CODE	TITLE	APPLICATION / DESCRIPTION
VTES01	Simple wearable eye tracker with mini-infrared point sensors	**Description**: This project that emit infrared light to detect the movement of your eyes, allowing for accurate tracking of where you are looking. The device is designed to be worn comfortably, typically as glasses or a headband, and works by reflecting infrared light off your eyes to determine gaze direction
VTES02	Increasing the solar reliability factor of a dual-axis solar tracker using an improved online built-in self-test architecture	**Description:** Project aims to improve the reliability of a dual-axis solar tracker by using an enhanced online built-in self-test (BIST) architecture. This system automatically checks and diagnoses the performance of the solar tracker in real-time, ensuring that it operates efficiently and minimizes downtime by identifying issues early, ultimately increasing the solar energy system's reliability
VTES03	Optimizing waste management: integrated pollution detection and systematic reporting for sustainable disposal	**Description:** The project focuses on optimizing waste management by integrating pollution detection systems with a systematic reporting framework. This approach helps monitor pollution levels in real-time and generates detailed reports, ensuring efficient and sustainable waste disposal while minimizing environmental impact.
VTES04	Secure and energy-efficient smart home automation: a user-based fingerprint security system	**Description:** The project aims to enhance smart home automation by integrating a user-based fingerprint security system. This system ensures secure access to the home, while also being energy-efficient, allowing users to control various smart devices with ease and safety.
VTES05	Gesture-controlled wheelchair and home automation using IR remote	**Description :** This project focuses on developing a gesture-controlled wheelchair and home automation system using an IR remote. This allows users to control both the wheelchair's movements and various home appliances through simple hand gestures, enhancing mobility and convenience.
VTES06	Intelligent automation in long vehicles through LDR sensor technology for accident prevention	**Description:** The aims to enhance safety in long vehicles by using LDR (Light Dependent Resistor) sensor technology to detect obstacles and prevent accidents. The system automatically monitors the vehicle's surroundings and alerts the driver to potential hazards, improving accident prevention and overall safety.
VTES07	Master street light system integrating automation and air pollution monitoring for urban sustainability	**Description :** The project focuses on creating a master street light system that combines automation with air pollution monitoring. It adjusts street light brightness based on traffic and weather conditions while also tracking air quality, contributing to energy efficiency and urban sustainability
VTES08	Enhancing borewell rescue with automation	**Description:** Enhancing borewell rescue with automation involves using advanced technology, such as robots or sensors, to quickly and safely rescue people trapped in borewells, improving efficiency and reducing risks for rescuers.
VTES09	Vehicle anti-theft system using fingerprint & Passcode with speed control and obstacle Detection	**Description:** TThis system enhances security by requiring both biometric and password authentication to start the vehicle, while also integrating speed control and obstacle detection for safer driving.

CODE	TITLE	APPLICATION / DESCRIPTION
VTES10	Fire detection and extinguishing robot using microcontroller	**Description**: A fire detection and extinguishing robot using a microcontroller automatically detects fires and puts them out by activating extinguishing mechanisms, all controlled by the microcontroller for efficient operation
VTES11	Automatic Grass Cutting Robot using Controller and Ultrasonic sensor	**Description:** To navigate and cut grass efficiently, detecting obstacles and adjusting its path without human intervention
VTES12	Standalone Dual-Axis Solar Tracker System with battery charger and controller	**Description:** A standalone dual-axis solar tracker system automatically adjusts the solar panels' position to follow the sun, maximizing energy capture, while a battery charger and controller store and manage the power for later use
VTES13	Design and implementation of a line follower robot	**Description:** This involves creating a robot that automatically follows a predetermined path marked by a line, using sensors to detect and stay on the track.
VTES14	Smart agriculture for sustainability: the implementation of smart irrigation using real-time embedded system technology	**Description :** Smart agriculture for sustainability involves using real-time embedded system technology to implement smart irrigation, which automatically adjusts water usage based on soil moisture levels, improving efficiency and conserving resources
VTES15	Leakage detection monitoring in underground pipes using Zigbee in wireless sensor networks	**Description:** Leakage detection monitoring in underground pipes using Zigbee in wireless sensor networks involves using wireless sensors to detect leaks in pipes and transmit real-time data, helping to prevent water loss and reduce maintenance costs
VTES16	Integrated smart trolley system: controller-based RFID billing and weight sensor augmentation	**Description :** This System is a shopping cart that uses a controller, RFID technology for automatic billing, and weight sensors to enhance the shopping experience by automatically tracking items and calculating the total weight for accurate billing.
VTES17	LPG transport tracking and leakage detection with accident prevention alert system	**Description:** The System monitors the movement of LPG tanks, detects any gas leaks, and sends accident prevention alerts to ensure safe transportation and avoid potential hazards
VTES18	Vehicle accident detection and locating using GSM and GPS	**Description:** The Vehicle Accident Detection and Locating System uses GSM and GPS technology to detect accidents and instantly send the vehicle's location to emergency services for quick assistance

