

INSPIREEE

INSPIRATIONAL SCRIPTS, PERSONALITIES AND INNOVATIVE RESEARCH
NEWSLETTER/ EEE/ VOLUME 5: ISSUE 1- AUGUST 2016



K.L.N. COLLEGE OF ENGINEERING

Approved by AICTE and Affiliated to Anna University
An ISO 9001:2008 Certified Institution
Pottapalayam - 630 612, Sivagangai Dt., Tamilnadu.

INSPIREEE

*IN*spirational Scripts, *P*ersonalities and *I*nnovative Research of *EEE*

Department of Electrical and Electronics Engineering

VISION

To become a high standard of excellence in Education, Training and Research in the field of Electrical and Electronics Engineering and allied applications

MISSION

To produce excellent, Innovative and Nationalistic Engineers with Ethical values and to advance in the field of Electrical and Electronics Engineering and allied areas.



K.L.N. College of Engineering

Pottapalyam – 630 612, Sivagangai District, Tamil Nadu, India

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MESSAGE FROM HEAD OF THE DEPARTMENT

**Dr. S.M. KANNAN, M.E., Ph.D.,
FIE, MISTE, MIEEE (USA)
Professor & Head, EEE,
K.L.N. College of Engineering**



MESSAGE

Greeting to all. Well and wish the same.

It is our long time wish to bring a Newsletter exclusively to publish an article on students' project. In our earlier issues most the contribution from the students are about briefing something already available, based on the literature survey. This motivates the students to search widely on the internet/magazines/journals about new concepts developed around the world in the recent past. Such information will be shared among the students motivates others also to do further search. However, we found the lack of Innovation, solving real time problems, Design and test etc. which are the need of the day. Hence we decided to bring an issue to focus on mini projects.

I congratulate those students who worked hard to show cause their talents. Appreciation to Editor, Staff advisor, Project coordinator and student in charge for conducting the Mini-Project event successfully and timely publication. Hope in the next issues items such as photograph of the project with members, budget, mapping with Program Outcomes, reference etc. may be included so that awareness on these areas communicated properly.

With regards,

Dr. S.M. Kannan
(Head of the Department – EEE)



EDITORIAL CREW

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Mr. S.P. RAJARAM [Assistant Professor 2]

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Dr. K. GNANAMBAL [Professor]

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ROMIKA A (132001, VII – B)	Article Grammar & Spelling Check
NAVANEETHA S (132026, VII - B)	Overall Editing
THAMODHARAN P (152904, V-C)	Poster Creation
VISHNU VARDHAN J G (142105, V-C)	Article Grammar & Spelling Check

AUTOMATIC WATER LEVEL CONTROLLER

T. Kuberan (152035)

C. Kartheeswaramani (152042)

S. Logesh (162904)

S. Gunasekaran (152083)

C. Meenakshi Sundaram (162907)

ABSTRACT:

We should switch on the motor to pullup the water from the ground to higher level and water gets wasted when tank overflow. When the air touches the water sensor at the bottom the motor automatically goes to on stage. When the water reaches the water sensor in the top of the tank the motor goes to off stage. On using Automatic water controlling system the motor goes to on and off stage automatically without any man power.

ARDUINO BASED HEARTBEAT MONITOR

Aravindasamy R (152051)

Anand Raj K (152016)

Ajith B (152305)

Muthubharathi M (152054)

Bharathi Pandian G (152048)

Dinesh Kumar P (162910)

ABSTRACT:

Heart rate, body temperature and blood pressure monitoring are very important parameters of human body. Doctors use various kind of medical apparatus like thermometer for checking fever or body temperature, BP monitor for blood pressure measurement and heart rate monitor for heart rate measurement. In this project, we have built an Arduino based heartbeat monitor which counts the number of heartbeats in a minute. Here we have used a heartbeat sensor module which senses the heartbeat upon putting a finger on the sensor.

CLAP SWITCH

S.Nandha Kumar (152018)

F.Ahamed Ibrahim (152044)

P.Ajith (152021)

P.Ajith Kumar (152032)

Abstract:

Clap Switch is a simple electronic switch which has an ability to turn ON or turn OFF using sound energy as switching element. In this circuit we use Condenser mike which has the ability to take the sound in high pitch. Although the sound is not a clap, sound like clap is a just a need a sound. In this circuit the sound act as an input and it holds a sound sensor which senses a sound like clap. It is due to 555 timer operation, transistors and other some components. This is will be used as switch in some other application. The one and only drawback is range of condenser mike is very small.

HOME SECURITY ALARM

K. Indu Priya (152052)

N. Aiswarya (152037)

S. Meharunnisha (152058)

ABSTRACT:

This circuit is based on LDR (Light Depended Resistor), a variable resistor in which the resistance varies according to the light intensity falling on it. The LDR and resistor R1 forms a potential divider network, which is the main part of our security alarm circuit. The voltage drop across the LDR is used to drive the transistor switch. ($V=IR$). While resistance increases the voltage drop also increases, when this voltage drop exceeds the cut in voltage of the silicon NPN transistor (0.6V; BC547), it will turn ON. Then current from Vcc starts flowing to ground via the buzzer and transistor, which makes the beep sound.

