

CODE	TITLE	APPLICATION / DESCRIPTION
VTES01	Design of Mobile Agricultural Data Collection Equipment Based on Raspberry Pico	Description: The development from traditional agriculture to intelligent agriculture needs to be driven by data. the movable collection of specific data about the environment where the crops are located, such as temperature, humidity, light level and gas can be smoothly realized, and the collected data meet the objective regular changes
VTES02	Identification and Detection of Fault in Distribution System Using Raspberry Pico	Description: The purpose of identifying and categorizing errors, the sensed signals are provided to the Raspberry Pico, GSM, a mobile cellular technology, is employed to deliver messages to the responsible person to eliminate fault as soon as possible. On the area for fault display, the fault type is shown. By deploying protective devices, the fault is simultaneously interrupted
VTES03	Smart Temperature-dependent Cooling of Solar Panel using Controller	Description: The aim to make an automated temperature-based cooling arrangement for the Solar Panels using Raspberry Pico. The goal is to lower the operating temperature of PV modules, to increase PV output efficiency due to operation at lower temperatures. The controller helps in functioning of the cooling system guided by the code to make it completely automated and hence lead to better energy saving. This system is smart” as it operates automatically, managing all year weather variations.
VTES04	Design and Implementation of a Zigbee-based Home Monitoring System	Description: In this project we use DHT11 and Air pressure sensor to measure temperature, humidity and air pressure for home monitoring and send the data to blynk app using ZigBee.
VTES05	Hazard Detection using custom Microcontroller and Zigbee	Description : In this project we detect hazard in forests and farms by fire sensor and smoke sensor and analyze the data through blynk app using ZigBee.
VTES06	Identification & Detection of Industrial Faults using Raspberry Pico Bot	Description: These incidents are caused due to leakage of gas, fire, boiler/cylinder explosions, overheating of operating machines etc. Therefore, it becomes important to identify such incidents at an early stage. Considering the above scenario, the authors present a solution called Industrial Fault Monitoring Bot. This robot is deployed in the manufacturing plant to monitor safety conditions in different units
VTES07	Smart Irrigation System Using Raspberry Pico	Description : Now a days its a challenge to improve development of plant in respect of its growth and to reduce costs which leads to an innovative idea of using an automated irrigation system which will further help in better management of water and human resources. An automated irrigation system have been developed using sensors technology with controller to efficiently utilize water for irrigation purpose.
VTES08	Efficiency and Performance Evaluation of an Early Fire Detector Device Using a Wireless Sensor Network	Description: In this project we detect fire and its spreading using sensors and respective residential location, sensor readings are send to fire engine by GSM.
VTES09	Raspberry Pico based Wheelchair Fall Detection System using GPS and GSM Module	Description: The advancement of technology, patient support and monitoring systems have become more user-friendly and easier to use. This study involves the development of a wheelchair prototype and a fall detection system using controller. This innovative system is designed to improve patient safety and security by providing real-time monitoring of wheelchair users. this study offers a promising solution to improve the quality of life for wheelchair users and their caregivers.

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VTES10	Innovative Child Rescue System from Borewell using Raspberry Pico	Description: In this project Temperature, humidity and Gas level sensors are attached to child body. Once the child falls in borewell these sends the details and automatically gets the alarm then with the help of keys we can take out the child from borewell using motor
VTES11	Raspberry Pico Based Bluetooth Voice-Controlled Robot Car and Obstacle Detector	Description: The paper aims to build a robot car that monitors the human voice's movement and senses distant objects. The robot movement and control system is used by the speaker to allow the robot to react to any speaker command that gives any verbal instruction that produces sound frequencies of the human voice. After receiving the command, the robot moves in left, right, forward, and backward directions. This device tried to alert workers to the possibility of a terrorist attack in a military camp
VTES12	Smart Car Parking System using Raspberry Pico	Description: This paper deals with a simple smart vehicles parking system by using basic components like Raspberry Pico (micro controller), IR Sensors, Servo Motor, LCD etc. Parking, offered in malls, shopping areas, etc., are provided with help of a person which is very time consuming
VTES13	Raspberry Pico based Touchless Temperature Sensing Visitor Notification System	Description: An automatic touch less temperature-monitoring doorbell can provide guarded and touch-free temperature sensing, thus informing the household members. The widespread usage of outdated touch-type doorbells may result in the transmission of the coronavirus. A Novel Doorbell system that can be activated using gestures and simultaneously detects the person's temperature and notifies the home of a suspected infectious disease.