CODE	TITLE	APPLICATION / DESCRIPTION
VTES19	An enhanced road safety for pothole detection and nighttime driving assistance	**Description**: The Enhanced Road Safety System detects potholes and provides night time driving assistance, helping drivers avoid hazards and improve visibility for safer travel
VTES20	A smart system for school bus accident detection and GPS tracking	**Description:** The Smart System for School Bus Accident Detection and GPS Tracking monitors school buses for accidents and tracks their location in real-time to ensure the safety of students and quick response in emergencies
VTES21	Assistive helmet for visually impaired human beings	**Description:** The Assistive Helmet for Visually Impaired Individuals is a wearable device that helps guide blind or visually impaired people by using sensors to detect obstacles and provide feedback through sound or vibration
VTES22	Integrating GPS and GSM technologies for enhanced women's safety: a fingerprint-activated device approach	**Description:** The GPS and GSM-based Women's Safety System is a fingerprint-activated device that helps ensure safety by tracking location and sending emergency alerts in case of danger
VTES23	Development of an intelligent fuel monitoring and theft detection system equipped with GPS & GSM integration, state of charge monitoring and real-time alarm generation	**Description :** The Intelligent Fuel Monitoring and Theft Detection System uses GPS and GSM integration to track fuel levels, monitor the state of charge, and generate real-time alarms to detect and prevent fuel theft.
VTES24	Implementation of power efficient smart helmet system for road safety and rider's convenience using Pico board	**Description:** The Power-Efficient Smart Helmet System uses a Pico board to enhance road safety and rider convenience by providing features like real-time alerts, navigation, and accident detection while conserving energy
VTES25	Enhancing atm security: a finger vein biometric approach	**Description :** Enhancing ATM security with a finger vein biometric approach involves using the unique pattern of veins in a person's finger for authentication, making it harder for unauthorized users to access accounts. This method is secure, as vein patterns are difficult to replicate or steal
VTES26	Design and implement a GPS car tracker on Google maps using controller	**Description:** The controller involves creating a system that tracks a car's location in real-time using GPS data, and displays its position on Google Maps. The controller processes the GPS information and sends it to a mobile app or website, where the car's movement can be monitored and tracked on the map
VTES27	Vehicle collision detection and emergency contact	**Description:** This system involves creating a system that automatically detects a crash using sensors in the vehicle and instantly notifies emergency contacts or services. This helps ensure quick assistance and response after an accident

