V-Ideas

Program: Electronics and Telecommunication Engineering

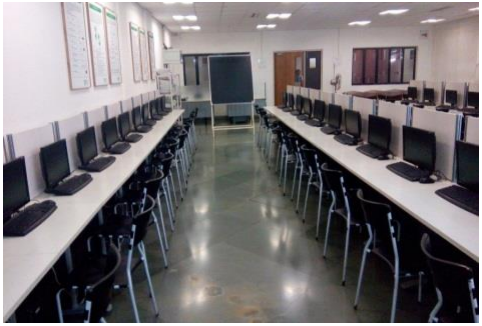
(NBA Accredited)

2022-2023

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 Polytechnic 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 Computer Engineering, Information Technology, Electronics and Telecommunication Engineering.**

- **The college has excellent infrastructure for Classrooms, 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 and industry.

Principal Speak

Prof. Ashish Ukidve, Principal
Vidyalankar Polytechnic

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.

Chief Technology Officer (CTO) Speak

Prof. Anjum Mujawar, CTO
Vidyalankar Polytechnic

"A project is complete when it starts working for you rather than you are working for it"

-Scott Allen

The capstone project is designed to consolidate final-year students' learning with valuable hands-on experience to help develop them into well-prepared and well-rounded graduates. It provides them an opportunity to use tools and techniques and implement methods. The capstone project encompasses a real-life working culture which aims to instill a set of specific skills that are both highly valued by employers and will ultimately serve students well into their careers.

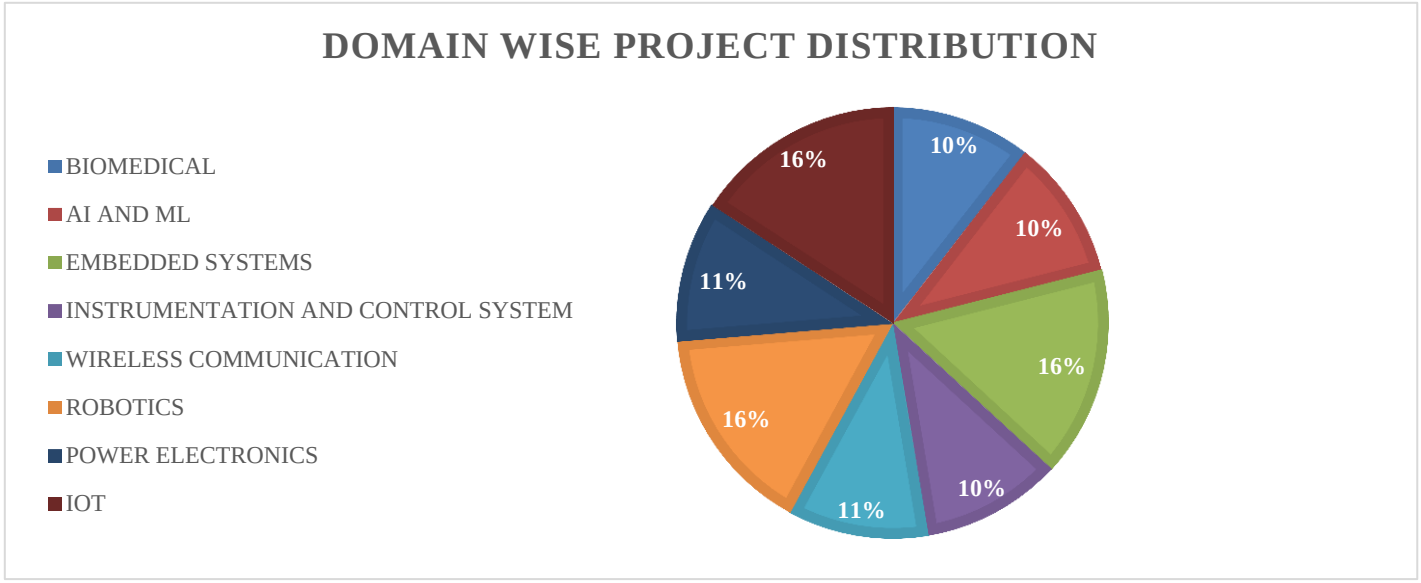
To complete the project, students need to plan, estimate, and manage their time and energy. Students deepen their knowledge across disciplines and work effectively in teams while engaging professionally with their peers and professors. Solving real industrial problems is encouraged and facilitated by project guide.