VTES14	Student Location Reporting System Using Raspberry Pico	Description : This project explores the idea of locating the student's when he/she will go out of the college/institution. This is done by using a GPS Module which is with the student. Tracking of a person and monitoring continuously requires a human assistance for long time. In this project involves the use of GPS to alert the admin by sending SMS.
VTES15	GSM Based Smart Irrigation System with Raspberry Pico Powered by Solar Panel	Description: India is an agriculture country where farmers are the most important part. Farmers plays a very crucial role in overall productivity of our country. To get over smart Irrigation using solar panel and sensors
VTES16	Raspberry Pico Based OTP Lock for Integrated Home Security System	Description : This research study intends to enable additional security measures that may be applied in homes and workplace. The A2-way verification approach is used in the system. A randomly generated OTP is delivered through Bluetooth to the user's smartphone for two-way verification if the user inputs the proper password. The system will be opened and the necessary job may be started if the entered OTP matches
VTES17	Implementation of Secure Smart Cart for Automatic Detection of Objects Using Raspberry Pico and RFID	Description: This model aims to shorten the line at billing counters in shopping malls or supermarkets. The system accomplishes this by presenting the entire details of the product on the cart. By using this process, the customer can pay the balance in full directly at the checkout counter and proceed with their purchases
VTES18	Solving Parking Problems with Smart Car Parking Systems	Description: This paper is to provide a simple automatic car parking allocation system with basic components like Microcontroller that provides solution to the problems in car parking allocation. Parking allocations provided in shopping complexes, malls, multi-store buildings etc

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VTES19	Raspberry Pico based Smart Blind Stick for People with Vision Loss	Description: The system provides the high security and show way to walk, this system can monitor the blind person position using mobile, an emergency alert message will be sent along with the exact location. This system can be very useful to peoples to show correct path while walking on the floor or steps and many more places. The Microcontroller processes this information and this processed information is sent to the respective numbers.
VTES20	Smart Public Transport Disinfection and Sterilization System	Description: This project is for Smart Public Transport Disinfection and Sterilization System. We can identify the presence of people in the public transport with the help of two IR Sensors. If nobody is there sterilization will takes place
VTES21	Air Quality Evaluator using Raspberry Pico	Description: We proposes a network of sensors to track changes in the air. The Raspberry Pico was employed as the platform's micro controller. The purpose of the air pollution surveillance systems is to continuously track and record data on the state of the air around a certain location and upload that information to a central server for safekeeping and online access
VTES22	Raspberry Pico Based Smart Litter Basket for Social Waste Management	Description: This project, a smart litter box is constructed on a Microcontroller-based platform. An infrared sensor and an ultrasonic sensor are positioned at the top and bottom of the trash can, respectively, to measure its level and where the bin should be stopped.
VTES23	Voice-Controlled Robot using Raspberry Pico and Bluetooth	Description : This project was developed in a way that the robot is controlled by voice commands. An android application with a microcontroller is used for required tasks. The connection between the android app and vehicle is facilitated with Bluetooth technology. The robot is controlled by buttons on the application or by spoken commands of the user
VTES24	Voice Controlled Wheelchair	Description: We control the wheel chair in four directions through voice commands using android app and also when obstacle is detected wheel chair stops automatically
VTES25	Raspberry Pico based Railway Line Tracking System for Mitigating Animal Accidents	Description : This study introduces a railway line tracking system. The objective of this research work is to ensure the safety of wildlife from being a victim of train collision with a mechanism that involves the detection of object movement. The object movement is sensed by using ultrasonic sensors, and proximity sensors.