CODE	TITLE	APPLICATION / DESCRIPTION
VTES28	Design of electricity theft detection and alert system using assisted controller and smart sensors	**Description**: To monitor electricity usage and identify unusual patterns that suggest theft. The assisted controller processes this data and sends alerts to the authorities or the utility company, enabling quick action to prevent or address the theft
VTES29	Enhancing cyclist safety: real-time fallen cyclist detection and emergency notification system	**Description:** The real-time fallen cyclist detection and emergency notification system uses sensors to detect when a cyclist falls and automatically sends an alert to emergency contacts or services, ensuring quick assistance and improving cyclist safety
VTES30	Children's safety application with secure tracking device	**Description:** It allows parents to monitor their child's location in real-time, ensuring they are safe and can quickly respond if needed. The device provides accurate tracking and alerts for added security.
VTES31	Low-power wireless sensor network for real-time indoor air quality monitoring with Co2 sensors	**Description:** To continuously measure air quality and send data wirelessly, helping to ensure a healthy environment by detecting harmful levels of carbon dioxide
VTES32	Fire alarm-based obstacle avoiding and Bluetooth controlled robot	**Description :** The system detects fires and avoids obstacles while navigating, and can be controlled via Bluetooth to assist in emergency situations or firefighting efforts
VTES33	Rollbot: an automatic curtain opener robot	**Description:** That uses sensors or a remote control to open and close curtains, providing convenience and energy efficiency by adjusting natural light in a room
VTES34	Exploring advanced smart sensing technology for enhanced drip irrigation management in greenhouses	**Description :** It uses sensors and data analytics to monitor soil moisture, temperature, and plant needs in real time, ensuring precise water delivery. This helps optimize water usage, improve crop growth, and reduce waste by adjusting irrigation based on accurate, up-to-date information
VTES35	Application of a Bluetooth low power communication network in an energy management platform	**Description:** It allows devices to wirelessly exchange data with low power consumption. This helps monitor and control energy usage efficiently, enabling real-time tracking and management of energy resources while minimizing energy waste
VTES36	MPPT controller for dc motor drives supplied by PV power system	**Description:** Optimizes the energy output from the solar panels, ensuring the motor receives the maximum available power. This helps improve the efficiency and performance of the DC motor while using solar energy

CODE	TITLE	APPLICATION / DESCRIPTION
VTES37	Smart Embedded System for accident pre-alert and prevention	**Description**: A smart embedded system for accident pre-alert and prevention uses sensors and real-time data processing to detect potential hazards, providing early warnings to drivers and automatically taking actions to prevent accidents, enhancing safety.
VTES38	TAFT: Thermal-Aware Hybrid Fault-Tolerant Technique for Multicore Embedded Systems	**Description:** TAFT (Thermal-Aware Hybrid Fault-Tolerant Technique) is a method designed for multi-core embedded systems that monitors and manages both temperature and faults to ensure system stability and reliability, preventing overheating and minimizing performance loss
VTES39	Mobialert: a data-driven embedded system approach to enhance safety for cyclists	**Description:** Mobialert is a data-driven embedded system designed to enhance cyclist safety by monitoring real-time data such as speed, location, and nearby traffic, providing alerts to cyclists about potential hazards or unsafe conditions
VTES40	Embedded floating bag for military use	**Description:** An embedded floating bag for military use is a portable, water-resistant bag equipped with sensors and technology that helps protect and store essential equipment, ensuring it stays afloat and accessible in water-based environments.
VTES41	Internet enabled, state of the art E-voting eco system	**Description :** An internet-enabled, state-of-the-art e-voting ecosystem is a secure and advanced online system that allows people to vote electronically in elections from anywhere, ensuring privacy, transparency, and accessibility
VTES42	Smart waste segregation system	**Description:** This system uses technology to automatically sort different types of waste, making recycling more efficient and reducing environmental impact
VTES43	RFID attendance system with notification	**Description :** An RFID attendance system tracks attendance using radio-frequency identification, automatically recording when individuals arrive or leave, and sends notifications to keep users informed.
VTES44	Voice controlled smart home for disabled	**Description:** This system individuals allows them to control lights, appliances, and other devices using voice commands, making daily tasks easier and more accessible
VTES45	Power quality challenges in integrated distribution generation and scope of intelligent control techniques	**Description:** The system involve issues like voltage fluctuations and grid instability, and intelligent control techniques aim to improve stability, efficiency, and reliability by using advanced monitoring and automation

