Vidyalankar Polytechnic

V-ideas

Department of Electronics & Telecommunication Engineering

2016-17

Be sure with

Vidyalankar

Since 1960

Preface

Vidyalankar is a 'Sanskrit' word combining two words Vidya + Alankar. Where Vidya means knowledge and Alankar means Ornament, the essence being that 'knowledge is the true ornament of a progressive mind'.

Vidyalankar Polytechic is one of the leading college in Mumbai, approved by AICTE,DTE Maharashtra state and Affiliated to MSBTE. It offers under graduate courses in engineering.

Vidyalankar Polytechnic was established by Vidyalankar Dyanapeeth Trust in 2002 under the dynamic leadership of Shri. C. S. Deshpande with the aim of imparting Technical Education in various fields of Engineering and Technology. It is located at the heart of Mumbai at Wadala(E).

Courses offered are Electronics and Telecommunication Engineering, Information Technology and Computer Engineering.

The college has excellent infrastructure for Class rooms, Technical library, Laboratories and latest computing facilities.

Vidyalankar Polytechnic

Vision

To achieve excellence in imparting technical education so as to meet the professional and societal needs.

Mission

- Developing technical skills by imparting knowledge and providing hands on experience.
- Creating an environment that nurtures ethics, leadership and team building.
- Providing industrial exposure for minimizing the gap between academics & industry.

Principal Speak

Vidyalankar Polytechnic has always believed in providing quality technical education to the student who aspire to become skilled engineers .

We at vidyalankar put forth for students a challenging ground; tracking them to learn and imply in their career and professional future. Emphasizing to skill and develop their opportunity to widen their innovative horizon.

V-Ideas is compilation of final year student's project ideas that have been processed and developed after fine scrutinizing and tuning by subject expertise. The selected projects were much appreciated by the judges boosting the morale of students.

Technovation the exploration of technology and innovation is the annual project exhibition and competition organised by Vidyalankar Polytechnic for final year students of various branches. Technovation enables students to exhibit and display their innovative skills, thus giving them an opportunity to manifest their hidden skills and ideas. This platform has privileged the students to think in new areas of their skills and present it in the best possible way.

V-ideas culminates V-Technovation 2017

"All of us do not have equal talent. But , all of us have an equal opportunity to develop our talents." - A.P.J Abdul Kalam

Vidyalankar Polytechnic has always believed in inculcating a synergetic and academic culture in its students, one that encourages them to be innovative and to be passionate about taking their ideas ahead.

V-Ideas are a collection of the final year project ideas of our students that have been nurtured after much rational thinking, fine-tuning and accurate reflection from teachers, guides and subject experts. The ideation stage is quite different from actual implementation; it is comparable to the transition from form to format, the regulated flow of ink from a nib which produces the actual writing. The Institute initiated an innovative idea of assembling the project ideas and transferring them into a hardcover book known as V-Ideas. This collection of projects acts as a future reference for First, Second and Third year students.

As a part of curriculum, students of diploma undertake a project related to their field and demonstrate the knowledge and skills gained on the subject of their choice. Students also take industry based projects for better and live exposure with the industry. The projects selected by the panel of experts are ii regularly monitored by the project guides. The innovative and creative projects are projected in V-Technovation. The projects won many awards at various competitions at other institutes.

V-Technovation provides a platform to diploma students to compete, interact and excel.

Glimpses of V-Technovation 2017

Department of Electronics & Telecommunication Engineering

Vision

To produce Electronics and Telecommunication engineers capable of effectively using technical knowledge and interpersonal skills to benefit the industry and society.

Mission

- Providing state of the art facilities and conducive environment enabling the students to sustain the challenges in the field of Electronics and Telecommunication.
- Educating the students to face the competitive world, develop leadership skills and to instill discipline and ethics.
- Promoting industry institute interaction.

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Department : Electronics & Telecommunication Engineering

Project Title : **AUTOMATIC WIRELESS HEALTH MONITORING SYSTEM**

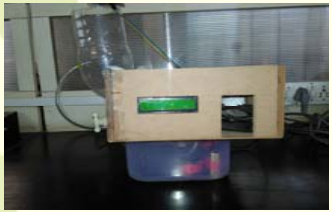
Domain (Area of Project) : **Wireless Communication**

Name of Project Guide : **Prof. Servesh Gupta**

Name of Students : Yugant Khedekar
Parmesh Patil
Gaurang Sonkavde
Ishiyaque Khan

Brief idea of Project : India is a developing nation. So every possible public facility is getting digitalized. So one of the action of digitalizing health system is proposed by us. Our Automatic Wireless Health Monitoring System is able to monitor and indicate health parameters like heart rate, blood pressure, temperature etc. at home and details will be send to the doctor through wireless system. So it will save time and provide effective health solution to the patient.. So this application will be able to support healthy India mission.

Screenshots of the Project / Photos of Working Model (Min.3):



Applications: Used to maintain And monitor health at home.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **E – UNIFORM**

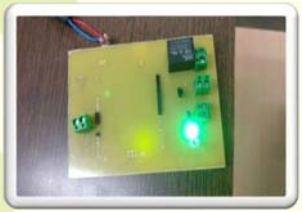
Domain (Area of Project) : **Wireless Communication**

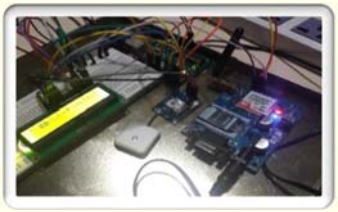
Name of Project Guide : **Prof. Servesh Gupta**

Name of Students : Abhishek Shinde
Vedant Shinde
Siddesh Nare
Sushant Parab

Brief idea of Project : E- Uniform (Suit) which gives better protection to the soldier's who are working to the extreme weather conditions. A conventional battery charging unit also for giving supply to the circuitry. Arduino Mega is the heart of the circuit as it control all the functions. Also the E – Uniform circuit is provided with the location tracking functioning which enable to control room to locate a specific soldier and have updates of the movement of soldier's.

Screenshots of the Project / Photos of Working Model (Min.3):





Applications: Army Applications

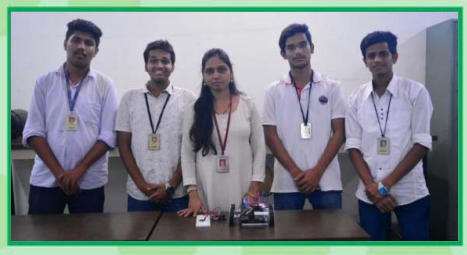
Used to maintain And monitor health at home.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **GESTURE CONTROL ROBOT**

Domain (Area of Project) : **Wireless Communication**

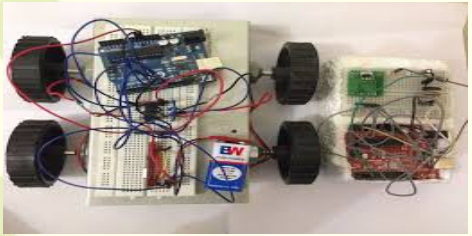


Name of Project Guide : **Mrs. Sheetal Shelar**

Name of Students : Kedar Vichare
Sarvesh Purohit
Yash Aswekar
Chinmay Dhuri

Brief idea of Project : Gesture control robot is a robot which can be controlled by simple gesture. The user just needs a gesture device which includes a sensor. The sensor will the movement of hand in a specific direction which will result in the movement of robot in the respective direction.