VTES26	Hand Gesture Controlled Car using Bluetooth Modules and Accelerometer Sensor	Description: This research work demonstrates the usefulness of an accelerometer sensor and how it can be used to move an object using hand gestures
VTES27	Smart Assistant for Visually Impaired People	Description: This project is for visually impaired people. These people is given a stick and to this stick a sensor is mounted. This sensor detects if obstacle gets in the path and if it alarm gets instantly. Using the sound visually impaired persons can know the path

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VTES28	Solar Based Smart Water Pump Control with Turbidity and pH Measuring System	Description: This research presents a performance analysis of the solar-based water pump controlling system and water quality measuring system using Raspberry Pico. The main objective of this research is to automatically control the water pump and single-axis tracking for solar
VTES29	Development of A Smart Non-Invasive Monitoring System With SpO2 and BPM for Diabetic Patient	Description: In this project we monitor the oxygen levels and heart rate of diabetic patient and can know it through OLED display
VTES30	Raspberry Pico based Dual Axis Smart Solar Tracking System	Description: The major goal is to develop a workable autonomous solar tracking system that moves the solar panel so that it remains always perpendicular to the sun
VTES31	Raspberry Pico based Women Safety Tracker Device	Description: This study has developed a navigation-based women protection system. The proposed system addresses this issue by providing user location since this device continually communicates the user location. A Global Positioning System (GPS) and a GSM modem-based system are employed here to ensure women's safety
VTES32	Home Automation using Raspberry Pico through Voice Control	Description : Voice Controlled Wireless Home Automation Based on internet/ Bluetooth/ wi-fi is a project that is integrated system with mobile phone (application) to give the facility to the elderly and the disable people, so that they can easily control home utilities fully Based on their phone through voice command.
VTES33	Fall Risk Prediction Using Wireless Sensor Insoles with Machine Learning	Description: However, most of the fall detection systems give notification only after a fall occurs. . As most fall prediction data in previous literature are obtained from static pressure sensors, in this study, wireless pressure sensors embedded insoles are used to train machine learning (ML) models to predict the risk of fall of an individual
VTES34	Solar Powered Bluetooth Controlled Grass Cutting Robot	Description : Raspberry Pico is the controller of the system. Through a variety of connections, controller can communicate with a Bluetooth module and DC motors. The solar grass cutter's DC motor is controlled by a Raspberry Pico that gets data from an Android app through a Bluetooth module. In addition, an ultrasonic obstacle detector is plugged into the input; once an impediment is detected, the machine is stopped and the sensor's data is transferred to the cloud.
VTES35	Smart Water Controller in Metro Water Supply Lines Using Ultrasonic Sensor and Flow Sensor	Description: In this project water tank empty and full status is detected by ultrasonic sensor and if it is empty valve gets on and water flow detection is done by flow sensor. Once the tank is full valve gets closed automatically and also water supply is stopped which is detected by flow sensor
VTES36	A complete air pollution monitoring and prediction framework	Description: Forecasting air pollution is crucial for understanding the phenomenological and contextual variety of mechanisms underlying pollution in a particular area or region. we proposed and evaluated four encoder-decoder architectures with attention for forecasting particulate matter (PM) levels, with a general applicability that is both location- and season-independent

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VTES37	A Review of Abnormal Behavior Detection in Activities of Daily Living	Description: Owing to the increasing rate of elderly accidents in the home compound, ABD in ADL research should be given as much attention to preventing accidents by sending out signals when abnormal behavior such as falling is detected
VTES38	Digital Twin of Atmospheric Environment: Sensory Data Fusion for High-Resolution PM2.5 Estimation and Action Policies Recommendation	Description: Particulate matter smaller than 2.5 microns (PM2.5) is one of the main pollutants that has considerable detrimental effects on human health. Estimating its concentration levels with ground monitors is inefficient for several reasons. In this study, we build a digital twin (DT) of an atmospheric environment by fusing remote sensing and observational data
VTES39	Efficient Mobile RFID Authentication Protocol for Smart Logistics Targets Tracking	Description: Target tracking is one of the problems existing in the supply chain management. The use of radio frequency identification (RFID) in target tracking helps improve the monitoring accuracy and status visibility of the tracked target. For this problem, a new efficiency mobile RFID authentication protocol is proposed in which implements secure authentication among different communication entities by different operation modes
VTES40	Home Energy Management Systems: A Review of the Concept Architecture, and Scheduling Strategies	Description: Growing electricity demand, the deployment of renewable energy sources and the widespread use of smart home appliances provide new opportunities for home energy management systems (HEMSs), which can be defined as systems that improve the overall energy production and consumption of residential buildings by controlling and scheduling the use of household equipment.