We, at Vidyalankar, provide all the required facilities to complete their project. We also promote industry institute interaction by assigning industry-based problems in the form of project to our students.

Analysis of Capstone Project (2022-2023)

Domain Wise Project Distribution

BIOMEDICAL	AI AND ML	EMBEDDED SYSTEMS	INSTRUMENTATION AND CONTROL SYSTEM	WIRELESS COMMUNICATION	ROBOTICS	POWER ELECTRONICS	IOT
2	2	4	2	2	2	2	5
21							



V-ideas culminates V-Technovation 2023

"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 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.

Program: Electronics and 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.

Program Educational Objectives

- **PEO1:** Provide socially responsible, environment friendly solutions to Electronics and Telecommunication engineering related broad-based problems adapting professional ethics.

- **PEO2:** Adapt state-of-the-art Electronics and Telecommunication engineering broad-based technologies to work in multi-disciplinary work environments.

- **PEO3:** Solve broad-based problems individually and as a team member communicating effectively in the world of work.

Program Outcomes

PO1. **Basic knowledge:** Apply knowledge of basic mathematics, sciences and basic engineering to solve the broad-based Electronics and Telecommunication engineering problems.

PO2. **Problem analysis:** Identify and analyse well-defined engineering problems using codified standard methods.

PO3. Design/ development of solutions: Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.

PO4. **Engineering Tools, Experimentation and Testing:** Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.

Program Outcomes

PO5. **Engineering practices for society, sustainability and environment:** Apply appropriate technology in context of society, sustainability, environment and ethical practices.

PO6. Project Management: Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.

PO7. **Life-long learning:** Ability to analyse individual needs and engage in updating in the context of technological changes.

Program Specific Outcomes

PSO 1. Electronics and Telecommunication Systems: Maintain various types of Electronics and Telecommunication systems.

PSO 2. EDA Tools Usage: Use EDA tools to develop simple Electronics and Telecommunication engineering related circuits.

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Program : Electronics and Telecommunication Engineering

Project Title : Anomaly Detection using ESP-32

Domain : AI and ML

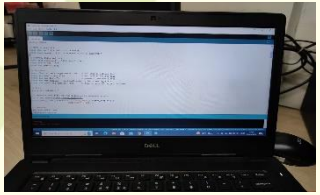
Name of Project Guide : Er. Helina Tandel

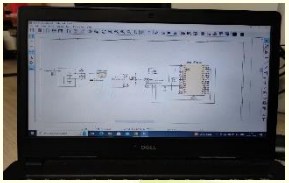
Name of Students : 20201C0002 – Babar Ayush Sandeepkumar
20201C0001 – Ronit Prajith Kumar

Brief idea of project:

It is an Anomaly detection system for a fan using ESP32 microcontroller and various sensors. It detects any unusual behaviour or malfunctions in real-time. The system can also store data for further analysis and optimization of fan performance. It is easy to install and maintain ,with a user-friendly interface for monitoring and control. The fan monitoring system is a real-time monitoring system for detecting fan anomalies. The system includes a sensor module that collects data from speed, temperature and vibration sensors. The data is processed by an ESP32 microcontroller and analysed by an Anomaly Detection Module. The Alert Notification Module sends alerts to maintenance personnel to prevent equipment failure and improve efficiency.

