CODE	TITLE	APPLICATION / DESCRIPTION
VTAUR01	Vehicle Speed Control and Accident Avoidance System Based on Arduino Micro Controller	**Application: Energy Management** **Description**: We propose a solution in our project to avoid road accidents and to control speed of vehicles. Front Ultra-sonic sensors of the vehicles detect obstacles, then Controller the information and passes signals to the wiper motor to brake the vehicle with the help of Arduino Uno
VTAUR02	Arduino Based Smart Home Warning System	**Application: Energy management** **Description:** In this system, Arduino Uno microcontroller has been used with several compatible sensors, actuators (buzzer and relays with attached water valve, air fan, and light bulb), and GSM as a wireless communication medium to enable the interaction between users and the proposed system
VTAUR03	Arduino-based Automated Washroom Sanitizing System	**Application: Green house** **Description:** The proposed Arduino-based automated washroom sanitizing system, mainly deals with solving the problem of the unhygienic condition of public toilets. The automation of systems for everyone is turning very frequently in the present. Yet, common people are facing many issues in their daily routine. Sanitation is one of the largest problems faced by people in our country
VTAUR04	Intelligent Monitoring Systems for Transportation of Perishable Products based Internet of Things (IOT) Technology	**Application: Defence** **Description:** In the proposed remote goods/ parcel monitoring system is structured by considering diverse human services parameters. Existing framework model is presented with Sensors, RFID Tags.
VTAUR05	A Standalone RFID-Based Mobile Robot Navigation Method Using Single Passive Tag	**Application: Ambient Intelligence** **Description :** This article proposes a standalone radio frequency identification (RFID)-based mobile robot navigation method, in which a mobile robot equipped with reader antennas can be continuously guided to a static object marked with a single passive UHF RFID tag
VTAUR06	Smart home automation system using Arduino microcontrollers	**Application: Defence** **Description:** In this paper, smart energy efficient home automation system is proposed that can access and control the home equipment's
VTAUR07	Smart Intrusion Detection System for Crop Protection by using Arduino	**Application: Agriculture** **Description :** The proposed methodology aims at designing a secure system for safeguarding the farmlands by preventing the ingress of animal or humans in the farm. The system also aims at preventing elephants from destroying crops
VTAUR08	Real Time DC Water Tank Level Control using Arduino	**Application: Energy Management** **Description:** This paper presents a Real-time level control of a laboratory water tank plant Demonstrating the essence of control engineering.
VTAUR09	Arduino Based Safeguarding System by Using Sound	**Application: Security system** **Description:** The proposed system of security using knock pattern is constructed with electronic circuit perforated board, gear motor, LED's, Piezo sensor and Arduino series board.

IEEE 2020 – ARDUINO

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CODE	TITLE	APPLICATION / DESCRIPTION
VTAUR10	A Predictive Data Feature Exploration-Based Air Quality Prediction Approach	**Application: Green House** **Description**: We propose an improved air quality prediction method based on the Light GBM model to predict the Sensor concentration at the air quality monitoring stations.
VTAUR11	Automatic Vehicle Counting for IoT based Smart Traffic Management System for Indian urban Settings	**Application: Automation** **Description:** The proposed method presents a framework, which has the capability to continuously convey the vehicle count and generate an alarm in case of large vehicle gathering to the controlling station in the Chandigarh or alike urban Indian cities.
VTAUR12	A Development Architecture for the Intelligent Animal Care and Management System Based on the Internet of Things and Artificial Intelligence	**Application: Artificial Intelligence** **Description:** This study proposes a development architecture for the intelligent animal management system based on the Internet of Things (IoT) and artificial intelligence (AI).
VTAUR13	Petrol Pump Queue Management System for Sultanate of Oman Using Artificial Intelligence Technique	**Application: Artificial Intelligence** **Description:** This paper discuss issues of managing queues of vehicles at petrol pumps in the sultanate of Oman and identify solutions to minimize the waiting time.
VTAM01	Solar Powered Automatic Irrigation Monitoring System	**Application: Irrigation Automation** **Description :** The proposed plan has the component of GSM which makes this framework remote. The water substance is always noted and when the dampness level of soil levels to low values, the framework will send a sign to engines requesting it to start
VTAM02	Smart Bank Locker Using Fingerprint Scanning and Image Processing	**Application: Domestic Automation** **Description:** In the present work, a smart locker has been designed for banking sector. The main feature of this work is it keeps track of time, date and number of access of locker by a user in the bank. The smart lock program will compare your image and fingerprint with the data already stored in the database
VTAM03	Fuel Theft Prevention System	**Application: Security** **Description :** The system involves continuously monitoring the fuel level in the storage tank of the tanker. When the fuel drops below a specified limit, an alert will be sent to the driver and the fuel agency. A keypad security system based on dual password authentication acts as the first layer of security. A GPS module enables authorities to monitor the location of the truck through a mobile application
VTAM04	Intelligent Greenhouse Management System	**Application: Ambient intelligence** **Description:** In this paper, we propose a utilizing IOT innovation to help farm's owner to control and monitor through screen and sense valuable information from their farms by their smart-phone application to help in the quality improvement and the crop amount
VTAM05	ATM Security System using Arduino	**Application: Home automation** **Description:** This paper gives safe arrangements, for example, biometric authentication. ATM cards has the data about unique mark. The primary target of the venture work is to guarantee better security in ATM exchanges. Right now, use RFID tag rather than ATM card