Screenshots of the Project / Photos of Working Model (Min.3):



Applications:

- Gaming zone just the play station, Xbox.
- Useful to military and high security bases.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **LANDSLIDE DETECTOR**

Domain (Area of Project) : **Wireless Communication**

Name of Project Guide : **Mr. Pratik Tawde**

Name of Students : Karan Vaishya
Ismail Khan
Ishtiyaque Pathan

Brief idea of Project : Environmental disasters are largely unpredictable and occur within short spans of time. Therefore technology has to be developed to capture relevant signals with minimum monitoring delay.
Landslides detectors are one of the cutting edge technologies that can quickly respond to repaid changes of data and send the sensed data analysis center in areas where cabling is inappropriate.

Screenshots of the Project / Photos of Working Model (Min.3):

Applications:
For the responsible decision maker the software system detect regions with the high danger with respect to landslide events and generates a worming message from the corresponding region.
It allows the decision maker to take measurement from the protection of the citation.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **PICK & PLACE ROBOT**

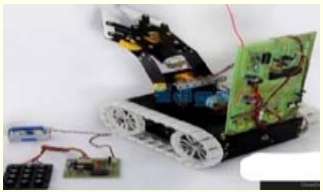
Domain (Area of Project) : **Wireless Communication**

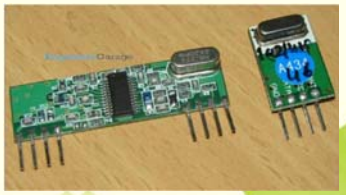
Name of Project Guide : **Prof. Shrinivas Paivarnekar**

Name of Students : Aditi Bhosale
Pragati Keni
Sunny Gangar
Mrugendra Lad

Brief idea of Project : The wireless control systems have become an essential part of everyday life ranging from garage door openers to smart metering systems. The communication in such systems involves transfer of information from a controller to a remote robot without any physical connections. A pick and place robot is the one which is used to pick up an object and place it in the desired location. At present, the RF communication is very important to transfer information over a short distance. This RF technology enables public or private radio communications with wireless networking features.

Screenshots of the Project / Photos of Working Model (Min.3):





Applications:
Robotic vehicle to do work PICK AND PLACE application

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **NFC BASED ADVERTISING AND REALTIME BUS LOCATION SYSTEM**

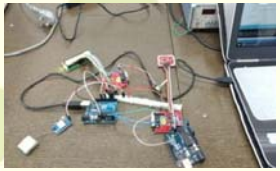
Domain (Area of Project) : **Wireless Communication**

Name of Project Guide : **Prof.Rohit Sharma**

Name of Students : Nish Varma
Suraj Patil
Abhijit Surose
Omkar Shete

Brief idea of Project : In today's advertisement sector various techniques use for marketing the products such as hoardings, newspaper advertisement, pamphlets , digital advertisement so our system so our system ids use to enhance the level of marketing by using latest technologies such as NFC (Near Field Communication).
In sub urban areas there are large no of people who commute by bus transport. So it is observed that most of the time the bus does not come on time due to the traffic jams, so in this situations it causes inconvenience to the passengers, so our system saves the time of passenger by showing them the current bus location by which they want to travel. For this purpose our system uses modern technologies like GPS, Serial Data Links etc.

Screenshots of the Project / Photos of Working Model (Min.3):



Applications:
1. This device is used for real time Bus Location.
2. NFC is also used for cashless transactions from an NFC enabled phone to a swiping machine.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-
Certification for Industrial Project by LARSEN & TOUBRO

Department : Electronics & Telecommunication Engineering

Project Title : **SELF BALANCING ROBOT**

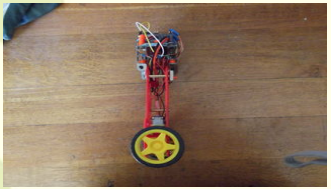
Domain (Area of Project) : **Wireless Communication**

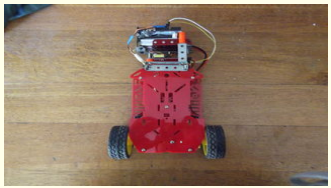
Name of Project Guide : **Mr. Rohit Sharma**

Name of Students : Prashant Sinha
Zainuddin Parkar
Abhishek Zope
Chitrans Singh

Brief idea of Project : Two wheel self-balancing robot is development in the field of robotics. This self-balancing robot is actually based on the concept of Inverted pendulum theory. This type of robot has gained fame and interest among researchers and engineers because it utilizes such a control system that is used to stabilize an unstable system using efficient microcontrollers and sensors.. These types of robots can effectively work in non-uniform surfaces due to their balanced control system. Self-Balancing Robot.

Screenshots of the Project / Photos of Working Model (Min.3):





Applications:
1. Intelligent gardener in agricultural fields.
2. Autonomous trolley in hospitals.
3. Healthcare applications or an intelligent robot to guide blind or disable people

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **SURVEILLANCE USING MOBILE CELLULAR SYSTEM**

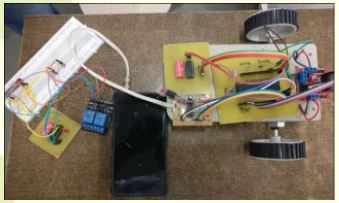
Domain (Area of Project) : **Wireless Communication**

Name of Project Guide : **Mrs. Sandhya Kumar**

Name of Students : Shreyas Manjrekar
Saurabh Rawool
Siddesh Mane
Kaustubh

Brief idea of Project : Conventionally, wireless-controlled robots use RF circuits, which have the drawbacks of limited working range, limited frequency range and limited control. Use of mobile phone for robotic control can overcome these limitations. In the project the robot is controlled by a mobile phone that makes a call to the mobile phone attached to the robot. In the course of a call, if any button is pressed a tone corresponding to the button pressed is heard at the other end called 'Dual Tone Multiple frequency' (DTMF) tone.

Screenshots of the Project / Photos of Working Model (Min.3):



Applications:

1. This project can be used in Military, for security purpose in industries, to server specific purpose.
2. In discrete area where no human being can be reached.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **2D PRINTER USING CNC.**

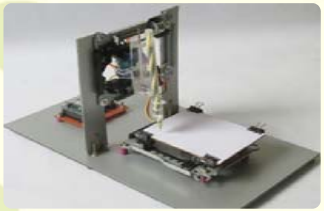
Domain (Area of Project) : **INSTRUMENTATION & CONTROL SYSTEM**

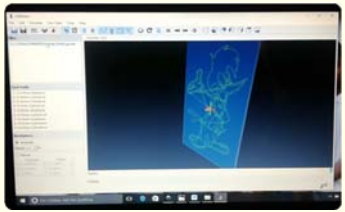
Name of Project Guide : **Rupali Bhosale**

Name of Students : Dhawal Mishra
Siddesh Dhuri
Omkar Dhumal
Liam Fernandes

Brief idea of Project : Our **Project 2D Printer using CNC** is very useful in today's Revolutionary and Dynamic era of Industrialisation. It is a fusion of Electronics and Mechanics which enables us to Drilling, Milling, and Printing with flexibility and Efficiency. Today CNC is widely used in almost every Industry successfully.