CODE	TITLE	APPLICATION / DESCRIPTION
VTES46	Fire monitoring and prevention system based on the severity of fire	**Description**: It detects fire intensity and automatically adjusts response measures, such as activating alarms or sprinklers, to effectively control and prevent damage
VTES47	Soil Moisture Monitoring and Seed Sowing Robot	**Description:** That automatically checks soil moisture levels and plants seeds accordingly, ensuring optimal growing conditions for crops
VTES48	Integrated traffic control system for emergency vehicles	**Description:** An integrated traffic control system for emergency vehicles uses real-time data to prioritize and clear paths for emergency vehicles, ensuring faster response times and reducing traffic congestion
VTES49	Automatic smart irrigation system	**Description:** An automatic smart irrigation system uses sensors and weather data to adjust watering schedules, ensuring plants receive the right amount of water while conserving resources and reducing waste
VTES50	Design & development of an automated wheelchair for differently abled person using keypad & bluetooth technology	**Description :** The automated wheelchair for differently-abled persons uses a keypad and Bluetooth technology, allowing users to control the wheelchair's movement easily and independently
VTES51	Smart motion detection and location tracking system for enhanced security applications	**Description:** The system uses sensors and GPS to detect movement and track the location of individuals or objects, enhancing security by providing real-time alerts and monitoring
VTES52	Smart home automation with smart metering using ZigBee technology and deep belief network	**Description:** This project uses Zigbee technology and deep belief networks to automate home functions and manage energy usage. It monitors and controls various home devices efficiently, optimizing energy consumption and enhancing convenience.
VTES53	A smart and systematic vehicle headlight operations controlling system based on light dependent resistor	**Description:** To automatically adjust the headlights based on ambient light levels, ensuring optimal visibility and safety
VTES54	Efficient embedded fixed-point direction of arrival method	**Description:** Uses specialized algorithms to accurately determine the direction of a signal source, optimized for use in embedded systems with limited processing power

CODE	TITLE	APPLICATION / DESCRIPTION
VTES55	Hot watch: Wearable Health Monitoring System	**Description**: A wearable health monitoring system that tracks vital signs like heart rate, temperature, and activity levels in real-time, providing users with health insights and alerts for better well-being
VTES56	GPS based efficient real time vehicle tracking and monitoring system using two factor authentication.	**Description:** The system uses GPS technology to track vehicles, while two-factor authentication enhances security, ensuring only authorized users can access and monitor the vehicle's location and status.
VTES57	Revolutionizing healthcare: seamless integration of cloud technology for health monitoring systems	**Description:** The systems, allowing real-time tracking of patients' health data, easy access to medical information, and improved care through remote monitoring and analytics
VTES58	Research on intelligent home care system.	**Description:** The system focuses on developing smart technologies that monitor and assist with the health, safety, and daily needs of individuals, especially the elderly, through connected devices and real-time data analysis
VTES59	Low-cost embedded system to measure pulse and oximetry	**Description :** A low-cost embedded system to measure pulse and oximetry is a compact device that monitors heart rate and blood oxygen levels, providing accurate health data in an affordable and easy-to-use format for personal or medical use.
VTES60	Indoor navigation with mobile embedded systems	**Description:** Indoor navigation with mobile embedded systems uses sensors and GPS technology in smartphones or other devices to help users navigate and find their way inside buildings, providing real-time directions and location tracking
VTES61	Wildfire risk assessment and detection for remote terrain	**Description :** Wildfire risk assessment and detection for remote terrain involves using sensors, satellite data, and advanced algorithms to monitor and identify potential wildfire threats in hard-to-reach areas, helping to prevent and manage fires more effectively
VTES62	Alcohol Sensing With Engine Locking System and Communication Using GPS, GSM Technology	**Description:** This System is designed to detect alcohol consumption by a driver using a sensor, preventing the engine from starting if alcohol is detected. Additionally, the system uses GPS and GSM technology to communicate the vehicle's location and status to a monitoring center or authorized users, enhancing safety and enabling quick response in case of emergencies. This system aims to reduce drunk driving and improve road safety by ensuring that only sober drivers can operate the vehicle
VTES63	Overload control of the embedded HVDC for Hybrid AC/DC power system security enhancement	**Description:** Overload control of the embedded HVDC (High Voltage Direct Current) in a hybrid AC/DC power system enhances security by managing power flow, preventing system overloads, and ensuring stable and reliable energy distribution

CODE	TITLE	APPLICATION / DESCRIPTION	IEEE 2024 EMBEDDED SYSTEM
VTES64	Anti-collision speed control system based on embedded system using RFID	**Description**: The system helps prevent accidents by automatically adjusting a vehicle's speed when it detects nearby objects or other vehicles through RFID tags, ensuring safer driving	
VTES65	Embedded C based smart voting system with biometric	**Description:** An Embedded C-based smart voting system with biometric authentication uses fingerprint to verify voters, ensuring secure and accurate voting while preventing fraud and unauthorized access.	