IEEE 2020 - ARDUINO

IEEE 2020 - AUTOMATION

CODE	TITLE	APPLICATION / DESCRIPTION
VTAM06	Efficient Model for Automated Home Management System	**Application: Home Automation** **Description**: This uses a mix of hardware and software to control and manage appliances and devices inside a home. The fundamental purpose of tracking electronic devices in the modern world through the use of the Internet of Things (IoT) is to regulate them according to situational requirements
VTAM07	Arduino based Real Time Drowsiness and Fatigue Detection for Bikers using Helmet	**Application: Automation** **Description:** This system provides real-time drowsiness and fatigue detection for the bikers by making a helmet to play a vital part with warning platform as a miniaturized sensor
VTAM08	Arduino Based Ambient Air Pollution Sensing System	**Application: Ambient Intelligence** **Description:** The proposed ambient air pollution sensing system provide real-time low-cost flexible measurement of five most important for human health urban areas air parameters
VTAM09	Intelligent Monitoring System for Oil Well Efficiency	**Application: Automation** **Description:** In This System The smart microcontroller (Arduino Uno) was connected to a global mobile communication system (GSM), for the monitoring of information processes, a malfunctioning sensor or a power management indication and the malfunctioning message would be sent to the maintenance team if any purpose required
VTAM10	Arduino Based traffic congestion control with automatic signal clearance for emergency vehicles and Stolen Vehicle Detection	**Application: Irrigation** **Description :** Proposed a system which removes this problem using RF Transmitter and Receiver. The particular path signal will change to blue along with green signal, indicating the ambulance arrival. Thus it reduces time & saves the lives of many people due to existing traffic system limitations. Also stolen vehicle can be easily detected with the help of RFID
VTAM11	Smart Monitoring System using RFID Technology	**Application: Industry** **Description:** The paper to get the attendance with the student presence. There were many problems to get student attendance when using the paper such as impostor. For this, by using RFID, lecturer can easily solve the problem by designing an regular attendance management system using RFID and ID card.
VTAM12	Investigation and Application of Smart Door Locks based on Bluetooth Control Technology	**Application: Robot Surveillance** **Description :** The peripheral device of the smart door lock controls and manipulates by the central controller
VTAM13	Collision Avoidance Head-Up Display: Design Considerations for Emergency Services' Vehicles	**Application: Automation** **Description:** This paper identifies the major issues related to ES vehicles' delays and collisions and offers a framework for an alternative solution that aims to enhance ES drivers' human responses in high speed and when maneuvering through traffic
VTAM14	Smart Home Automation-cum Agriculture System	**Application: Automation** **Description:** The system when used as smart Home Automation. The multichannel relay module for loads is interfaced with the central unit. When used for Agricultural monitoring the environmental parameters including soil moisture, air temperature and humidity has been analyzed and displayed on the LCD screen. Water flow was controlled using the water motor as per soil moisture threshold value. Hypertext transfer protocol based ESP8266 Wi-Fi