Screenshots of the Project / Photos of Working Model (Min.3):





Applications:

- In Automobile Industries
- Metal Extraction and carving industries
- CNC in Hydraulics work hold designing applications

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **AUTOMATIC WASTE MATERIAL SEGREGATION USING PLC**

Domain (Area of Project) : **INSTRUMENTATION & CONTROL SYSTEM**

Name of Project Guide : **Prof. Imran Sayyed**

Name of Students : Maithili V. Kale
Trushita Kalekar
Shweta Gade
Omkar Kale

Brief idea of Project : In our following project the material to be separated is been kept one by one on the conveyer belt. The different sensors used in the system will detect particular material and will send the signal to the PLC. The PLC will receive the status of the inputs and will generate signals depending on the particular material. To push the material in their respective bin, gear and pinion assembly are been used which will generate signal from PLC through 4 Relay cards.

Screenshots of the Project / Photos of Working Model (Min.3):

Applications:

1. Can be used for Garbage settlement in large industries, factories or at Mill place.
2. Segregating plastic from the whole waste can prevent rise of globalization and help the re-cycling process of plastic to take place.
3. Can be used in toy making factory

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **ARDUINO BASED CIRCUIT DRAWING MACHINE**

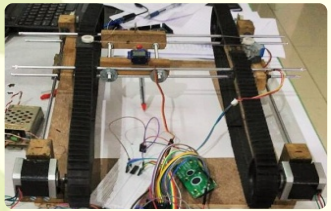
Domain (Area of Project) : **INSTRUMENTATION & CONTROL SYSTEM**

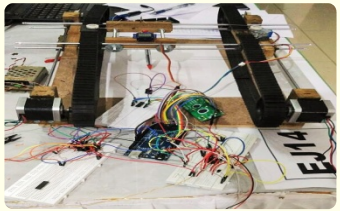
Name of Project Guide : **Mr. Shrinivas Paivernekar**

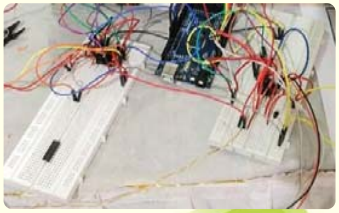
Name of Students : Sarvesh Pawar
Sanit Bhosle
Saurabh Satye
Vikrant Shelar

Brief idea of Project : The project is based on drawing different circuits or objects with the help of Arduino.It basically requires a mobile phone connected to Arduino with the help of USB cable to give input to machine. The object or circuit drawn on mobile phone or tablet hence, will be replicated on paper sheet with the help of the machine. The machine will work as per the programming feed in Arduino and the further process takes place.

Screenshots of the Project / Photos of Working Model (Min.3):







Applications:

- We can use this machine as “Earth Queck Wave Plotter” like intensity detector.
- It can be used as Heart Bit Plotter.
- It can be used in Educational field.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **CAR PARKING USING PLC**

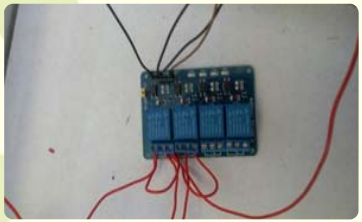
Domain (Area of Project) : **INSTRUMENTATION & CONTROL SYSTEM**

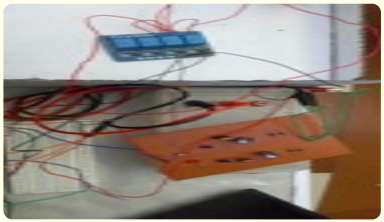
Name of Project Guide : **Mr.Imran Sayyed**

Name of Students : Abhisha Sawant
Suraj Verma
Divyang Singh
Rohan Singh

Brief idea of Project : With increasing numbers of automobile and lack of time and space ,PLC based automatic car parking system serves as a great boon for cities. Project involves a PLC,LDR based sensors ,gear and pinion assembly for gate opening and closing.
It reduces human effort to maintain a track record of cars in the parking lot and parking lots being vacant. Thereby saving time and indicating space availability for parking.

Screenshots of the Project / Photos of Working Model (Min.3):





Applications:
1. used in large industries.
2. used in small as well as large parking area.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **INTELLIGENT STREET LIGHTING SYSTEM**

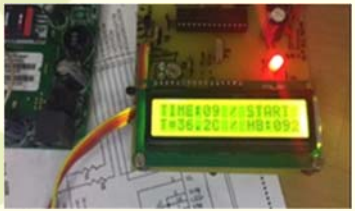
Domain (Area of Project) : **EMBEDDED SYSTEM**

Name of Project Guide : **Mrs. Anjali Gharat**

Name of Students : Swapnil Gaonkar
Sulaiman Khan
Onkar Pawar
Lavkesh Jadhav

Brief idea of Project : The public lighting is designed to meet the needs of local communities, such as the rising number of road and sidewalk traffic safety . In order to surge the efficiency, a modern street lighting control system must be able to adapt the light level intensity to determine the optimum energy consumption level. However, power wastage will happen if there is no user .
This Street Lighting Automation System is an intelligent system which provides the flexible and efficient system in order to control the street lighting autonomously

Screenshots of the Project / Photos of Working Model (Min.3):



Applications:
1. The street light control circuit can be used in normal roads, highways, express ways etc.
2. The project can also be used in parking areas of malls, hotels, industrial lighting, etc.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **Automated Toll Plaza Using RFID**

Domain (Area of Project) : **EMBEDDED SYSTEM**

Name of Project Guide : **Prof. Helina Tandel**

Name of Students : Nishant Pawar
Abhijeet Jagdale
Chandrakant Ingle

Brief idea of Project : Automated Toll Plaza System used for collecting tax automatically. In this we do the identification with the help of radio frequency. A vehicle will hold an RFID tag. This tag is nothing but unique identification number assigned. This will be assigned by RTO or traffic governing authority.

