throughout the world. An efficient waste management is a pre requisition for maintain a safe and green environment as there are increasing all kinds of waste disposal. Many technologies are used for waste collection as well as for well managed recycling. The information gathering is cumbersome. The device capable of detecting the object by capturing its image through the camera attached to it followed by image processing. Once the object is classifies as non-degradable, the ultrasonic sensor and IR sensor attached to the device is used to find out exact position of the object with respect to the device. Once the objects location is known to us, the robotic arm which has server monitors in it is used to move to the object and lift it. The sound sensor mounted in its arm is used for acoustic analysis and helps to identify the object preciously. Once the object is identified the robotic arm lifts the object and place in into respective bin. By image processing technique, modifications in the robotic arm, navigation, image, and interfacing modules the encountered various problems in garbage collection.

STUDENTS NAME

RAHUL KUMAR 1VE13IS030

SAIYAD ARSHAD QADIR 1VE13IS041

SAURABH MISHRA 1VE13IS043

PROJECT TITLE

SMART PATIENT MONITORING SYSTEM USING IOT

ABSTRACT

The paper presents the design and implementation of an IoT-based health monitoring system for emergency medical services. In this project, various human bodies related values are acquired through various sensors by the microcontroller. The acquired data is then uploaded to the cloud to be accessed readily from anywhere, at any time. Further, the doctors and close relatives can view those sensor values which include temperature, heart rate, and glucose level of the patient using Blynk application. An alert message is sent to the doctor and concerned people whenever there is an abnormal sensor value who then can alert the nearby ambulance or hospital. This would mean faster initiation of the medical services to the patient. With the help of this proposal, a cost effective means of the patient health monitoring can be done from time to time and doctors can also help in emergency scenario as much as possible which would be crucial in saving the life of a patient during emergency.

STUDENTS NAME

DEEKSHITHA R S 1VE13IS013

DISHA S HEGDE 1VE13IS014

SHILPA K N 1VE13IS044

PROJECT TITLE

HEART RATE MONITORING USING SMART DEVICE

ABSTRACT

Smart phones are equipped with various sophisticated features such as Wi-Fi, GPS navigation, high resolution camera, touch screen with broadband access which helps the mobile phone users to keep in touch with the modern world. In this project, 'Heart rate monitoring system' application using Google's Android Mobile Platform is addressed. This application is targeted to a person who is suffering from heart attack. Heart rate monitoring device is integrated with our application to sense the heart rate of a person driving the vehicle and if there is any abnormalities in the heart rate, then our application performs a role in which, application uses a GPS to track the location information of the user and send those location information as a message via SMS to the pre-defined contacts.

STUDENTS NAME

ARCHANA M 1VE13IS006

HIMA BINDU R 1VE13IS019

PRIYANKA D S 1VE13IS039

PROJECT TITLE

PELTIER BASED LOW COST AC

ABSTRACT

Air conditioning is one of the major consumers of electrical energy which causes energy shortage. It is one of the main causes of global warming. We know how beneficiary air conditioner is. It increases the efficiency of human being; provide us with cool air and comfortness, nasal issues etc. in extreme cases pneumonia and asthma attacks can also develop. These air conditioners don't affect only humans but also they indeed contribute to greenhouse effect. So the best way to get rid of this is by making use of natural resources rather than using electrical energy. So the best alternate is thermal energy which uses peltier effect which has the ability of cooling the specific area. This model doesn't need any compressor, primer moving parts etc. the main objective of this project is to deliver a low cost air conditioning system which works on peltier module that can be used at remote areas where people cannot afford high cost air conditioning system.

STUDENTS NAME

LEKHANA K V 1VE13IS026

MANASA J 1VE13IS031

MONISHA G 1VE13IS036

PROJECT TITLE

ANT COLONY OPTIMIZATION TO FIND THE SHORTEST PATH

ABSTRACT

The purpose of this project is to provide a clear understanding of the ant-based algorithm, by giving a formal and comprehensive systematization of the project. The simulation developed in java will be a support of a deeper analysis of the factors of the algorithm, its potentialities and its limitations. Then the state-of-the-arts utilisation of this algorithm and its implementations in routing algorithms, mostly for mobile ad hoc networks, will be explained. Results of recent studies will be given and resume the current employments of this great algorithm inspired by the nature.