SELF POWERED DOORBELL WATCHER

M. Aarthi (152060)

A.Nachammai (152005)

A.Azhagu Mari (152019)

ABSTRACT:

As most doorbells use 12 Vac supply, the circuit must be simply connected to the doorbell coil leads. When the doorbell is activated, an AC voltage of about 16 V is developed at its leads, so it is rectified by D1 and charge C. This simple and self-powered device was conceived to allow a person to leave the house for a few hours or weekend, a number of tests has proven that a minimum of 15 days “memory” can be guaranteed.

AUTOMATIC IRRIGATION

K.Mathu Metha (152014)

S.Mano dharshini (152034)

J.Jaffrin banu (152047)

ABSTRACT:

Water is a very precious resource and must be properly utilized. Agriculture is one of those areas which consume a lot of water. Irrigation is a time consuming process and must be done on a timely basis. The aim of the article is to develop an auto irrigation system which measures the moisture of the soil and automatically turns on or off the water supply system. The project requires very less human involvement once installed. The circuit is based on PIC microcontroller and also a soil moisture sensor. A properly configured soil moisture sensor can save up to 60 percent of water used in irrigation. The designed system can be used in turf grass or with small garden plants.

LUGGAGE SECURITY ALARM

K. Babysalini (152062)

R. Malathi (152041)

S. Kala ranjani (152045)

S. Nivetha (152055)

ABSTRACT:

The basic building block of this circuit is CD4011 along with some other components viz. resistors, capacitor along with transistor and relay which is used to save your important things from robbery with the help of this easy circuit. It produces a warning beep, when someone tries to unlock the lock. CD4011 is the mainly used CMOS chip. There is a small notch present on the chip at one of the corner which is recognized as pin 1. Each gate is a three terminal device with two terminals for input purpose and one is for the output purpose. 5V to 16V is the working voltage range of the IC.

WIRELESS ELECTRICITY

S. Merunaline (151008)

V. Kaviya (151065)

C. Abarna (151077)

N. Iswariya (151304)

ABSTRACT:

Many researchers have developed several techniques for moving electricity over distance without wires. WIRELESS ELECTRICITY is based upon coupled resonant object. Two objects having same resonance frequency and in magnetic resonance tends to exchange energy. There are three main methods for wireless energy transfers in use today, induction, electromagnetic transmission (power beaming) and evanescent wave coupling. A wireless power system consists of a “transmitter” connected to a source of power such as a mains power line, which converts the power to a time-varying electromagnetic field, and one or more “receiver” devices which receive the power and convert it back to DC or AC electric current which is used by an electrical load.

LASER SECURITY ALARM

E.Muthumonisha (152002)

A.M.Nisha (152301)

ABSTARCT:

LASER alarm is the alarm which is used for the security of valuable Materials. It can be used in houses to protect the valuable materials. LASER is used in this process because LASER – ray goes through long distance and it is invisible. It is easy to catch the thief. Only the radiation point and incident point is visible. So by this security project we can make an invisible boundary of a sensitive area.

AUTO IRRIGATION SYSTEM USING SOIL MOISTURE SENSOR WITH PIC MICROCONTROLLER

R.Ramya (152030)

K.Yogapriya (152012)

M.Saranya (152064)

ABSTRACT:

The aim of the project is to control a motor based on the moisture in the soil. The design of the circuit is as follows. PIC 16F877A is the main processing IC. A 12 MHz crystal oscillator is connected across OSC1 and OSC2 (Pins 13 and 14). The crystal is connected with two 33pF capacitors. The Master Clear pins is normally connected to Vcc via a pull-up resistor. A bypass button is connected to ground. This button is used to reset the microcontroller. The output of the soil moisture sensor is given to RA0 (Pin 2) of the PIC microcontroller. An LCD is used to display the key messages.

WATER LEVEL INDICATOR

S.Divya (152011)

T.Jaipoorani (152003)

Lakshmi (152074)

ABSTRACT:

Water level indicator or liquid level sensor displays the current level of water in any water in any water tank reservoir. Here we use a simple real time encoding circuit with 7 segment display. It can also be used as a water level meter or water level detector. This water level sensor consist of 8 to 3 encoder (74148-8 line to 3 line priority encoder) with some water sensor arrangement. The encoded level is displayed on a 7 segment digital display. This circuit uses one “Hex display”, it doesn’t require driver IC to encode.

AUTOMATIC TRAFFIC SIGNAL CONTROL SYSTEM USING ARDUINO

S. Hemalatha (152059)

S. Dhaarini (152070)

M.R. Hemanth Kumari (152026)

K. Chandra Lekha (152013)

ABSTRACT:

Traffic rules are violated by people in the modern years, these violation increases number of death due to accidents. The traffic rules violation is reduced by Traffic Control System. In this system, potential divider is used to adjust time interval for green and red light signaling. Depending upon the time the green signal is given for traffic road and the road is allowed for vehicle movement after the flow is descended, the yellow light is given to stop the movement followed by Red indication. The Arduino Uno can be powered via the USB connection or with an external power supply. The power source is selected automatically.