Screenshots of the Project / Photos of Working Model (Min.3):

Applications:
1. Consumption of oil is reduced.
2. Speedy transport.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **VEHICLE SPEED DETECTION ON HIGHWAY**

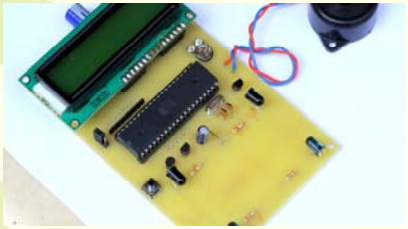
Domain (Area of Project) : **EMBEDDED SYSTEM**

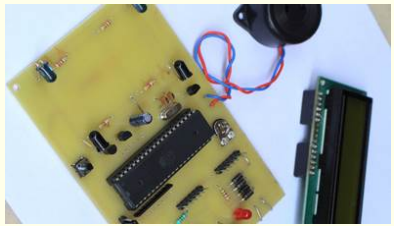
Name of Project Guide : **Prof. Arpit Bankar**

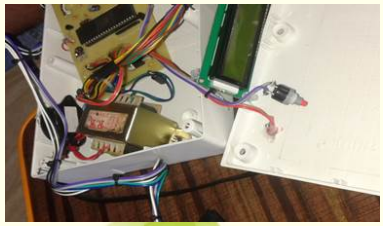
Name of Students : Faisal Khan
Vakas Kondkari
Suraj Yerim
Saqib Pawaskar

Brief idea of Project : This project is to develop a device that detects over speeding of vehicle on highways and to alerts traffic authorities in case of any speed limit violation. The system checks an over speeding vehicle or rash driving by calculating the speed of the passing vehicle using the time taken to travel between two set points(at a fixed distance) this may reduce traffic accidents.

Screenshots of the Project / Photos of Working Model (Min.3):







Applications:
1. It can be used at Highway to measure speed of vehicles.
2. It can be used to reduce accidents.
3. And also can be used to save lifes.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **AUTOMATIC WASTE SEGREGATOR**

Domain (Area of Project) : **EMBEDDED SYSTEM**

Name of Project Guide : **Mrs. Pranjali Patil**

Name of Students : Anurag Shukla
Kaustubh Kelkar
Sejal Sardal

Brief idea of Project : This project is used to separate the dry and wet waste only. And the dustbin used it gives the alarm when the dustbin is full, with the help of ultrasonic sensor and buzzer. And it is displayed on lcd also.

Screenshots of the Project / Photos of Working Model (Min.3):

Applications:

1. It used to separate dry and wet waste only.
2. The smart bin is used to notify that bin is full or empty, it keeps the area clean.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **Border Security System**

Domain (Area of Project) : **EMBEDDED SYSTEM**

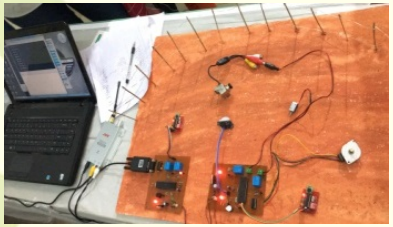
Name of Project Guide : **Miss. Tanvi Gursale**

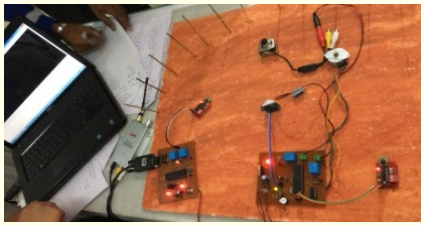
Name of Students : Aaditi Warik

Samiksha Jadhav

Brief idea of Project : The idea of the border security system is implemented specifically for the border area, but can be modified and could be used in any of the security requirements on scaling of cost and complexity. The automatic gun targeting system will enhance the border security using automation which may reduce the human efforts to large extents.

Screenshots of the Project / Photos of Working Model (Min.3):





Applications:

Home security system

This can be used in defense applications to detect the humans in war field.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **CO2 DETECTION WITH ALERT**

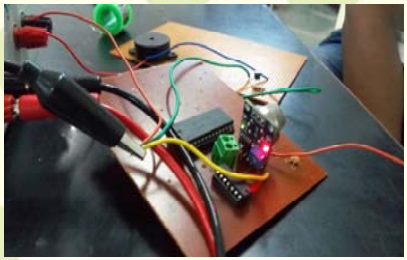
Domain (Area of Project) : **EMBEDDED SYSTEM**

Name of Project Guide : **Prof. Sneha Patankar**

Name of Students : Anuj Amberkar
Makarand Jena
Sanket Raut
Swapnil Shelatkar

Brief idea of Project : Our project aims at detecting CO2 with the help of MQ 135 gas sensor module and give alert by giving sound from Buzzer.

Screenshots of the Project / Photos of Working Model (Min.3):



Applications:
1. Domestic Air Pollution Detector
2. Industrial Air Pollution Detector
3. Portable Air Pollution Detector

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **COIN BASED WATER DISPENSER**

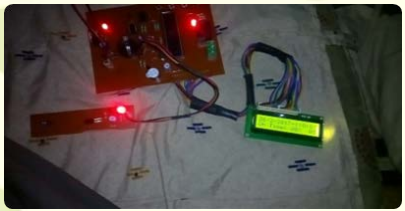
Domain (Area of Project) : **EMBEDDED SYSTEM**

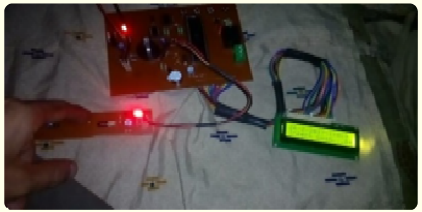
Name of Project Guide : **Mrs. Pranjali Patil**

Name of Students : Tanvi Patkar
Tejal Raul
Neha Chalke
Poonam Dhotre

Brief idea of Project : The system is capable of fully automated water/cola dispensing using motors and sensors. The system also senses if glass is placed at the counter to avoid water spoilage if there is no glass placed at the counter panel. The system uses IR sensors to detect presence of glass and then the sensors send a signal to the microcontroller.

Screenshots of the Project / Photos of Working Model (Min.3):





Applications:
1. Railway station
2. Bus stand
3. Hospitals

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **Home Automation Using Raspberry PI 3B.**

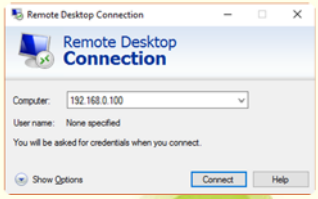
Domain (Area of Project) : **EMBEDDED SYSTEM**

Name of Project Guide : **Prof.Pranesh.Naik**

Name of Students : Param Nitin Chaughule
Sangram Vasant Patil
Mrunal Mangesh More
Jaitali Bhupesh Bhoir

Brief idea of Project : The objective of this project is for monitoring home from any room in the home For Ex. We can measure room temperature in bedroom by sitting in hall or kitchen . Not only temperature we can measure water level ,smoke detection if any gas leakage, and we can also get to know if any person has entered or house and we are in any another room using raspberry pi connected to laptop, computer or mobile via secure shell.

Screenshots of the Project / Photos of Working Model (Min.3):



Applications:

- Smart Home Systems.
- Monitoring various System in industries to check production lines using sensors. & Raspberry Pi
- Raspberry Pi can be used as an the micro computer (Affordable up to inr.2900 for latest version).

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Certification for Industrial Project by LARSEN & TOUBRO

Department : Electronics & Telecommunication Engineering

Project Title : **Home Automation**

Domain (Area of Project) : **EMBEDDED SYSTEM**

Name of Project Guide : **Miss. Tanvi Gursale**

Name of Students : Shreyas Mayekar
Shivam Shukla
Subhash Gupta
Chetan Jagtap

Brief idea of Project : Aim of the project is to develop a system based on embedded microcontroller which is used for controlling various appliances at home using gsm network and which provides a security features.