Screenshots of the Project:





Applications:

- Industrial automation
- Smart buildings
- Health care

Program : Electronics and Telecommunication Engineering

Project Title : Object Recognition using Image Processing

Domain : AI and ML

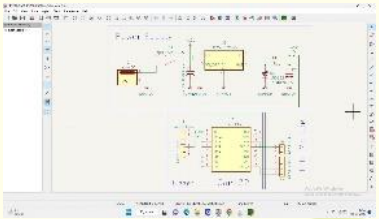
Name of Project Guide : Er. Arpit Bankar

Name of Students : 20201A0014- Sawant Tanmay Vinod
20201A0013 – Sayyed Rais Fareed
20201A0017 – Koli Rushank Rajendra

Brief idea of project:

Object recognition is a computer vision technique for identifying objects in images or videos. Object recognition is a key output of deep learning and machine learning algorithms. When humans look at a photograph or watch a video, we can readily spot people, objects, scenes and visual details. The goal is to teach a computer to do what comes naturally to humans to gain a level of understanding of what an image contains.

Screenshots of the Project:



Applications

- Animal Detection
- Airport Facial Recognition
- Autonomous Driving

Program : Electronics and Telecommunication Engineering

Project Title : Plastic/waste Detection for Lakes

Domain : Embedded Systems

Name of Project Guide : Er. Sandhya Kumar

Name of Students : 20201A0049 **–** Shelar Neel Rajesh
20201A0009 – Gupta Rajiv Ramashankar
20201A0033 – Shinde Ankita Avinash

Brief idea of project:

The oceans are an essential global resource for all living organisms but especially for us humans. However, year after year we continue to neglect proper recycling of our waste, resulting in litter ending up in our oceans. The majority of said litter comes from single use plastic items. Through fragmentation and erosion, the plastic dissolves to smaller pieces ,once they are no longer than 5 mm they are classified as micro and nano plastics. Little is known about these small plastic particles impact on marine life and marine environment. India is the second populated country across the globe, with a rough population of 1.35 billion.Around 5.6 million tonnes of plastic wastes are generated every year, which is approximately about 15,342 tonnes per day. India produces more plastic than its recycling limit.Multi-National companies like Frito Lay,PepsiCo are accountable for most of waste generated. The Government of India has decided to make India plastic free by 2022,though rules and regulations pertaining to reach goal are not robust enough to inflict any change but the citizens can make this change. We will explore a potential solution using Machine Learning and waste detection to assist the smooth profiling of the waste in our locality.

Screenshots of the Project:

Applications:

- For clearing lakes, oceans etc.

Program : Electronics and Telecommunication Engineering

Project Title : Smart Baby Cradle using Raspberry Pi

Domain : Biomedical

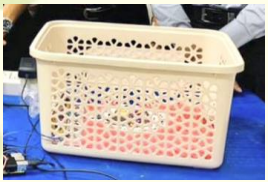
Name of Project Guide : Er. Pratik Tawde

Name of Students :
20201A0001 – Ghanekar Heramb Amit
20201A0002 – Sawant Aryan Ranjeet
20201A0028 – Makwana Raj Ashwinkumar

Brief idea of project:

It is an innovative, smart and protective cradle system to nurture an infant in an efficient way. This system considers all the minute details required for the care and protection of the baby in the cradle. This "Smart Baby Cradle" can monitor every movement of the little one and notify the parents immediately to resolve the problem. But with the automation and innovation we have smart baby cradle which has its own logic and reduces the minor works of tired mom.

Screenshot of the Project:



Applications:

- Provide a smart solution for child care industry.
- Also can be used in day care centres.