IEEE 2020 - AUTOMATION

CODE	TITLE	APPLICATION / DESCRIPTION
VTAM15	IoT Enabled Home Automation System Comprehending the User Experience Based on Their Pattern Usage	**Application: Bio Medical** **Description**: The smart home system is a widely used reference term and a platform for home automation control, and monitoring. This is basically a system that will connect with our device (phone or web) and there will be the main device inside the home that device will be connected with the wifi or Bluetooth and other home appliances that we want to control remotely
VTAM16	Turmeric Plant Diseases Detection and Classification using Artificial Intelligence	**Application: IOT** **Description:** Artificial Intelligence is an emerging sector in all fields of works for automation and to improve efficiency. It also included in agricultural sector to improve crop yield by identify the disease affection at early and classify type of disease affected for taking precaution measurements to prevent spreading to other plants in field
VTAM17	Smart Monitoring System for Pond Management and Automation in Aquaculture	**Application: Agriculture** **Description:** In this paper, by using sensors we have measured water level, temperature, humidity and pH level which are integrated with water pumps and aeration system which is controlled by the ESP32 micro controller. These values are sent to the cloud at regular intervals of time, which can be monitored by user through blynk application which is integrated with the cloud
VTAM18	Smart Driving With Drowsiness Detection And Alert System	**Application: Energy Management** **Description:** This project is to develop a prototype drowsiness detection system. The focus will be placed on designing a system that will accurately monitor the eye blink rate, distance between the vehicles and if any pressure applied on the vehicle
VTAM19	Intelligent Transport systems Road weather information and forecast system for vehicles	**Application: Energy Management** **Description :** Intelligent Transport System (ITS) initiative along with related standardization presents the technological approaches for a vehicular communication and an autonomous driving. Vehicular local area networking (VANET) utilizing Vehicle to vehicle (V2V) and Vehicle to infrastructure (V2I) communication tools with the IEEE 802.11p protocol along with it 4G/5G cellular networking and hybrid models of them are the key technological approaches for this communication entity
VTAM20	Detection of Disease in Cotton Leaf using Artificial Neural Network	**Application: Agriculture** **Description:** The main purpose of farming is to yield healthy crops without any disease present. It is very difficult to visually presume the health of cotton leaf.
VTAM21	WIA-FA and Its Applications to Digital Factory: A Wireless Network Solution for Factory Automation	**Application: Industry** **Description :** One application deploys a WIA-FA network to monitor and control industrial robots in a digital workshop.
VTAM22	Low-cost, Inkjet-printed UHF RFID Tag based System for Internet of Things Applications using Characteristic Modes	**Application: Automation** **Description:** The proposed smart refrigerator is used for automatic billing and restoring of beverage metallic cans. The metallic cans can be restored by generating a product shortage alert message to a nearby retailer.
VTAM23	Distributed Real-Time IoT for Autonomous Vehicles	**Application: Automation** **Description:** In this work, we study a smart traffic control scenario – a realtime IoT application, where a group of autonomous vehicles independently decide on their lane velocity.

IEEE 2020 – AUTOMATION

IEEE 2019 – AUTOMATION

CODE	TITLE	APPLICATION / DESCRIPTION
VTCE01	Multi-Functional Blind Stick for Visually Impaired People	**Application: Industry** **Description**: The proposed solution employs the Internet of Things (IoT) paradigm to provide a medium between the blind and the environment. Several sensors can be used to detect anomalies like obstacles, staircases and wet terrains respectively
VTCE02	Low-Noise Energy Efficient Readout Front-End for Wearable Continuous Blood Pressure Monitoring Systems	**Application: Green house** **Description:** This paper presents a low-noise, energy efficient readout front-end, which is dedicated to sensing and pre-processing of vital bio-signals, viz., electrocardiogram and photo plethysmo graph for continuous blood pressure estimation
VTCE03	Analysis of IOT architecture for low-cost air pollution monitoring systems	**Application: Automation** **Description:** This paper proposes an IoT based totally definitely air infection checking framework and gives an outline of the device association of the proposed framework
VTCE04	Early Detection of Building Collapse using IoT	**Application: Ambient Intelligence** **Description:** The proposed method is of Early detection of building collision is where detecting the bend, or any gap in the building. If any bend in the building the sensor detects and gives the emergency alert
VTCE05	Real Time Analysis of Air Pollution Prediction using IoT	**Application: Energy Management** **Description :** Our system is a real time analysis of the air pollution, and purifies the air based on the real time and the data stored from the real time analysis
VTCE06	Air Quality Sensing and Reporting System Using IoT	**Application: Automation** **Description:** The model presented here uses a combination of the Arduino UNO software and hardware along with a Gas sensor - MQ135, MQ7 and dust sensor
VTCE07	An Instrument to Identify Bus Names for Visually Impaired Person	**Application: Energy Management** **Description :** A Nouvelle Instrument to Identify Bus Names for Visually Impaired Persons" has been proposed. With the assistance of this Project blinds can without much of a stretch recognize which bus is drawing closer towards bus stop. This should be possible by putting RF Transceiver on all the bus stops and setting another RF receiver on the walking stick
VTCE08	Face Recognition Based Smart Attendance System	**Application: Security** **Description:** There are several ways to mark your attendance, the most common ways to sign or call the students. It took longer and was problematic. From now on, a computer-based student attendance checking system is required that support the faculty to keep record of attendance. We have used an intelligent attendance system based on face recognition in this project. We have proposed to implement a "smart attendance system for face recognition" through this large application are incorporated. The system implemented uses LBPH face
VTCE09	Analysis of the Water Quality Monitoring System	**Application: Automation** **Description:** The quality of water is determined using various sensors like PH sensor and turbidity sensor, connected to the Arduino family microcontroller. The Arduino software is written in embedded C and GSM module is connected to the Arduino. The data will be transferred constantly from the remote sensor organize through microcontroller and WIFI