Screenshots of the Project / Photos of Working Model (Min.3):

Applications:

- Appliances Control.
- Security System.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-
Certification for Industrial Project by LARSEN & TOUBRO

Department : Electronics & Telecommunication Engineering

Project Title : **LED SCROLLING DISPLAY**

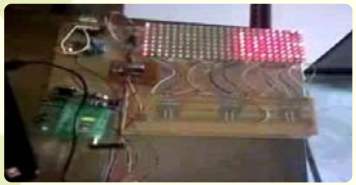
Domain (Area of Project) : **EMBEDDED SYSTEM**

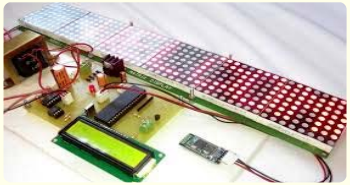
Name of Project Guide : **Mrs: Anjali Gharat**

Name of Students : Rohan Talavdekar
Santosh Patneka R
Chetan Kondhalkar

Brief idea of Project : Nowadays, uses of LEDs are increasingly made in many applications as a replacement for traditional light bulbs. It is a way of visual information where large LCD and other display become too much expensive. The displays are commonly seen single colour or having 2 or 3 colours. This system supports an efficient and scalable approach to LED displays. This system is comprised of a red colour matrix display panel. It also includes an executive program that runs on the PIC microcontroller for the display control of data information on the display board. LEDs provide several advantages over traditional light bulbs, such as small size and longer life

Screenshots of the Project / Photos of Working Model (Min.3):





Applications:

- Display Board for Railway station, banks.
- Can be used in historical places to display basic information of the place

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-
Certification for Industrial Project by LARSEN & TOUBRO

Department : Electronics & Telecommunication Engineering

Project Title : **LIBRARY ASSISTANT ROBOT**

Domain (Area of Project) : **EMBEDDED SYSTEM**

Name of Project Guide : **Mrs.Sandhya Kumar**

Name of Students : Shreyas Kulkarni
Anuj Mokal
Sumeet Chavan

Brief idea of Project : We are using QR codes using IR sensor and according to the pattern of QR code the robot will keep the book in that particular row and column. It is mainly targeted on the book identification and reducing the human work. A robot is any automatically operated machine that replaces human effort. After issuing the book, librarian scans the codes which represent the row & column. Then the librarian places the book on the robot & robot travels to the shelf and places the book. After placing the book robot travels to starting position.

Screenshots of the Project / Photos of Working Model (Min.3):

Applications:

- It is used in library which helps librarian to keep books in respective shelf.
- It is used in industries to supply various parts or instruments to a person.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **MOBILE PHONE DETECTOR USING MICROCONTROLLER**

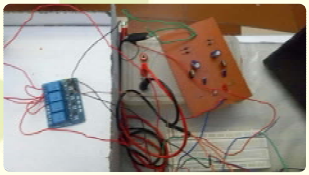
Domain (Area of Project) : **EMBEDDED SYSTEM**

Name of Project Guide : **Mrs. Madhavi M**

Name of Students : Nishad Tapse
Sankalp Kallianpur
Sohan Shinde

Brief idea of Project : As increase in the technology in the world using the electronic equipments are being used in a wrong way like, in the examination halls and confidential rooms. To avoid this we are introducing a project called **MOBILEPHONE DETECTOR USING MICROCONTR- OLLER**. This handy, pocket-size mobile transmission detector or sniffer can sense the presence of an activated mobile phone from a distance of one and-a-half meters. So it can be used to prevent use of mobile phones in examination halls, confidential rooms, etc. It is also useful for detecting the use of mobile phone for Spying and unauthorized video transmission. The circuit can detect the incoming and outgoing calls, SMS and video transmission even if the mobile phone is kept in the silent mode. The moment the Bug detects RF transmission signal from an activated mobile phone, it starts sounding a beep alarm and the LED blinks. The alarm continues until the signal transmission ceases.

Screenshots of the Project / Photos of Working Model (Min.3):



Applications:

- It is used in library which helps librarian to keep books in respective shelf.
- It is used in industries to supply various parts or instruments to a person.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **Autonomous water robot**

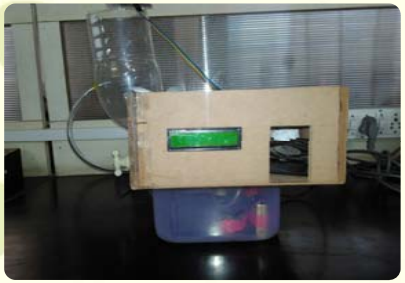
Domain (Area of Project) : **EMBEDDED SYSTEM**

Name of Project Guide : **Prof. Monica More**

Name of Students : Shriya Swami
Rushikesh Avate
Varad Borekar

Brief idea of Project : An **autonomous robot** is a **robot** that performs behaviours or tasks with a high degree of autonomy, which is particularly desirable in fields such as spaceflight, household maintenance (such as cleaning), waste water treatment and delivering goods and services.

Screenshots of the Project / Photos of Working Model (Min.3):



Applications:
Pick and place purpose in factories

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **PRINCIPAL'S ASSISTANT**

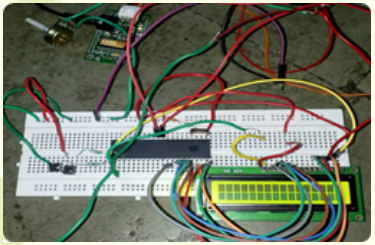
Domain (Area of Project) : **EMBEDDED SYSTEM**

Name of Project Guide : **Prof. Minal Tandale**

Name of Students : Aniket Benke
Priya Jaiswal
Siddhi Tawde
Tejas Dangare

Brief idea of Project : The text to speech module can speak out almost any text provided at the input most of the times. Hence it is an acrcuracy of above 90%. It is a microcontroller based hardware coded in embedded 'c' language. TTS converts the text into spoken voice. TTS software helps kids who have trouble in reading or visually challenged person.

Screenshots of the Project / Photos of Working Model (Min.3):



Applications:
1. Aid to vocally Handicapped.
2. Source of Learning.
3. Games and Education

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **RAIN WATER HARVESTING**

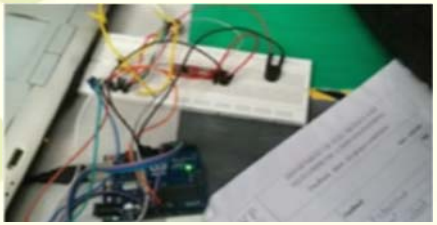
Domain (Area of Project) : **EMBEDDED SYSTEM**

Name of Project Guide : **Rupali Gaikwad**

Name of Students : Lymraina Fernandes
Muktai Sawant
Neha Dalvi
Pratiksha Nigade

Brief idea of Project : Now a days, during the rainy seasons the cultivated crops gets affected due to the heavy rain fall. The main theme of this project is that to prevent the crops from the heavy rain and save the rain water. The rain sensor and soil moisture sensor is used for the working of automatic roof. This system involves protects the crops by the auto roof which covers the whole field. The rain sensor is activated when there is a rain fall. The soil moisture sensor will sense the water level in the field. If the water level is beyond the normal level it will gives intimation to the controller. So depending upon the sensor condition it will gives intimation to the controller, GSM and it will indicate to the DC motor for roof automation. GSM is used to report the conditions in the field through SMS to the mobile phone.