SONAR SECURITY SYSTEM

J. Yuvamareeswaran (152025)

M. Sivabalan (152029)

S.M.K. Gokul (152004)

S. Saravanan (152043)

ABSTRACT:

The problem facing many institutions like museums and banks is that of security around the clock. Security guards are expensive and burglars have learned to evade conventional security devices like infrared beams, thermal sensors etc., The use of SONAR in a security system, as used in our project is a novel idea, and as far as we could determine, extremely difficult, if not impossible, to evade. The use of SONAR offers us many advantages.

DENSITY BASED TRAFFIC SIGNAL SYSTEM

Omnath S.L (152033)

Surya narayanan K.B (152063)

Praveen Kumar L.H (152102)

Rishinath Kumar K.R (152103)

ABSTRACT: Nowadays, controlling the traffic becomes major issue because of rapid increase in automobiles and also because of large time delays between traffic lights. So, in order to rectify this problem; we will go for density based traffic light system. In this system, we use IR sensors to measure the traffic density. We also use the ATmega8 controller, PCB board, LED's, battery. This project is mainly used to control the traffic in METROPOLITAN cities.

Air velocity monitor

T.Poorva Dharshan (152057)

B.Prabhu (162911)

P.Rajkumar (152912)

V.Sivachandran (162909)

ABSTRACT: The air velocity monitor is used to calculate the speed of humidity and other earth disaster.

Automatic Engine locking system through Liquor Detection

J. Venkatesh Kumar (152027)

B. Vidhyatharan (152073)

M. Vimal Rajasekar (152081)

J. Rahul (152303)

ABSTRACT:

Now-a-days, major part of the accidents occurs due to drunken driving which causes a severe damage to the property and life. Hence an automatic locking system has been proposed which contains a relay and a gas sensor. The use of gas sensor is to detect the alcohol and the engine will get automatically locked so that the vehicle would not accelerate further. The complete process takes place under the supervision of an intelligent ARM Microcontroller. Here the input is identified by the sensor through the breath of a human and is measured by the sensor.

INTELLIGENT AUTOMATIC PLANT IRRIGATION SYSTEM WITH WATER PUMP CONTROL BASED ON SOIL MOISTURE CONDITION SYSTEM.

S.Hariharasudhan (152017)

K.Gowtham (152039)

R.Nithin Noah (152068)

D.N.Hari Vignesh (152046)

Absract:

The motivation for this project came from the countries where economy is based on agriculture and the climatic conditions lead to lack of rains & scarcity of water. The farmers working in the farm lands are solely dependent on the rains and bore wells for irrigation of the land. Even if the farm land has a water-pump, manual intervention by farmers is required to turn the pump on/off whenever needed. The aim of our project is to minimize this manual intervention by the farmer.

TRACKING FAN

K.S.Priya lakshmi (152071)

A.Viji (152020)

M.Sangeetha (152015)

R.Sangareswari (152078)

Abstract:

The main concept of our project is to design a fan which power on itself as the it detects movement and if the surrounding temperature has reach a certain degree. It also has two motion sensors that track the person's movement. The overall design operates under a microcontroller that controls a servo, a fan, two motion sensors, and one temperature sensor. The temperature sensor is actually a thermal resistor which changes its resistance according to the surrounding temperature. It sends out signal up to a range of 7 feet.