IEEE 2020 - CONSUMER ELECTRONICS

CODE	TITLE	APPLICATION / DESCRIPTION
VTCE10	Automatic Seat Adjustment using Face Recognition	**Application: Health Care** **Description**: It adversely affects the body of the driver when he/she adjusts the seat for a comfortable position. The comfortable seat position is different for each person. This research work explains about reducing manual effort in seat adjustment by automating the seat adjustment process by using face recognition. The seat adjustment process deals with the movement of the seat in horizontal, vertical and inclination directions by rotating the motors fitted within the seat
VTCE11	Gas Leakage Detection System using IoT with integrated notifications using Push bullet-A Review	**Application: Automation** **Description:** The main idea of this paper is to carry out the literature review on IoT based gas detection techniques and to ensure the safety of people and surroundings. By presenting a simple yet reliable system, gas leakage detection system using MQ5 gas sensor and Arduino uno controller is incorporated with a cloud storage for data collection and also used for storing and analyzing data
VTCE12	A Review on IoT based Smart Card System for students	**Application: Automation** **Description:** This paper expects to display the utility of an understudy card framework for an instructive foundation utilizing smart cards innovation which can be usable in shipping, trade and instructive segments. Smart cards will be utilized as means for recognizable proof, safety and money
VTCE13	Classifying Daily and Sports Activities Invariantly to the Positioning of Wearable Motion Sensor Units	**Application: Automation** **Description:** The proposed approach with an existing technique to achieve position invariance and combine the former with our earlier methodology to achieve orientation invariance. We evaluate our proposed methodology on a publicly available dataset of daily and sports activities acquired by wearable motion sensor units. The proposed representations can be integrated into the pre-processing
VTCE14	Intelligent Greenhouse Management System	**Application: Security** **Description :** we propose a utilizing IOT innovation to help farm's owner to control and monitor through screen and sense valuable information from their farms by their smartphone application to help in the quality improvement and the crop amount. The proposed system offers a full-automated control over the climate changes in the greenhouse to improve the agricultural conditions for the different plants in the greenhouse
VTCE15	IoT Network Security and Applications via Long Range Technology	**Application: Automation** **Description:** We propose Internet of Things secure localization system and application based on multisensor fusion calculation here Arduino UNO high-level development platform, and the multisensor fusion computing workstations, which send the results to the central monitoring system through the wireless devices of the network
VTCE16	Providing enhanced security in IoT based smart weather system	**Application: Industry** **Description :** In the present work the environmental parameters such rainfall, temperature, humidity, and density of carbon dioxide in the air are measured with sensors
VTCE17	Automatic Speed Detection and Reporting System Using Arduino	**Application: Health Care** **Description:** This paper presents a system, developed for over-speed detection of the vehicle or human beings and alert corresponding persons by giving buzzer automatically and also sends messages to their mobile
VTCE18	A Review on IoT based Smart Card System for students	**Application: Consumer Electronic** **Description:** This project focus on securing homes using intelligent door lock, which captures the image of the person standing before the door to get access to enter the house. Using image recognition, the captured image is tested and if it is the image of an authorized person the door opens automatically and if it is of an unknown person the captured image is sent to the owner of the house to get access.