Screenshots of the Project / Photos of Working Model (Min.3):



Applications:
Greenhouse plant, Farm automation

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **RFID BASED SMART TROLLEY**

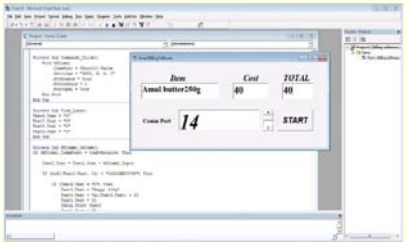
Domain (Area of Project) : **EMBEDDED SYSTEM**

Name of Project Guide : **Prof. Kalyani vaidya**

Name of Students : Mohammad Hadi
Mohammad Danish
Ashok Shitole
Shashank Gaikwad

Brief idea of Project : This project aims at minimizing congestion at checkout counters at departmental stores and shopping malls. The transaction of the products takes place at the trolley in which the customer is shopping and then the amount reflects at the check out counter with the trolley ID.

Screenshots of the Project / Photos of Working Model (Min.3):



Applications:
Remote billing.
Automated bill generation.
Managed asset and inventory control.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **RFID TOLL PLAZA SYSTEM BASED ON VEHICLES CATEGORY USING 89C51**

Domain (Area of Project) : **EMBEDDED SYSTEM**

Name of Project Guide : **Mrs. Sneha Patankar**

Name of Students : Diksha Gupta
Rajesh Kori
Tushar Mishal

Brief idea of Project : This topic is an extension to simple toll plaza system. The toll amount is charged based on the category of the vehicle driving through the plaza. The vehicle categories taken here are two-wheeler & four-wheeler. When a user scans his ID at the toll plaza, some amount is charged from his account depending upon his vehicle category. User also has the facility to recharge his account. The project has been developed by interfacing RFID with AT89C51.

Screenshots of the Project / Photos of Working Model (Min.3):

Applications:

1. RFID automated gate project can be used in Toll collection plaza on highway.
2. RFID based automatic gate can be used in octroi collection booths for faster access
3. License recognition

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **SMART AMBULANCE**

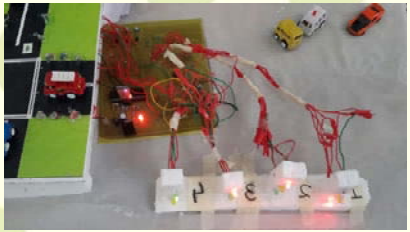
Domain (Area of Project) : **EMBEDDED SYSTEM**

Name of Project Guide : **Prof Trupti Patel**

Name of Students : Sanket Shinde
Nihant Singh
Shubham Phalke

Brief idea of Project : This project works with a Bluetooth module when traffic condition control of traffic is Given to Ambulance & with IR sensor the density of traffic is controlled.

Screenshots of the Project / Photos of Working Model (Min.3):



Applications:

1. RFID automated gate project can be used in Toll collection plaza on highway.
2. RFID based automatic gate can be used in octroi collection booths for faster access
3. License recognition

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Certification for Industrial Project by LARSEN & TOUBRO

Department : Electronics & Telecommunication Engineering

Project Title : **SMART BAG**

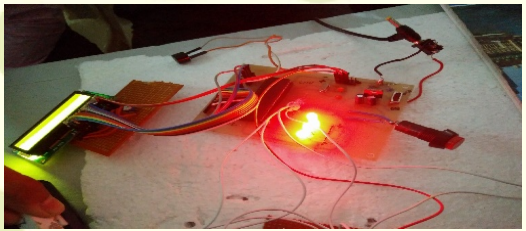
Domain (Area of Project) : **EMBEDDED SYSTEM**

Name of Project Guide : **Mr. Pratik Tawde**

Name of Students : Sanket Parkhe
Vaibhav Gurav
Rupesh Avhad
Rohit Mandavkar

Brief idea of Project : The objects and materials present in the bag, If they are lost or came out of the bag, then owner will come to know about it by the detection signals. Hence losing of materials and objects are avoided by smrtbag. The circuit of 89C51 is installed inside the bag and also connected to the LCD ,LED'S Sensors, and buzzer.

Screenshots of the Project / Photos of Working Model (Min.3):



Applications:
1. Can be use in military application.
2. Can be used by officials who deals with or handle important document, precisious things

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **SOLDIER HEALTH AND POSITION TRACKING SYSTEM**

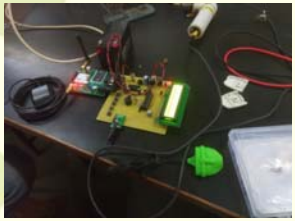
Domain (Area of Project) : **EMBEDDED SYSTEM**

Name of Project Guide : **Prof. Pranesh Naik**

Name of Students : Sanket Parkhe
Vaibhav Gurav
Rupesh Avhad
Rohit Mandavkar

Brief idea of Project : The soldier Health and Position Tracking System allows military to track the current GPS position of soldier and also checks the health status including body temperature and heartbeats of soldier. The System also consists extra feature with the help of that soldier can ask for help manually or send a distress signal to military if he is in need. The GPS modem sends the latitude and longitude position with link pattern with the help of that military can track the current position of the soldier. The system is very helpful for getting health status information of soldier and providing them instant help.

Screenshots of the Project / Photos of Working Model (Min.3):



Applications:
1. Military and aerospace embedded software applications
2. Communication Applications
3. Industrial automation and process control software

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **TIRE PRESSURE MONITORING SYSTEM**

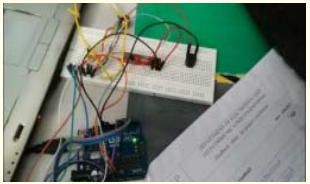
Domain (Area of Project) : **EMBEDDED SYSTEM**

Name of Project Guide : **Prof. Trupti Patel**

Name of Students : Veenithsai Adepu
Zeeshan Vanu
Vipul Mishra
Shrinath Sawant

Brief idea of Project : The purpose of the tire pressure monitoring system (TPMS) in your vehicle is to warn you that at least one or more tires are significantly under-inflated, possibly creating unsafe driving conditions. However, proper tire maintenance with the aid of a TPMS can and does help prevent many serious accidents. Due to underinflated tires, the US government passed the Transportation Recall Enhancement, Accountability, and Documentation (TREAD) Act.

Screenshots of the Project / Photos of Working Model (Min.3):



Applications:
Impact of TPMS on fuel efficiency and CO2 reduction.
Profitability of TPMS for light commercial vehicles and heavy-duty vehicles.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **ULTRASONIC BLIND WALKING STICK**

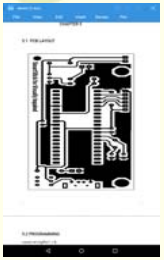
Domain (Area of Project) : **EMBEDDED SYSTEM**

Name of Project Guide : **Prof. Kalyani Vaidya**

Name of Students : Sahil Prabhune
Mrunal Jagtap
Sayali Sagwekar

Brief idea of Project : Through this proposed project we offer to give a solution which overcomes the limitations of the ordinary white cane. The ultrasonic blind walking stick is fully automated, comfortable to use and cheap. In other words, it is quite economic over the conventional method.