RFID BASED INTELLIGENT VEHICLE SPEED CONTROL

K. Yuvalakshman (152038)

G. Surya Prakash (152036)

P. Vasantha Vikash (152031)

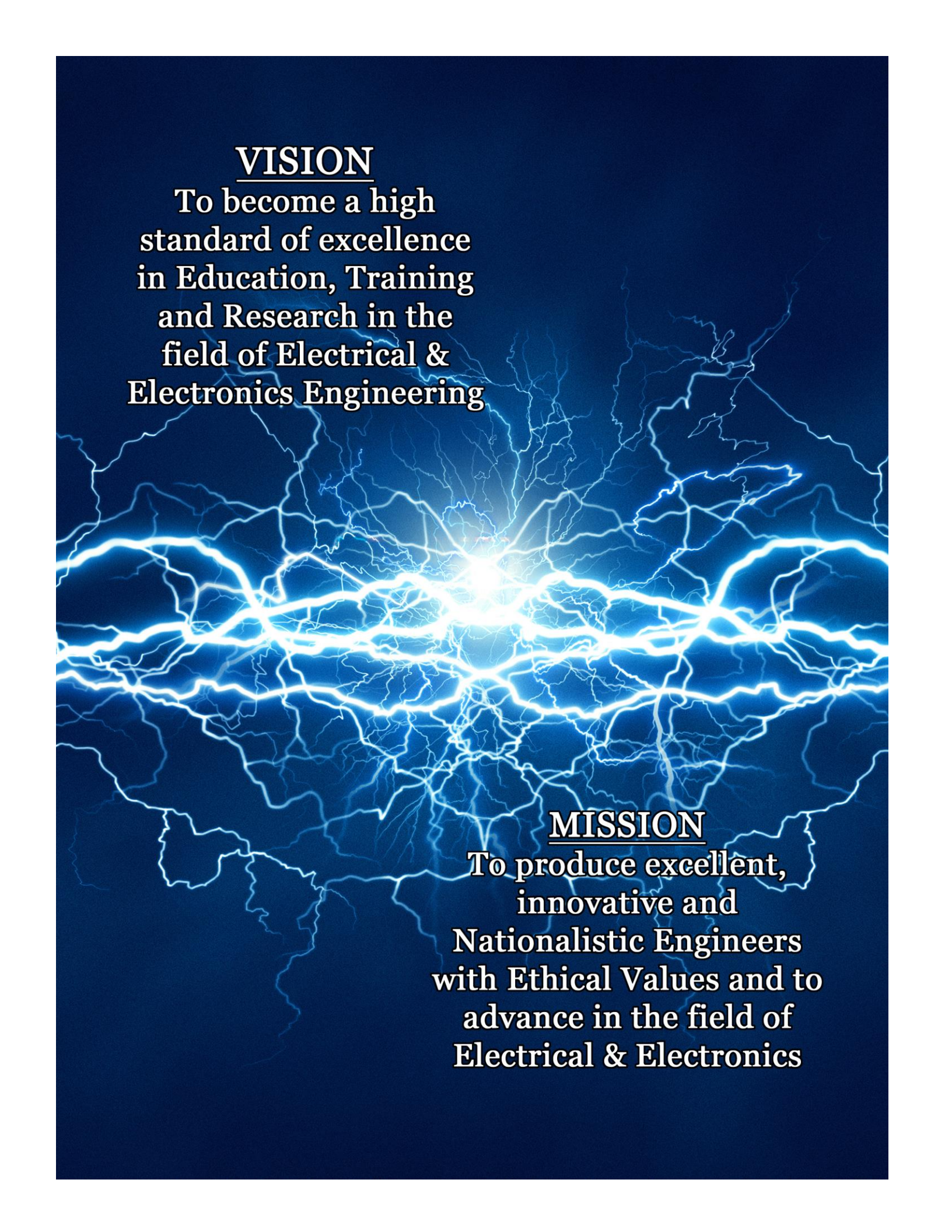
A. S. Vignesh (162902)

Abstract:

Now-a-days, road accidents are increasing day by day. This proposed system uses an RFID – Based Intelligent vehicle speed control in which the microcontroller is interfaced with Vehicle speed sensor at the receiver end. This Microcontroller in the receiver station receives the frame from the wireless module and processes this frame and imposes the maximum speed limit on vehicle in a particular area. At the transmitting end, a similar wireless module is also interfaced with the Microcontroller which acts as the transmitter. This transmitter is to be fixed at the top of the pole at the locations where speed of the automobile needs to be controlled.

Efficient Power Extraction from Solar Panel using Variable Controller

Solar panel has been used to generate the electricity in recent years. Solar panels convert solar energy into electrical energy. Large number of solar panels is connected together and is connected to the power grid after conversion. The solar panels produce electric power at maximum efficiency when the solar panels are perpendicular to the sun. So in order to improve efficiency or to produce more power efficiently through solar panel, they have to be positioned towards the sun. For executing this, the servo or stepper motor can be used to position the panels, the LDRs can be used to detect the sun light direction and microcontroller can be used to control the servo or stepper motor based on LDR signal. In this project the panels are positioned using LDRs, RTC and Maximum power angle. If the panels are positioned perpendicular to the sun, the power produced will be 40% more than the fixed position panels. The control for the panels will be automatically selected by the microcontroller based on the conditions. We are using ARDUINO microcontroller for executing this project. We can control the more solar panels by using single motor.



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WE-DIOD V.5



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MESSAGE

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(Head of the Department – EEE)



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VISHNU VARDHAN J G (142105, V-C)	Article Grammar & Spelling Check

ACCIDENT PREVENTER USING HELMET

P.Meena Priya Dharshini (132051)

J.Meriba Cecili (132032)

T.Muthumathi (132023)

Abstract:

The impact when a motorcyclist involves in a high speed accident without wearing a helmet is very dangerous and can cause fatality. Wearing a helmet can reduce shock from the impact and may save a life. There are many countries enforcing a regulation that requires the motorcycle's rider to wear a helmet when riding on their motorcycle, Malaysia is an example. With this reason, this project is specially developed as to improve the safety of the motorcycle's rider. For achieving this, a push to on switch is inserted in the helmet. When the push button is on, the load gets operated (motor cycle's engine). This is wired connection process.

SMART ENERGY METER

Balamurugan.M (132062)

Dhanushkumar.G (132014)

Harishankar.L (142904)

Ambrish Babu.S (132103)

Abstract:

Peoples are consuming too much of energy in peak hours and they didn't know that whether they turned off all loads while they go out. Our ultimate aim to create a smart energy meter that will show how much energy they consume and automating the process of on and off and it will show an alert to the consumer if they consume more energy in peak hours. By this concept the energy rate and consumption will get reduce. By a socialistic view we have designed this energy meter to the current tariff. After a certain rate reached this meter will shows the bill amount also. And we implemented our project in a mobile app too. By this the alerts will come to our mobile phone and we can control it. We can see the energy details in an LCD display and in a mobile phone too. By our project we planned to show the energy consumed and the rate, bill amount according to the tariff and the supply voltage and current.