IEEE 2020 – CONSUMER ELECTRONICS

CODE	TITLE	APPLICATION / DESCRIPTION	
VTCE19	IOT Based Smart Quality Water Management System	**Application: Automation** **Description**: Our proposed model helps to indicate the level of water available in the tank, it checks the quality of water, identifies the water leakage in tank and prepares billing by keeping track of daily as well as monthly water usage	**IEEE 2020 - CONSUMER ELECTRONICS**
VTCE20	Travel assistant for persons with visual disabilities	**Application: Automation** **Description:** This paper tries to evaluate the specific needs for such persons and offer pragmatic solutions based on the latest information and communication technologies (ICT)	
VTCE21	Smart Sensing-enabled Decision Support System for Water Scheduling	**Application: Automation** **Description:** Proposed approach uses the latest smart sensing technology such as soil moisture, leaf-wetness, temperature and humidity. The proposed smart sensing-enabled test-bed was deployed in the orange orchard of our institute for approximately one year and successfully adjusted its irrigation schedule according to the needs and demands of the plants	
VTCE22	IoT Based Smart Waste Management System: India prospective	**Application: Bio-Gadgets** **Description:** This paper presents an Internet of Things (IoT) based Smart Waste Collection Monitoring and Alert System to monitor the waste Material at the selected site of garbage collection area.	**IEEE 2019 - CONSUMER ELECTRONICS**
VTCE23	A Novel Smart Energy Theft System (SETS) for IoT based Smart Home	**Application: Security** **Description :** This paper develops an energy detection system called Smart Energy Theft System (SETS).	
VTGP01	GSM Based Irrigation System for Monitoring Agriculture	**Application: Industry** **Description:** In this System three detectors are attaining the boundary level of the sensing evidence; the GSM will be sending the sensor evidence to the corresponding authorized user.	**IEEE 2020 - GSM & GPS**
VTGP02	The Design of User Meter Reading System Based on ZigBee and GSM	**Application: Security** **Description :** In this paper, a method based on wireless transmission is proposed to monitor and detect the meter. A wireless meter reading system based on ZigBee-GSM technology is proposed by using ZigBee wireless network and GSM Communication network for real-time monitoring of power consumption data	
VTGP03	Automatic gate control for highly secure organization Using RFID and GSM Technology	**Application: Security** **Description:** The proposed research article claims to forward fake person to the corresponding or authorized person in the same instance of time. Thereby, the accomplishment of the aforesaid security system is maintained by RFID Tag-based database by the organization	
VTGP04	Development and Performance analysis of a GPS & GSM Guided System for Vehicle Tracking	**Application: Security** **Description:** This paper, therefore presents the development of a GPS-GSM guided system for vehicle tracking. The developed system comprises of an integration of both hardware and software such as a microcontroller (Arduino), GPS module, GSM module, and a vibration sensor.	

CODE	TITLE	APPLICATION / DESCRIPTION
VTGP05	Automatic Farming for Minimum Water Usage and Animal Protection Using Solar Fencing with GSM	**Application: Energy Management** **Description**: The Proposed which will protect the farm field from animals /birds, as most of the crops / grains are destroyed by the animals / birds which enter the farm field. A Solar / electric fence is provided around the farm to protect the farm from animal / birds
VTGP06	Developing SCADA Systems to Monitor and Control Liquid and Detergent Factories	**Application: Security** **Description:** In the proposed remote industrial monitoring system is structured by considering diverse human services parameters. Existing framework model is presented with Sensors, and IOT.
VTGP07	Real-time Alarm, Dynamic GPS Tracking, and Monitoring System for Man Overboard	**Application: Automobiles** **Description:** In this paper, we propose a real-time alarm, dynamic GPS tracking, and monitoring system for MOB, and its R&D target, The system consists in parts wearable sensing aids, modular long-range access points, physical electric fences, and a central control system, as well as methods for detecting and protecting against MOB
VTBIO01	Development of e-Health Monitoring System for Remote Rural Community of India	**Application: Smart Surveillance** **Description:** This work is an attempt to solve basic health problems and take advice from registered medical experts for the betterment of the targeted community. The imperative goal of the paper is to develop a cost effective and reliable Internet of Things (IoT)
VTBIO02	Design and Implementation of Hypothermia Symptoms Early Detection with Smart Jacket based on Wireless Body Area Network	**Application: Energy Management** **Description :** It consists of temperature sensor, pulse sensor, and accompanied by heating elements based on wireless body area network (WBAN). This device will connect to the user's smart-phone by using Bluetooth
VTBIO03	Secured Pulse Rate Monitoring System using IoT and Cloud	**Application: Energy Management** **Description:** The system is designed in a way so as to ensure the objectives, one of monitoring of the heart condition remotely, as in through the heart beat rate is achieved alongside facilitating for a continuous observation of the heart beat rate of the patient remotely
VTBIO04	A Trusted Platform Module Sharing Scheme towards Smart IoT-eHealth Devices	**Application: Energy Management** **Description :** Monitoring the physical status of the patients at anytime and anywhere, and develop more precise treatment plans by analyzing the collected data, such as heart rate, blood pressure, blood glucose. Actually, these smart sensors used in eHealth system are smart embedded devices (SED)
VTBIO05	An Efficient IoT Based Body Parameters Tele monitoring System	**Application: Energy Management** **Description:** This paper illustrates a real time tele monitoring system that will keep track of patients' body parameters like temperature, heart rate and galvanic skin response (GSR)
VTBIO06	IoT based Real Time Health Monitoring	**Application: Health care** **Description:** The objective is paper is to implement a low-cost system and transmit the patient vital signs in emergency situations. Sensors are being used for measuring the patient vital signs by using the wireless network