Screenshots of the Project / Photos of Working Model (Min.3):



Applications:
Ultrasonic Blind Walking Stick does not have any application, as it itself is an application.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **VOICE CONTROL ROBOTIC VEHICLE**

Domain (Area of Project) : **EMBEDDED SYSTEM**

Name of Project Guide : **Miss. Minal Tandale**

Name of Students : Akshay Dudhal
Akshay Jangam
Saeed Karbari
Sarang Ghatkar

Brief idea of Project : The project is based on VOICE CONTROL ROBOTIC VEHICLE. In this system a vehicle works on voice command given through an android application called AMD. Through Bluetooth module Hc-05 and given to microcontroller. Then gives command to motor to rotate(clockwise or anticlockwise)or to stop. It is easy to operate. Any one can operate it.

Screenshots of the Project / Photos of Working Model (Min.3):

Applications:
Home Automation Future Development
Wheelchairs
Surveillance Device
Military Applications

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **GSM BASED WIRELESS NOTICE BOARD**

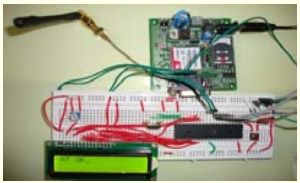
Domain (Area of Project) : **EMBEDDED SYSTEM**

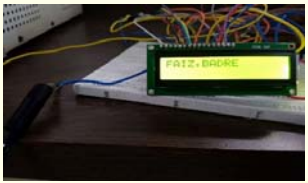
Name of Project Guide : **Prof. Arpit Bankar**

Name of Students : Bilal Shah
Shivam Shukla
Badrealam Ansari
Faiz Vora

Brief idea of Project : Nowadays conveying messages at large using notice boards are widely used ones ranging from schools to organizations. We know the significance of notice boards in public areas like bus stands, railway stations, airports and banks, etc.
But day to day changing these boards is a very difficult task and a waste of time. At present, all electronic boards are designed with a wired system. This notice board displays the information on LCD display whatever you sent from the mobile. The project displays the data on LCD whatever we sent from the mobile.

Screenshots of the Project / Photos of Working Model (Min.3):





Applications:
The applications of wireless notice board mainly include public places like bus stands, railway stations, airports, shopping malls and parks to display the information wirelessly.
This project can be used in Industries, Office, Shops, Colleges, Schools, University campus.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **E-SAVER**

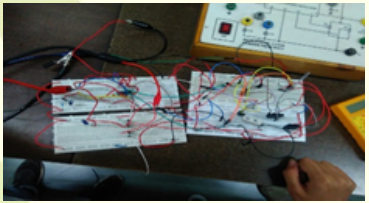
Domain (Area of Project) : **POWER ELECTRONICS**

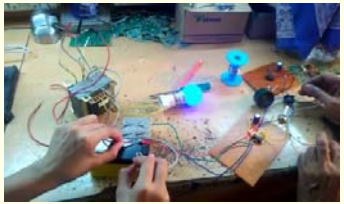
Name of Project Guide : **Ms. Madhavi M.**

Name of Students : Shaurin Karnik
Shashank Vetal
Riya Jethwa
Gauravi Phansalkar

Brief idea of Project : As the project name suggests it is a battery storage system in which the energy from the solar panel (i.e. DC) is stored into rechargeable battery. This energy is given to instruments which work on AC through INVERTER. Inverter is a device which converts DC into AC with variable frequency. Rechargeable battery is used as backup when supply from source is interrupted due to some error. Hence to switch from supply to battery circuit switching circuit is used.

Screenshots of the Project / Photos of Working Model (Min.3):





Applications:
1. Can be used in Laboratories
2. Industrial Applications
3. Automobile Industries
4. To reduce Electricity bill in homes ,hospitals, offices , etc.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-
2nd prize in paper presentation in VPM polytechnic, Thane

Department : Electronics & Telecommunication Engineering

Project Title : **PHASE-ANGLE CONTROL OF SCR USING AT89C51**

Domain (Area of Project) : **POWER ELECTRONICS**

Name of Project Guide : **Mrs. Shanti S Krishnan**

Name of Students : Abhijit Dhumal
Amey Patade
Pranit Shelke
Rupesh Tandale

Brief idea of Project : In the phase-angle controller, the firing pulse is delayed to turn on the SCR in the middle of every half cycle. This means that every time a part of an AC cycle is cut, the power to the load also gets cut. To deliver more or less power to the load, the phase angle is increased or decreased, thereby controlling the throughput power. There are several ways to control the firing angle of SCR. This project illustrates a microcontroller AT89C51-based phase-angle controller. A microcontroller can be programmed to fire SCR over the full range of half cycles—from 0 to 180°—to get a good linear relationship between the phase angle and the delivered output power.

Screenshots of the Project / Photos of Working Model (Min.3):

Applications:

1. It can be used to control speed of motors.
2. Light dimmer
3. Power regulators etc.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **E-SWACCH**

Domain (Area of Project) : **ELECTRONICS & ELECTRICAL**

Name of Project Guide : **Prof. Shilpa Gaikwad**

Name of Students : Himanshu Sharma
Kashyap Meher
Rahul Harer
Sanket Satam

Brief idea of Project : **India** is a developing nation. So every possible public facility in getting digitalizes .So one of the action of digitalizing toilet is proposed by us. Our toilet monitoring system is able to monitor and indicate problems like Water logging, Bad odour, Poor maintenance ,Improper flushed. So it will be able to clarify this problems and the maintenance of toilet would be easy. So this application will be able to support Swacch Bharat Abhiyan, a initiative my Mr. Narendra Modi.

Screenshots of the Project / Photos of Working Model (Min.3):

Applications:
Used to maintain And monitor toilets at railway stations, offices, homes,etc.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-
1. Winners (Technomantra : state level technical paper presentation) Vidyalankar Polytechnic.
2. Winners (Techknowvent : state level technical paper presentation) Bhausaheb Vartak Polytechnic.
3. Runners Up (Epistemico : state level technical poster presentation) Shri Bagubhai Mafatlal Polytechnic.

Department : Electronics & Telecommunication Engineering

Project Title : **TILT CONTROLLED ROBOTIC VEHICLE**

Domain (Area of Project) : **ELECTRONICS & ELECTRICAL**

Name of Project Guide : **Prof. Monika More**

Name of Students : Rohit Tanawade
Nikhil Rajgudhe
Pranay Bhosle

Brief idea of Project : This robot is a prototype but its applications are vast. It makes use of tilt sensor / acceleration sensor to move forward/reverse/ right/left. Many of us have played games on android phones where you just tilt your phone to make the character in the game to do action. The same technology is used here. A tilt sensor is located on a remote. The remote and robot are connected/do communication using wireless technology.