CAMERA MOTION CONTROL

R.R.Priyanka (132031)

M.Perianayagi (132005)

S.Navaneetha (132026)

Abstract:

In this project we have designed a camera capturing unit. In this we have programmed Arduino the delay time of the camera capturing. We have used two stepper motor one for the camera driving and other for the normal motor drive. Here micro stepping is done for the camera motion. Here the camera is made to be rotated in different directions and the object is captured.

VIRTUAL CONTROL ROOM USING LABVIEW and MYDAQ KIT

Kaleeswari M (132073)

Kokila A (132050)

Kathun sarifa M (132033)

Abstract:

Now a days the entire field, we use and in need of virtual controlling without intervention of mankind. This Project is about monitoring and controlling of the parameters like transformer oil level detection, Relay presetting value, temperature level in boilers, water level in the automatic irrigation and wherever we are in need of the presets value exceeding indication automatically by using LABVIEW software and MYDAQ kit. The MYDAQ establishes the connection between the sensors and transmits the acquired information to the LABVIEW coding, in there we built the vi (MYDAQ assistant palette through MYDAQ). The monitoring and control system is featured with satisfactory automation, intelligence and plots the performance of the system stability in the bode plot, pole zero plot for system stability analysis each and every seconds. So, we can know the occurrence of fault with time. The system can be used for evaluation of industry environment and bring out the basis for modern Industry. Through this, we can visualize realistic equipment operation and about the dynamic behavior of the system in industrial level. Our project describe that the system has higher efficiency for the real-time monitoring and controlling without intervene of the mankind.

WIRELESS ELECTRONIC NOTICE BOARD USING GSM

K.Vasumathi (142062)

S.K.Ramya (142053)

S.Ponmanipriya (142039)

R.S.Nandhini (142030)

Abstract:

This project explains us on how to design a wireless electronic notice board using GSM Technology. The GSM modem is interfaced with the 8051 controller. The basic principle of this project is that, when we send any message from the mobile, GSM modem which is arranged at the display unit receives the message. Now the controller reads the message from the GSM modem and displays the content on the LCD.

STRESS INDICATOR USING SKIN RESISTANCE

T.G.Meena (142919)

S.Prathibah (142907)

M.Kowsalya (132069)

M.Kowsalya (132012)

Abstract :

Stress is a term that refers to the sum of the physical, mental and emotional strains on a person. Physiological or biological stress in an organism response to a stressor such as an environmental condition. According to a stressful event, the body's way to respond to stress is by sympathetic nervous system activation which results in the fight or flight response. In humans, stress typically describes a negative condition that affects a person's character and physiological problems. According to stress-illness theory these leads to changes in physiology and psychology. Thus the proposed project is used to indicate whether the person is in stress or not. Many social illegal activities are initiated by stress in an individual person. If their problems are identified and by providing them a proper guidance many problems may be avoidable. So the first step is to find the person who are suffered by stress. This project proposed about indication of stress within the person based on the principle of resistance level in the skin.

GREEN HOUSE MONITORING USING ARDUINO

A.Mohammed Faizal (142902)

P.Naveen Kumar (132025)

K.Manoj Kumar(142907)

M.P.Laxmen Babu(132063)

Abstract :

In today's greenhouses many parameter measurements are required to monitor and control for the good quality and productivity of plants but to get the desired results there are some important factors such as Temperature, Humidity, Light and Water which are necessary for a better plant growth. The automatic greenhouse monitoring system is very efficient for growing good quality plants. The system demonstrates the climatic changes which affects the plant in its productivity and quality. The temperature sensor is used for sensing temperature. When temperature exceeds from a defined level the system turns on the fan. And when temperature comes in normal range it turns off the fan. Humidity is measured using the humidity sensor. If humidity of environment is below the defined level it can turn on spray unit. The light intensity is measured using LDR circuit. When light intensity is low it senses and turns on light. Water supply for plants is very important for good growth. Soil moisture sensor senses the moisture and turn on the water pump. When the sensors sense any change in environment or in soil Arduino comes in action and process the required operation for growing good quality plants.

ONLINE VOICE CONTROLLED ROBOT

Mageswaran S (132060)

Parthasarathy G (132015)

Ramkumar P (132312)

Rishikesh T K (132021)

Abstract :

In this modern world, every-thing is getting closer due to the technology advancement, we have to global resources in our hand in the form of Smart phones, laptops and other gadgets. Our project is controlling a robot over the internet with voice command. The project consists of an Android Application that we have developed which recognizes the voice of user using google API, this data is stored in the server and a Raspberry pi connected along with the robot reads it and takes corresponding actions.

AUTOMATIC HAZARD SENSOR WITH ENERGY CONSUMPTION

Akila.K(132061)

Hema.R (132007)

Imyakani.B (132058)

Abstract :

There is an invention called Automatic street light controller that uses street light in efficient manner by saving energy wasted during day times. But we had made a small change in the circuit by including a PIR sensor which detects the object crossing a particular distance (30 meters considered) and thereby glowing the street lamp at particular time and by minimizing the energy consumption in more efficient way. It also includes a fire hazard sensor to prevent fire accidents in streets.