Program : Electronics and Telecommunication Engineering

Project Title : Solar Based Grass Cutter

Domain : Wireless Communication

Name of Project Guide : Er. Pranjali Patil

Name of Students : 20201A0020 – Shigwan Chetana Dinesh

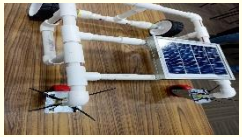
20201A0051-Khan Fouzan Maksood

20201A0029-Surve Gauri Nandkumar

Brief idea of project:

Technological development for making efficient and cost effective grass cutter. Grass cutters are available in market. We are trying to make the new innovative concept of automatic grass cutter with advance facilities. In this project, it has been implemented an IOT (Internet of Things) solar based grass cutter using ESP32.The solar grass cutting machine is a fully automated machine power-driven by solar energy. It also detects the obstacles in the path based on that changes the movement direction. We also use solar panel to charge the battery so there is it may need of charging it externally in rainy season. In this project of a solar powered automatic grass cutter will relieve the consumer from moving their own lawns and will reduce both environmental and noise pollution.

Screenshots of the Project:



Applications:

- It can be used in garden at home.
- It can be used in public park.
- It can be used in college.

Program : Electronics and Telecommunication Engineering

Project Title : Water Level Controller using PID

Domain : Embedded Systems

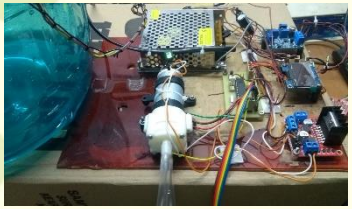
Name of Project Guide : Er. Srinivas Paivernekar

Name of Students : 20201A0006 – Kamble Suraj Balkrishna
20201A0026 – Amate Sahil Ashok
20201A0024- Konar Anand Subbiah

Brief idea of project:

The PID controller will be able to control the inlet and the smooth transition of water into the tank to satisfy the set parameters by the handler (human).The program is from the PID controller itself. PID controller is programmed and the tunings of other manual settings on the whole system uses human interface.

Screenshots of the Project:



Applications:

- It is used in temperature control system of an industry.
- PID controllers are also used in pH,flow and speed control devices.

Program : Electronics and Telecommunication Engineering

Project Title : Face Recognition Attendance System

Domain : Biomedical

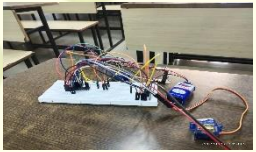
Name of Project Guide : Er. Shanti Krishnan

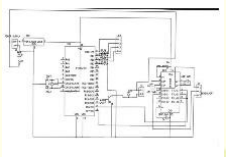
Name of Students : 20201C0013 – Kadam Prathamesh Shamarajj
20201C0011 – Sahani Nikesh Narayan
21201C1004 – Gaikwad Punam Bapu

Brief idea of project:

The aim of this project is to deal with the problem of face detection in colour images. The novel approach to face detection is presented,binarization rules especially designed for a skin area detection within a image frame. The process involves Binnarization,localization, training and identification of Human Face. This project easily extracts the human face from any other images. Image segmentation algorithm is used to identify the face from other images. After recognizing the face, the PC puts the attendance for the particular user. The PC recognizes the face and checks the data with the existing data. If it matches with any data,it puts attendance for the particular user. Also it sends signal to the microcontroller. According to the signal received from camera, the values are stored in the RAM of the microcontroller. Accordingly microcontroller controls door motor through driver section and relay.

Screenshots of the Project:





Applications:

- Contact less attendance
- Automate HR tasks
- In restricted areas for security

Program : Electronics and Telecommunication Engineering

Project Title : Mars Rover using ESP32-CAM

Domain : Wireless Communication

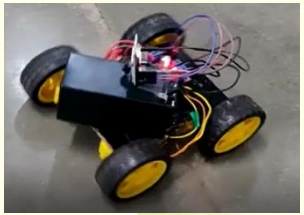
Name of Project Guide : Er. Anjum Mujawar

Name of Students : 20201A0003 – Garige Sandesh Anjana
20201A0025 – Deorukhakar Sejal Atul

Brief idea of project:

As there are places that are too dangerous to be visited by humans we tend to use robot cars that relay information through sensors. To further upgrade this we have thought of using Mars rover design and simplified it so as to used by for exploration and while relaying information through the CAM to our monitor. This can be further modified using sensord based on the environment we are exploring on.