Screenshots of the Project / Photos of Working Model (Min.3):

Applications:
These robots are used in military applications to operate robots

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **AIR HOCKEY ROBOT**

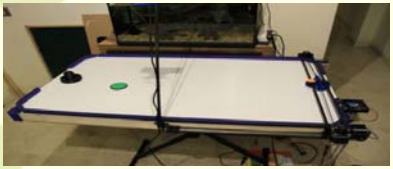
Domain (Area of Project) : **ELECTRONICS & ELECTRICAL**

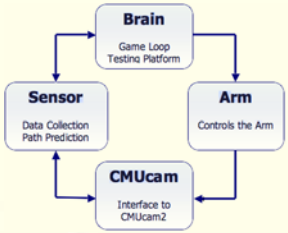
Name of Project Guide : **Mrs: Shilpa Gaikwad**

Name of Students : Altamash Dakhni
Faraz Khan
Sarvesh Tawde
Sidney Chikodi

Brief idea of Project : We have designed and built an air hockey playing robot to study the research issues associated with real-time vision-based control in rapidly changing environments. Fundamental to the air hockey problem is impulsive manipulation of a circular puck sliding on a low friction surface. Air hockey thus falls into the category of impulsive manipulation tasks, which, according to Huang, Korsakov, and Mason , are comprised of two phases. A strike phase which imparts an instantaneous change of velocity to the object and a free motion phase where the object is subject only to environmental forces.

Screenshots of the Project / Photos of Working Model (Min.3):





Applications:
These robots are used in military applications to operate robots

Awards if Any for TPP / Competitions / Paper Publication / Any Other PIs. Specify:- Winners of Final Year Project Exhibition

Department : Electronics & Telecommunication Engineering

Project Title : **GSM BASED HEALTH CHECK MONITORING SYSTEM**

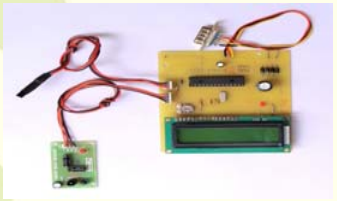
Domain (Area of Project) : **BIOMEDICAL**

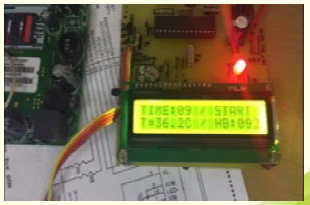
Name of Project Guide : **Ms. Apurva Sawant**

Name of Students : Mayur Thorve
Fatima Thakur
Swapnali Hambir
Rizwan Sayed

Brief idea of Project : The project is based on monitoring of patients. In this system the patient health is continuously monitored and the acquired data is analysed at a centralized PIC microcontroller. If a particular patient's health parameter falls below the threshold value, an automated SMS is sent to the pre-configured Doctor's mobile number using a standard GSM module interfaced to the PIC microcontroller. Patient's health parameters are sending by SMS to Doctors mobile at his request.

Screenshots of the Project / Photos of Working Model (Min.3):





Applications:

1. To monitor patient in remote area or even if they are travelling.
2. This device can be used in life line ambulance to monitor patient's conditions before reaching hospital.
3. It can be implemented in wrist watch bands.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **HAZARDOUS WASTE DETECTOR USING PH SENSOR**

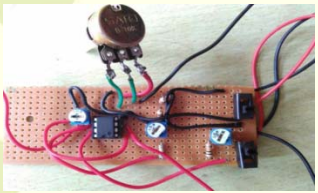
Domain (Area of Project) : **BIOMEDICAL**

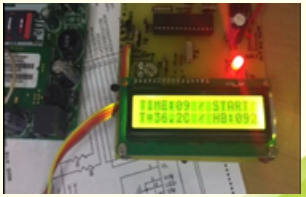
Name of Project Guide : **Ms. Anjali Gharat**

Name of Students : Ashish Gupta
Faiyaz Khan
Sanjay Nishad
Zohair Sabowala

Brief idea of Project : Drinking water utilities are facing new challenges in real time world. Because of more population and limited water resources. The current methodology allows a thorough analysis of water including chemical and biological agents, it has several drawbacks The main conclusion was that many of the chemical and biological contaminants used have an effect on many water parameters monitored including Turbidity (TU), Oxidation Reduction Potential (ORP), Electrical Conductivity (EC) and pH. Thus, it is feasible to monitor and infer the water quality by detecting changes in such parameters.

Screenshots of the Project / Photos of Working Model (Min.3):





Applications:

1. Chemical leakage detection in rivers
2. Maintain the swimming pool water quality

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **RASPBERRY PI BASED INFORMATION TRANSFER**

Domain (Area of Project) : **IOT(INTERNET OF THINGS)**

Name of Project Guide : **Mrs. Kirthi Gupta**

Name of Students : Abhijeet Chahuhan
Bhaskar Mahangare
Prashant Gawde
Sahil Shah

Brief idea of Project : Data transmission, digital transmission or digital communications is the transfer of data (a digital bit stream or a digitized analog signal) over a point-to-point or point-to-multipoint communication channel.

Screenshots of the Project / Photos of Working Model (Min.3):

Applications:

- To transfer files , documents ,videos ,etc in a single network.
- Offline file sharing, media streaming, and community building.
- By teachers to distribute and collect digital materials from students.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Department : Electronics & Telecommunication Engineering

Project Title : **IOT AIR AND SOUND POLLUTION MONITORING SYSTEM**

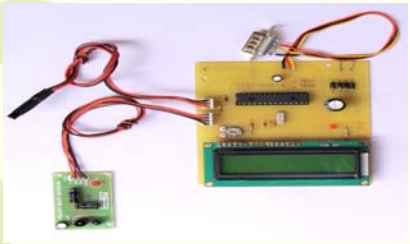
Domain (Area of Project) : **IOT(INTERNET OF THINGS)**

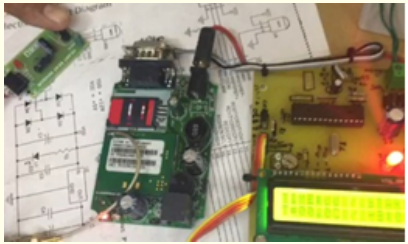
Name of Project Guide : **Mrs. Sheetal Shelar**

Name of Students : Rutuja Shinde
Tejal Vanjare
Shubham Lad

Brief idea of Project : Air and Sound pollution is a growing issues these days. Its is necessary to monitor air quality and keep it under control for a better future and healthy living for all. Here we propose an air quality as well as sound monitoring system that allows us to monitor and check live air quality as well as sound pollution in a particular areas through IOT.

Screenshots of the Project / Photos of Working Model (Min.3):





Applications:
Keep an watch on the noise and air pollution near schools, hospitals , no honking areas, residential areas etc.

Awards if Any for TPP / Competitions / Paper Publication / Any Other Pls. Specify:-

Project Committee
Department of Electronics & Telecommunication

Ms. Sheetal Shelar

Ms. Trupti Patel

Vidyalankar Polytechnic
Vidyalankar Educational Campus,
Vidyalankar Marg, Wadala (E),
Mumbai - 400 037.