VTES41	Intelligent Air Pollution Sensors Calibration for Extreme Events and Drifts Monitoring	Description : We propose an intelligent sensors calibration method that facilitates correcting LCSs measurements accurately and detecting the calibrators' drift. We evaluate the method in a controlled experiment under different types of smoking events
VTES42	A Versatile Embedded Platform for Implementation of Bio cooperative Control in Upper-Limb Neuro motor Rehabilitation Scenarios	Description: We present a highly versatile, low-cost and wearable embedded system that integrates the most commonly used sensors in this field. Additionally, the compact system combines wireless communication for data transmission and a high-efficiency microcontroller for real-time signal processing and control
VTES43	Body Posture Determination for Heart Failure Patients From Ankle Orientation Measurements	Description : This paper proposes a body tracking/activity estimation method for low-power continuous monitoring. The results are highly relevant for clinical practice, as body motion and position can serve as important health markers for patients. Moreover, the motion information obtained can be further processed to better understand variations in the analog impedance measurements.
VTES44	Design and Implementation of Remote Controlling System	Description: The transmitter of the system is mainly composite of microcontroller, DHT sensor, two LEDs, and four push button switches. Here, two LEDs are continuously transmitting the control and data signal
VTES45	Intelligent Sitting Posture Classifier for wheelchair users	Description: It is necessary to carry out a monitoring that allows to determine not only the postural status of wheelchair users, but also to infer the evolution or anomalies associated with a specific disease. Therefore, this paper proposes an intelligent classifier based on a multilayer neural network for the classification of sitting postures of wheelchair users

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VTES46	Low-Carbon Economic Dispatch of Integrated Electricity-Gas Energy System Considering Carbon Capture, Utilization and Storage	Description: In this paper, a bi-level optimal scheduling model is proposed for an IEGS considering carbon capture, utilization and storage (CCUS), and the ladder carbon trading mechanism is introduced to convert carbon emissions into economic benefits.
VTES47	Smart Farming Robot for Detecting Environmental Conditions in a Greenhouse	Description: Where the farmer does not have previous information about the crop. Here, an unsupervised learning algorithm is implemented to cluster the optimal, standard, and deficient sectors of a greenhouse to determine in appropriate growth patterns in crops.
VTES48	A General Pipeline for Online Gesture Recognition in Human-Robot Interaction	Description: We propose a framework consisting in a pipeline devised to consider these specific constraints. We implement the proposed pipeline considering, as an example, an evaluation use case. In particular, gestures have become an established way to interact with robots since they allow to command them in an intuitive manner
VTES49	Multimodal Multi-User Mixed Reality Human-Robot Interface for Remote Operations in Hazardous Environments	Description: In hazardous environments, where conditions present risks for humans, the maintenance and interventions are often done with teleoperated remote systems or mobile robotic manipulators to avoid human exposure to dangers. The increasing need for safe and efficient teleoperation requires advanced environmental awareness and collision avoidance
VTES50	Research on Design and Motion Control of a Considerate Guide Mobile Robot for Visually Impaired People	Description : In this paper, a guide mobile robot with an easy-to-hold handle is designed, a generation method of spatial risk map is proposed to evaluate the influences of potential spaces of objects and a motion control method based on spatial risk map considering potential occupied spaces of objects is proposed
VTES51	Pulse Wave Generation Method for PPG by Using Display	Description: Project is about Pulse wave Generator, In this study, we propose a method that enables a PPG sensor to measure arbitrary pulse data by using a display
VTES52	A “Plant-Wearable System” for Its Health Monitoring by Intra- and Interplant Communication	Description : A step forward in smart agriculture is moving to direct monitoring plants and crops instead of their environment. Understanding plant status is crucial in improving food production and reducing the usage of water and chemicals in agriculture. Here, we propose a “plant-wearable,” low-cost, and low-power method to measure in-vivo green plant
VTES53	Smartphone-Based CO ₂ e Emission Estimation Using Transportation Mode Classification	Description: We create efficient systems for monitoring individual travel patterns and the associated carbon footprints. To this end, this paper presents a CO ₂ e emission estimator that combines transportation mode classification with mode-specific emissions data. In addition to assessing the accuracy of the final emission estimation