SOUND GENERATOR

S.Birundha(132011)

S.Aadhithya(132044)

Abstract :

Building circuits many times we need to generate sounds like a musical sound or some kind of altering sound. Instead of building complex circuitry, we have some use full IC to produce the sound like UM66,UM3561 etc. While UM66 have a limitation of generating only one sound, we have UM3561 which is very useful and can generate four types of sound i. e, police siren, fire brigade siren, Ambulance siren and machine Gun siren.UM3561 is very handy when we need to generate these kinds of alerting sounds and its very easy to use this IC.UM3561 works in the range of 3.5 volts, voltage higher than 5v can damage the IC,so if we are using it with other circuit or using a high voltage source, a Zener diode must be connected, to protect the IC. The output generated by the IC is not sufficient to drive a 8ohm small speaker, so to amplify the output of the IC, a transistor must be used at the output.

CRIME PATROL FOR SECURITY WITHOUT HUMAN SCOUTS

P.Dharani (132043)

Indira.G (132003)

Abstract:

The project deals with detection of any intruder into confidential places such as offices, locker rooms, secret rooms etc. Once the motion is detected a call or SMS is generated and is sent to the mobile number that is fed to the programmable microcontroller Arduino. Our project deals with Arduino controlled servo motor, upon which a surveillance camera is attached to the shaft of the motor. As and when the motion

is detected an SMS will be sent to the mobile number registered with Date and Time of intrusion and the Motor turns to the direction where the motion is being detected. The project is extendable by developing an application using Android for controlling the motion and recording the history on a periodical basis.

SMART ENERGY METER

JR. Aravindh(132306)

Karthik vikram K.G.K. (132040)

Dinesh kanna B.(132041)

Abstract :

Today there is a great deal of interest in the development of gas monitoring systems for application of gas leaks, detection of harmful gases in mines, home safety, exhaust gas monitoring etc. In all this fields of investigation, a key matter is the need of flexible and practical virtual instruments, a way to easily expose the gas sensors to hazardous levels of gas concentration. This project presents a conceptual architecture for a versatile, flexible, cost efficient, portable system for monitoring the gas presence in the air. The software platform – in terms of virtual instruments – is developed under LabVIEW programming environment and to be specific VI technologies. The main advantage of this project is the identification of the hazardous gases which can lead to destruction due to their combustible property. Extinguishing the fire is based on the fire source. We have to implement correct method or else it may lead to a new un-intensive problems. We are about to develop the project in future so that fire is extinguished based upon the source automatically.

TRANSMISSION LINE FAULT DETECTION AND INDICATION THROUGH GSM

M.Sudharsan (142043)

A.R.YuvarajaSrinivasan (142109)

B.SuryaPraksh (142304)

K.Vadivarasan (142054)

Abstract :

One of the 8051s many powerful features is its integrated UART, otherwise known as a serial port. The fact that the 8051 has an integrated serial port means that you may very easily read and write values to the serial port. If it were not for the integrated serial port, writing a byte to a serial line would be rather tedious process requiring turning on and off of the I/O lines in rapid succession to properly “clock out” each individual bit, including start bits, stop bits and parity bits. Instead, we simply need to configure the serial ports operation mode and baud rate. Once configured, all we have to do is write to an SFR to write a value to the serial port or read the same SFR to read a value from the serial port. We do not have to worry about transmission at bit level, which saves us bite a bit of coding and processing time. In this project, we are

using one Temperature sensor, ADC, Microcontroller 8051, LCD) for displaying the faults and parameters, GSM board used to send the fault message to electricity board. By this project, we can detect the multiple faults of three phase transmission lines one can monitor the Temperature, Voltage, Current by means of GSM modem by sending message.

STAIRCASE POWER GENERATION USING PIEZO-ELECTRIC TRANSDUCERS

R.YOKESH WARAN (152927)
S. RAFIC BASHA (152909)
B.VIJAY (152913)
M.VIVJAY PANDI (152917)

Abstract:

With the decrease in energy consumption of portable electronic devices, the concept of harvesting renewable energy in human surrounding arouses a renewed interest. In this context, we are proposing the prototype of a piezoelectric generator that harvests mechanical vibrations energy available on a Staircase. Embarked piezoelectric transducer, which is nanoelectromechanical converter, undergoes mechanical vibrations therefore produce electricity. A static converter transforms the electrical energy in a suitable form to the targeted lighting application.

GAS LEAKAGE DETECTION & AUTO ON-OFF GAS SYSTEM

R Saravana Kumar (142055)
M.Sathish kumar (142052)
V.Suriya kumar (142006)
S.Vivek ram (142002)

Abstract :

This system helps us to upgrade our safety standards, comply statutory requirements on environmental commitments and most important and basic function being prevent accidents and protect life and property from disaster. The LPG Kit installed is many times installed inside the car creating possibilities of large accidents. The primary objects of the present project to provide a novel means for safely detecting any malfunction of a pressurized gas system in order to prevent accumulation of combustible gases so that damage or explosion due to such an accumulation of gases is prevented. Ideal sensor for use to detect the presence of a dangerous LPG leak in your car or in a service station, storage tank environment. This unit can be easily incorporated into an alarm unit, to sound an alarm or give a visual indication of the LPG concentration. The sensor has excellent sensitivity combined with a quick response time. The sensor can also sense iso-butane, propane, LNG and cigarette smoke. If the detected gas is LPG, Butane and propane which is heavier than normal air, Install the gas leak alarm about 1.00 meter above the ground, adversely,

For the Natural gas, Methane, coal gas, and CO, which is lighter than the normal air, install gas leak alarm about 1 meter below the roof, Both of them are should be with good air circulation.