STUDENTS NAME

AJAY PHOGAT 1VE13IS003

SAGNIK GOSWAMI 1VE13IS040

SANJAY SINGH SAMANT 1VE13IS042

PROJECT TITLE

CLOUD BASED E-MANAGEMENT SYSTEM FOR EDUCATIONAL INSTITUTIONS

ABSTRACT

This online examination system is a software solution, which allows any industry or institute to arrange, conduct and manage examinations via an online environment. It can be done through the internet/intranet and /local area network environments. Some of the problems faced during manual examination systems are the delays occurred in result processing, filling poses a problem, filtering of records is difficult. The chance of loss of records is high also record searching is difficult. Maintenance of the system is also very difficult and takes lot of time and effort. Online examination is one of the crucial parts for online education system. It is efficient, fast enough and reduces the large amount of material resources. An examination system is developed based on the web. The system provided the functions, including question management, paper generation and online test.

STUDENTS NAME

MARUTHESH B R	1VE13IS020
HARSHITHA YADAV R	1VE13IS018
MADHU J	1VE13IS028

Sl. No	Project Title	Student Name	Guide Name	Relevance to POs & PSOs
1	IoT based Security Model for Buildings	Shravya Nagesh, Sushmitha k	Mrs. Tejaswini N P	PO1, PO2,PO3, PO 4, PO5, PO8, PO9, PO10, PO11, PO12 PSO1
2	Peltier Effect based Low Cost Solar Air Conditioning Systems	Lekhana k V, Manasa J, Monisha	Mr. Guruprasad Y K	PO1, PO2,PO3, PO 4, PO5, PO7, PO8, PO9, PO10, PO11, PO12, PSO1
3	Ant Colony Optimization to find shortest path.	Ajay Phogat, Sanjay Singh, Sagnik Goswami	Mr. Yerriswamy T	PO1, PO2,PO3, PO 4, PO5, PO8, PO9, PO10, PO11, PO12 PSO1
4	Smart Health Care Monitoring System	Deekshitha R S, Disha Hegde, Shilpa K N	Mr. Chethan C	PO1, PO2,PO3, PO 4, PO5, PO7, PO8, PO9, PO10, PO11, PO12, PSO1
5	**Computation Offloading in Mobile Cloud Environment to Enhance the Battery Lifetime of Android Mobile Devices**	Kumari Rashmi, Meera M Nair, Priya	Mr. Maria Navin J R	PO1, PO2,PO3, PO 4, PO5, PO8, PO9, PO10, PO11, PO12 PSO1
6	**Non Degradable Waste Segregation using Robot**	Rahul Kumar Saiyad Arshad Saurabh Mishra	Mr. Balakrishnan	PO1, PO2,PO3, PO 4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12 PSO1
7	**Smart Vehicle Routing based on Attitudinal Segmentation for Smart Cities**	Arun p Ashuthosh Kumar Lohith Kumar C	Mrs. Shoba M	PO1, PO2,PO3, PO 4, PO5, PO6, PO8, PO9, PO10, PO11, PO12 PSO1

		Mayank Pandey		
8	**Cloud based E-Management System for Educational Institute**	Maruthesh B R Harshitha Yadav Madhu J	**Mr. Satyanarayana M S**	PO1, PO2,PO3, PO 4, PO5, PO8, PO9, PO10, PO11, PO12 PSO1
9	**Automated Attendance System using Face Recognition System**	Bhanupriya K V Chaitrashree N Arpitha B M	**Mr. Shivaprakash Ranga**	PO1, PO2,PO3, PO 4, PO5, PO8, PO9, PO10, PO11, PO12 PSO1
10	**Heart Rate Monitoring using Smart Device**	Archana M Himabindu R Priyanka D S	**Mrs. Pankaja R**	PO1, PO2,PO3, PO 4, PO5, PO7, PO8, PO9, PO10, PO11, PO12 PSO1
11	**Nutridis – An App for Healthy Living**	Ashmitha Rungta Madhuri Saxena Mallika G C	**Mr. Raghavendra S N**	PO1, PO2,PO3, PO 4, PO5, PO7, PO8, PO9, PO10, PO11, PO12 PSO1
12	**Smart Vegetables, Fruits and Medicines preserving system**	Jibil Rose Jisha J Kavya S	**Mrs. DivyaRaj G N**	PO1, PO2,PO3, PO 4, PO5, PO8, PO9, PO10, PO11, PO12 PSO1
13	**IoT Garbage Monitoring System**	Rajeswari R Lavanya H V Meghana B S	**Ms. Aruna T M**	PO1, PO2,PO3, PO 4, PO5, PO7, PO8, PO9, PO10, PO11, PO12 PSO1

PAPERS PUBLISHED / AWARDS RECEIVED

Sl. No	Paper Title	Student Name(s)	Event/Conference	Date	Place	Remarks
1	Literature survey on wireless sensor Networks	Ms. Meghana B S Ms. Rajeshwari Ms. Lavanya H V	National Conference on Shaping the Future: Digitize India, Startup India.	20th & 21st April 2017	SVIT, Bangalore	Presented a Paper