VTES54	Systems Approach in Telemedicine Adoption During and After COVID-19: Roles, Factors, and Challenges	Description: This article investigates the values and barriers influencing the adoption and acceptance of telemedicine services during COVID-19 by a systems approach combined with a quantitative analysis. We developed a casual loop diagram showing the interactions between the factors, including technology, policymaking, patient, and care provider in the context of COVID-19

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VTES55	Design Methodology, and Field Test for Sustainable Greenhouse Monitoring	Description: We propose a novel and generic design methodology to suggest minimum energy harvesting hardware requirements, namely the photovoltaic panel's area and supercapacitor's size for energy storage. In addition, a lifetime model is also proposed to calculate the extended lifetime of a hybrid energy harvesting device if it is equipped with a backup battery
VTES56	A Novel Architecture Using Ibeacons for Localization and Tracking of People in Women Safety	Description: In this work, architecture for real-time tracking using Bluetooth Low Energy (BLE) and iBeacons in women safety is proposed. The proposed system is to locate not only women but also other facilities such as children
VTES57	Robotic Accident Prevention and Alert System for Visually Impaired	Description: This paper proposes a walking aid cane robot for the elderly and visually impaired people, which is equipped with a walking stick and force sensors in the handlebar
VTES58	A Robotics-Based Surveillance System for Livestock Well being and Early Disease Detection in Poultry Farms	Description: This paper presents a smart surveillance system using robotics for analysing the well being of the livestock and early detection of disease in poultry farms. The current system often identifies infections too late, resulting in mass culling of flocks. The proposed solution is to use disease control through vaccination as an alternate approach
VTES59	Raspberry Pico based Wheelchair Fall Detection System using GPS and GSM Module	Description : Wheelchairs are essential for people with physical disabilities, the elderly, and those who are temporarily incapacitated due to illness or accidents. This study involves the development of a wheelchair prototype and a fall detection system using controller.
VTES60	Design For Dust Cleaning Robot Using Embedded System	Description: The goal of designing a dust cleaning robot using embedded systems is to clean the floor automatically using a robot that can work in hazardous environments without the assistance of people, to construct a floor cleaning robot without a driver, and to develop an autonomous robotics system that uses the internet of things
VTES61	Crop Monitoring System with Water Moisture Level using Raspberry	Description : This research work employs the idea of IoT to connect the monitored plant to the network and transmit data. The components include a photoresistor for light detection and a moisture sensor for measuring the amount of moisture in the soil. If the crop is dry, a motor driven water pump is used to saturate the soil, and if it's too wet, a motor-operated shutter opens to let the water out.
VTES62	Design and Implementation of Integrated E-Vaccination Chip for Covid-19	Description: In our proposed system person who carries a Vaccination Chip stand in front of the security person he will be having a unit which will shows the Identity and the Vaccination details fetched from the International Vaccine Page of the person standing in front of the security check in.
VTES63	Smart Car Parking System Using Raspberry Pico	Description: This paper focus on decreasing the time squandered on discovering parking area. This in turn diminishes the fuel utilization and way of life. With the exponential increment in the quantity of vehicles and total population, vehicle accessibility, use out, about starting late, finding a space for parking the vehicle is turning out to be increasingly more troublesome with realizing the amount of conflicts, for example, automobile overloads

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VTES64	Design and Implementation of Women Auspice System by Utilizing GPS and GSM	Description: This project provides a wearable safety system to all the women. There are many android applications in the market for women safety but the thing is whenever she is in danger she may not able to operate mobile phones. By considering this as major problem designing a solution is the main motto of the project to provide safety for all the women who may or may not use android mobile phones.	
VTES65	Student Library Management System	Description: This paper aims to improve the existing library management systems at the university level using radio frequency identification technology (RFID). The proposed smart library system uses RFID tag, RFID tag reader, Controller, that store the required content. It automates the issue and return of books with minimum human intervention. The data analysis of book transaction details is done and data visualisation is also made available to both user and admin	