Screenshots of the Project:



Applications:

- For exploration.
- Used for entertainment.

Program : Electronics and Telecommunication Engineering

Project Title : MDB Fiingerprint Scanner

Domain : Embedded Systems

Name of Project Guide : Er. Minal Tandale

Name of Students : 21201C1006 – Solunke Ninad Komalsing

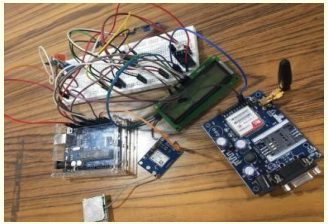
21201C1005 – Surve Shruti Mangesh

21201C1007- Maharana Shankar Surendra

Brief idea of project:

The present invention relates to method and apparatus for establishing registering administrating and managing vending machine subscription accounts and products offered for sale by vending machine.

Screenshots of the Project



Applications:

- It is used in small finance banks..
- We can set up this machine at any place where customers can easily access product whenever they required.
- It is used in hospitals, schools, colleges, industries.

Program : Electronics and Telecommunication Engineering

Project Title : Line Follower Robot

Domain : Embedded Systems

Name of Project Guide : Er. Arpit Bankar

Name of Students : 20201A0011 – Lad Rohan Subhash
20201A0050 - Khandare Shreyas Naresh

Brief idea of project:

The fully automated line follower robot is a fully automated line following robotic vehicle which has a robotic arm powered by battery energy that also avoids obstacles and is capable of fully automated line following without the need of any human interaction. We usually see the robotic machine that are used at the factory's housing park residence and the commercial are like industry area, we usually see the manually operated and conventional method is used. This is a battery powered robot. So the cost of electricity are being used for robot are also reduced. Thus our main aim is to move towards automation and to increase the systems capacity. In addition to this modification will be done to arm of robot to perform different task and realiable to operator. Thus providing user friendly and cost effective robot.

Screenshots of the Project:

Applications:

- Guidance system for industrial robots moving on shop floor etc.
- Healthcare applications
- Industrial applications
- Home applications

Program : Electronics and Telecommunication Engineering

Project Title : Smart Home Automation

Domain : IOT

Name of Project Guide : Er. Imran Sayyed

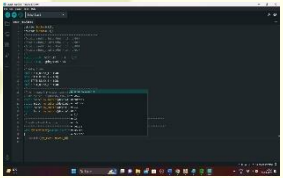
Name of Students : 21201C1010 – Ram Naresh Mohit Kumar

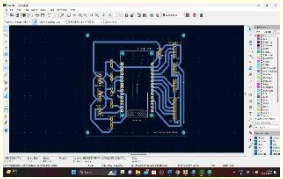
19201C0012 – Shirkar Atharva Santosh

Brief idea of project:

The concept of "Home Automation" has been in existence for several years "Smart Home" ,"Inteligent Home" are terms that followed and is been used to introduce the concept of networking appliance within the house. Home Automation Systems (HASs) includes centralized control and distance status monitoring of lighting, security system and other appliances and systems within a house. HASs enables energy efficiency ,improves the security systems and certainly the comfort and ease of users. In the present emerging market, HASs is gaining popularity and has attracted the interests of many users. HASs comes with its own challenges. Mainly being,in the present day, end users especially elderly and disabled even though hugely benefited ,aren't seen to accept the system due to the complexity and cost factors.

Screenshots of the Project:





Applications:

- Some of the areas of home automation led to IOT enabled connectivity such as: lighting control, gardening, safety and security, air quality, water quality monitoring, voice assistants, switches, locks, energy and water meters.

Program : Electronics and Telecommunication Engineering

Project Title : Smart Gardening

Domain : Power Electronics

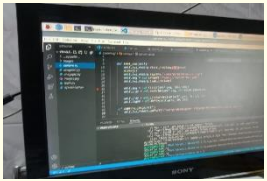
Name of Project Guide : Er. Madhavi M.