EMBEDDED BASED VEHICLES SPEED CONTROL SYSTEM IN SMART ZONE

Abstract:

This paper aims at automatically controlling the speed of vehicles at speed restricted areas such as schools, hospital zones etc. Nowadays the drivers drive vehicles at high speed even in speed limited areas without considering the safety of the public. The traffic police are not able to control them with full effect. Also it is not practical to monitor these areas throughout. This paper paves way for controlling the speed of the vehicles within certain limit in restricted zones without interruption of the drivers. An RFID is used for this purpose. The RFID reader is attached along with the vehicle and the RFID Tag with these Zones. These tags are programmed to send a coded signal when the reader comes in proximity. Whenever the vehicles enter into these zones their receivers will receive this code and the speed of the vehicles is controlled automatically with the help of the micro controller unit present inside the vehicle. The tags are placed at the beginning and the end of the regions for which the speed should be reduced.

EMBEDDED VEHICLE FOR BLINDPEOPLE.

G.V.Saiganga (142023)

K.S.Srinivasan (142018)

N.Naveen kumar (152902)

Krishna kumar (152919)

Abstract:

Blind people are struggled to walk in the road, bus stand and struggled to drive ordinary bike or cars. So they needed some system without usage of human vision power. So this vehicle will be very useful for them. This vehicle completely controlled by the embedded system. Here the Arduino board is used to control the vehicle which means here DC motor are control by the user instruction through the program. Here the program designed to control the DC motor and ultrasonic sensor for the required operation. And also from this kind of vehicle we can avoid the accidents. And blind people can be drive this vehicle easily. And before drive this vehicle we are supposed to instruct the board through the program.

SOLAR ENERGY BASED ELECTRICAL POWER CONSUMPTION FOR HOME APPLIANCES

T.L. Santhana krishnan (132024)
S. Syed Abdullah (142918)
M. Yokesesh (132308)

Abstract:

Solar energy is an abundant and renewable energy source. The annual solar energy incident at the ground in India is about 20,000 times the current electrical energy consumption. This project will be having the same process for the extraction and conversion of solar energy. The only new feature is that, when EB power is available the solar panel charges the battery and share some of the power with the line. When the charge in the battery is full, the solar and battery together share most of the loads and cut the main line, until the half of the battery power. When the battery power drains to half, the same process continues. This reduces the EB bill as it shares the load and charges the battery only by solar power. The project prototype will contain a solar panel, battery, power converter and controller for switching between the sources. This can be developed in real-time which motivates everyone to use the solar power, as it reduces the bill for power.

SOLAR BATTERY CHARGER

A.Vanmathi (132022)
M.Veeralakshmi (132039)
V.Vivitha (132030)
M.Shalini (132006)

Abstract :

Solar concept is not new for us. As non-renewable energy sources are decreasing, usage of solar energy is increased. This solar energy is not only used on the Earth but also used in space stations where no electrical power is available. The objective of this project is to charge the cell phone with the help of solar power. This project acts as instant charger. This project is used in important places such as petrol bunks, bus stand, railway station and outside of the home and so on. Here is the simple circuit to charge 12V, 1.3Ah rechargeable Lead-acid battery from the solar panel. This solar charger has current and voltage regulation and also has over voltage cut off facilities. This circuit may also be used to charge any battery at constant voltage because output voltage is adjustable.

AUTOMATED UNMANNED RAILWAY LEVEL CROSSING SYSTEM

S.Varshitha (132019)
G.Siva sakthi (142901)
G.Shanthini (132047)

Abstract:

In the rapidly flourishing country like ours, accidents in the unmanned level crossings are increasing day by day. Our project deals with automatic railway gate operation (i.e.,) automatic railway gate at a level crossing replacing the gates operated by the gatekeepers. It deals with two things. It provide safety to the road users by reducing the accidents. By employing the automatic railway gate control at the level crossing the arrival of the train is detected by the sensors placed near to the gate. Other implementations in this project include the use of light of specific wavelength to detect the obstacles in the path. The operation is automatic. Automatic railway gate control is highly microcontroller based arrangements, designed for use in almost all the unmanned level crossing in the train. Using simple electronic components, we have tried to automate the control of railway gates. When the wheels of the train move over, both tracks are shorted to ground and this acts as a signal to the microcontroller indicating train arrival.

OPERATION OF DC MOTOR AS STEPPER MOTOR (PWM)

M.Kathirvel (132018)
K.S.AjithKumar (142915)
M.Dhinesh (132310)

ABSTRACT :

Here we are going to interface a DC motor to Arduino UNO and its speed is controlled. This is done by PWM (Pulse Width Modulation). This feature is enabled in Arduino, to get variable voltage over constant voltage. The method of PWM is explained here consider a simple circuit as shown in figure.