Name of Students : 19201C0021 – Mahi Atwal
19201C0016 – Bala Krishnan
20201A0010 – Diggi Mitesh Shivshankar

Brief idea of project:

A soil moisture sensor is a simple sensor consisting of two conducting plates that act as a probe. It measures the moisture content present in the soil. The resistance between the two conducting plates varies inversely with the moisture content present in the soil. This change in resistance can be used as a measure of the moisture content in the soil. The sensor is used in series with a fixed resistance to form a voltage divider network whose output varies with the moisture content in the soil. The output voltage can be processed through an ADC and used according to need of the application.

Screenshots of the Project:



Applications:

- Helps in good irrigation management..

Program : Electronics and Telecommunication Engineering

Project Title : RFID based Smart Rationing System

Domain : IOT

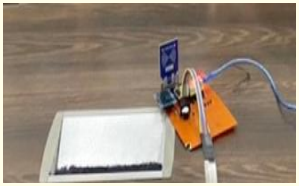
Name of Project Guide : Er. Anjum Mujawar

Name of Students : 20201A0030 – Makwana Bhumi Manilal
20201A0018 – Gaikwad Bhumika Sudhir
20201A0008 – Bhorade Piyush Vitthal

Brief idea of project:

An Automatic ration material distribution using RFID (Radio frequency identification) and GSM (global system for mobile) that replaces the ration card with RFID tag. To get materials, customer shows the RFID tag into the RFID reader. Then the controller checks the customer code verifies the password. Once the authentication of the customer is done, material dispensed to the customer. The main aspect of this project is to avoid corruption, and to increase the genuinely distribution of ration materials .

Screenshots of the Project:



Applications:

- Rationing system is used as an important activity of the state to ensure food security to the people,particularly the poor ones.

Program : Electronics and Telecommunication Engineering

Project Title : Gas Leak Detection using 8051

Domain : IOT

Name of Project Guide : Er. Shanti Krishnan

Name of Students : 20201A0015- Khushal Vinod Ravaria

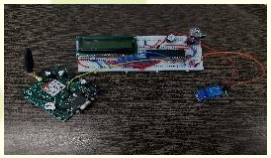
20201A0019 – Borkar Atharva Jaiprakash

20201A0021- Kharade Mayank Dattaram

Brief idea of project:

Liquified Petroleum Gas (LPG) is a main source of fuel, especially in urban areas because it is clean compared to firewood and charcoal. Gas leakage is a major problem in the industrial sector, residential premises etc. Gas leakage is a source of great anxiety with ateliers residential areas and vehicles like compressed natural gas (CNG),buses and cars which are run on gas power. One of the preventive methods to stop accidents associated with the gas leakage is to install a gas leakage detection kit at vulnerable places. The aim of project is to design of a gas leakage detection system that can automatically detect, alert and control gas leakage. This proposed system also includes an alerting system for the users. The system is based on a sensor that easily detects a gas leakage.

Screenshots of the Project:



Applications:

- Residential complex
- Industry zones

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Program : Electronics and Telecommunication Engineering

Project Title : Patient Monitoring System using Node MCU

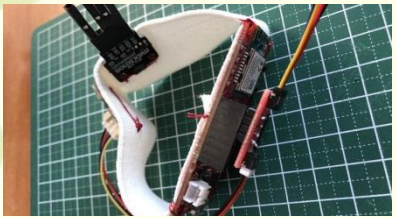
Domain : IOT

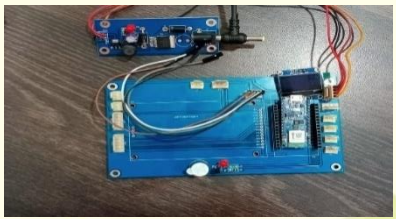
Name of Project Guide : Er. Helina Tandel

Name of Students :
20201C0007 – Uppal Tanishq Shekhar
20201C0012 – Suban Khalid Hawaldar
21201C1002– Kamble Kartik Suresh
21201C1003- Sakpal Harshal Sanjay

Brief idea of project:
Health monitoring for active and assisted living is one of the paradigms that can use the IOT advantages to improve the patient lifestyle. The objective of the project is to measure the values of body temperature, pulse rate, respiratory rate and ECG values. Node MCU collects measures values from sensors and sends these values to cloud server. This system creates alarms for critical situations /measurements. This helps doctors and supervisors to make decision in critical situation in real time.

Screenshot of the Project :





Applications:
- Hospital
- Clinic

Program : Electronics and Telecommunication Engineering

Project Title : Smart Street Light Monitoring and control using NodeMCU

Domain : IOT

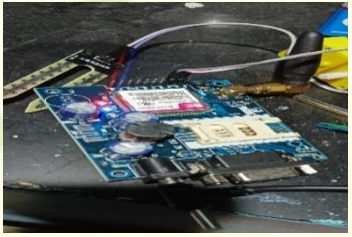
Name of Project Guide : Er. Minal Tandale

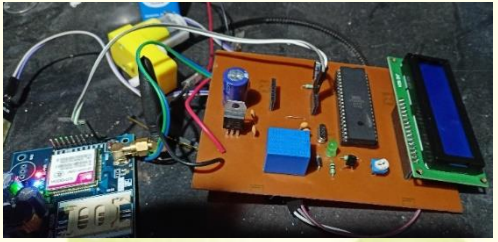
Name of Students :
20201A0031 – Aswar Siddhant Suresh
20201A0043 – Dolas Kshitij Anand
20201A0057- Gaikwad Aditya Arjun
21201C1008- Mandavkar Pratik Suresh

Brief idea of project:

In this project, the street light system in which lights on when needed and light-off when not needed. Currently in the world enormous electric energy is consumed by the street lamps which can automatically turns on when it becomes dark and automatically turns off when it becomes bright. Our smart street light system consists of a LED light, a brightness sensor, a motion sensor and a short distance communication network. The lights turn on when pedestrians and vehicles come and turn off or reduce power when there is no one.

Screenshots of the Project:





Applications :

- Smart street lights could be equipped with RADAR sensors which could detect if any object comes near the pole and the light gets brighter.
- It could act as a hub for smart applications
- It could also be equipped with charging station for electric vehicles.
- It is also used for digital signage.

Program : Electronics and Telecommunication Engineering

Project Title : Automatic Waste Segregator

Domain : Instrumentation and Control System

Name of Project Guide : Er. Imran Sayyed

Name of Students : 20201A0039 – Rathod Bhaskar Jyotingsing

20201A0046 – Rathod Nilesh Dnyaneshwar

20201A0038- Dhamapurkar Aishwarya Sudhir

Brief idea of project:

India is one of the countries in the world that disposes most of the waste, creating serious healthy problems and environmental destruction. Open dumping in landfills sites, which is unplanned and unregulated is a common method of garbage disposal. Waste must be properly divided, managed, transported and disposed of in order to minimize the risk to public health and safety as well as the environment. With such a large population creating domestic waste daily. Waste must be separated into dry and wet categories. So solid waste management as become a major challenged that necessities process automation. As a result, we proposed automatic waste segregation. The waste is divided into two categories: dry and wet in this system.

Screenshots of the Project:

Applications:

- Designed to sort the waste into three main categories namely dry and wet thereby making the waste management in more effective way.
- The system is best suitable for smart city applications.

Program : Electronics and Telecommunication Engineering

Project Title : Heal and Care-Medicine Vending Machine

Track : Instrumentation and Control System

Name of Project Guide : Er. Shilpa Gaikwad

Name of Students : 20201A0007 – Patil Runali Rushikesh
20201A0005 – Sawant Ritesh Satish
20201A0022 – Dhotre Arya Vinod

Brief idea of project:

The project is to design a product namely 'Heal n care', a vending machine which will vend medicinal items. It consist of simple electro-mechanical system which helps to automate the entire vending process. This product is useful in an urgent need of medication in college campus. This product includes cotton, Dettol, bandages which are basic medicinal items needed in our day to day life. This product is designed by using microcontroller ESP-32.