BOOST CONVERTER

R.Rasukutty (142933)
K.Veerapathiran (132034)
D.Sasikumar (142914)
K.Senthilkumar (132037)

ABSTRACT:

In modern world saving electric power is an essential criterion. So in order to save electric power and to feed outputs to two or more loads or homes we have designed a boost converter. Using this boost

converter, we can step up the input voltage. This boost converter would be very helpful in situations where very small input voltage is available. We have built this boost converter at a very low cost using LC circuit. Thus low cost circuit used for meeting high demands where input is very low is a big boon to the society.

LAND MINE DETECTOR BY USING ARDUINO

Srinivasan .J (132108)

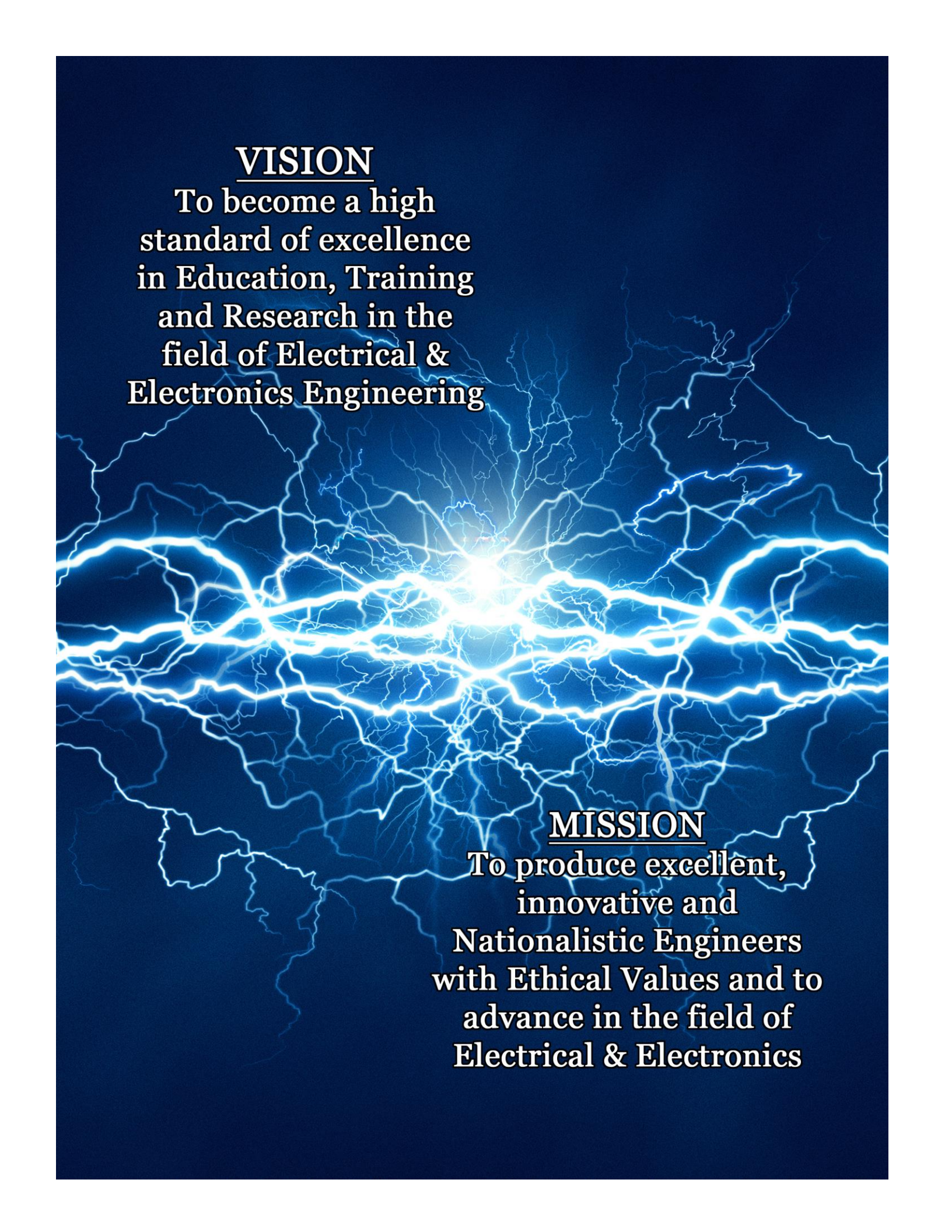
Vineeth Kumar .R (132106)

Saravanan .T.S (132101)

Singaraja .K (132059)

ABSTRACT:

“Land mine detector is a mini robot which is used to find the land mines in different places. In this robot can be easily controlled by Arduino microcontroller. During the critical situation areas, it is detect the landmine in that region. When it operates, it gives the signal to controller which helps to the user can identify wheatear the landmines are present or not. If the land mines are present, then it produces the alarm signal. It’s compact in size and also less weight.



VISION

To become a high
standard of excellence
in Education, Training
and Research in the
field of Electrical &
Electronics Engineering

MISSION

To produce excellent,
innovative and
Nationalistic Engineers
with Ethical Values and to
advance in the field of
Electrical & Electronics