Screenshots of the Project:

Applications:

- This Heal and care product can be utilized in school,college,Industries to provide basic medicinal products on urgent basis.

Program : Electronics and Telecommunication Engineering

Project Title : Component Tester

Domain : Robotics

Name of Project Guide : Er. Pratik Tawde

Name of Students :
20201A0023– Bashte Darsh Viresh
20201A0012 – More Aayush Nilesh
20201A0041 – Karande Aditya Ajay

Brief idea of project:

The component tester used to check if electronic components used in projects are functional or not. This project used small and low-cost components to build a system that detects the defected components in laboratories and electronics shops.

Screenshots of the Project :

Applications:

- Fault Diagnosis
- Repair and Maintenance
- It is used in hardware manufacturing companies.

Program : Electronics and Telecommunication Engineering

Project Title : Arduino Based Colour Sorting Machine

Domain : Robotics

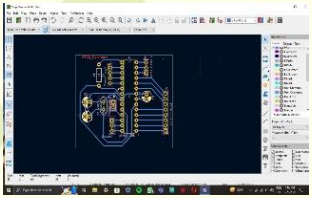
Name of Project Guide : Er. Pranesh Naik

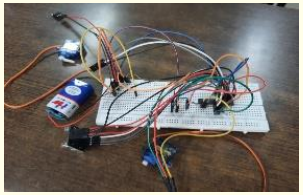
Name of Students :
20201A0035 – Labde Aadesh Anil
220201A0036 – Chaurasiya Sumit Kamlesh
20201A0045 – Dumbre Shritej Vinayak

Brief idea of project:

The machine on which our team is working is a 'Colour Sorting Machine'. Sorting of object is an essential mechanical process in which difficult work is quite required. In this fast-moving modern era, even every small-scale industry needs a system for sorting the goods they produce. Machines can perform mainly dreary assignments superior to human beings. On this a compact record close to arranging of articles based totally on shading has been implemented making use of 'TCS3200 Colour Sensor' with 'SERVO MOTORS' associated with 'ATMEGA 328P'.

Screenshots of the Project:





Applications:

- The Colour Sorting Machine, that can be used in food industry, in factory for sorting goods and also for sorting agricultural grain and rice.

Program : Electronics and Telecommunication Engineering

Project Title : MIA ROVER (Multi Universe Interplanetary Annexation)

Domain : Power Electronics

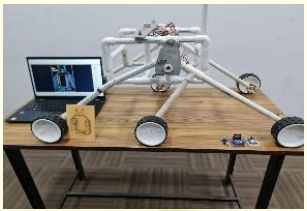
Name of Project Guide : Er. Sandhya Kumar

Name of Students :
20201C0003 – Shaikh Afzal Amir Badshah
20201C0008– Vishwakarma Rishabh Kumar Horilal
20201C0009 - Shaikh Tahirhussain Rais Ahmed

Brief idea of project:

The vehicles used to explore the Martian surface require a high degree of autonomy to navigate challenging and unknown terrain, investigate targets and detect scientific events. Increased autonomy will be critical to the success of future missions.
MIA ROVER (Multi universe interplanetary annexation).This is the rover inspire by MARS rover perseverance. Its only objective is to explore places where humans can't go. It is design to role on Martian surface with perfect balance. It is capable of capturing HD photo. It is design to cross obstacle without lifting any wheels of the ground.

Screenshots of the Project:



Applications:

- For research purpose.

Final Year Project Committee
Program: Electronics and Telecommunication Engineering

	**Er. Anjum Mujawar** (CTO, Vidyalankar Polytechnic and HOD, Department of Electronics and Telecommunication Engineering)
	**Er. Pratik Tawde** (Project Coordinator, Department of Electronics and Telecommunication Engineering)