IEEE 2020 - GSM & GPS

IEEE 2020 - BIO-MEDICAL

CODE	TITLE	APPLICATION / DESCRIPTION
VTBIO07	Patient Assistance using Flex Sensor	**Application: Energy Management** **Description**: This proposed model deals with flex sensor placed on finger/toe. It picks up bending in finger and translates to a selective control. Further the Arduino micro-controller is used which assists the patient and communicates the patient's condition to the concerned person using one of its units in case of emergency
VTBIO08	Exploratory Data Analysis Based on Remote Health Care Monitoring System by Using IoT	**Application: Security** **Description:** The system proposed in this article is to make Exploratory Data Analysis (EDA) of people's health condition based on remote health care monitoring system in their different activities. Because of several critical physiological parameters of human body, multi body sensor health monitoring approach is vital
VTBIO09	A Patient-Specific Single Sensor IoT Based Wearable Fall Prediction and Detection System	**Application: Bio-Medical** **Description:** In proposed system, we can design a new monitoring and tracking system to provide the fall down information to the rescue section automatically by using GSM.
VTROB01	Military Support and Rescue Robot	**Application: Smart Surveillance** **Description:** In this project a complete framework presentation of building a low-cost robot prototyping based on Arduino technologies
VTROB02	Obstacle Detecting Multi-functional AGRIBOT Driven by Solar Power	**Application: Energy Management** **Description :** This AGRIBOT uses the renewable energy i.e. solar energy obtained from solar panel powered battery, it also consists of a visual obstacle detector and a Bluetooth module which is paired with a Bluetooth terminal application
VTROB03	IoT Based Smart Multi Application Surveillance Robot	**Application: Energy Management** **Description:** The main goal of this paper is to design and develop a surveillance robot that can reduce the casualties in the war field
VTROB04	A Review on Smart Autobot in Building Eradication Using WSN Technology	**Application: Energy Management** **Description :** The paper manages the screen and presentation of humans in those zones and distinguishing fire utilizing fire sensors, passive infrared sensors, and clouds. It likewise empowers the light in darker regions with the assistance of LDR (Light dependent sensor). It additionally controlled with the IoT innovation to control and a camera to envision the way and explore through the territory. Groups of such robots ought to attractively be heterogeneous and to perform with a given degree of adaptable and simple to learn and easy to start and agreeable to actuate
VTROB05	Structuring Free Space as a Hyper graph for Roving Robot Path Planning and Navigation	**Application: Energy Management** **Description:** This paper presents a method of structuring the free space of a roving robot's environment into a set of overlapping convex regions Ideally suited to path planning and navigation tasks.
VTROB06	A Terrain-Based Vehicle Localization Approach Robust to Braking	**Application: Health care** **Description:** This paper develops a Terrain-based localization approach which is robust to braking events. First, the terrain map is generated and stored before localization, which includes distance measurements, terrain feature data, and the geographic locations.

IEEE 2020 - BIO-MEDICAL

IEEE 2020 - ROBOTICS

IEEE 2019 - ROBOTICS

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CODE	TITLE	APPLICATION / DESCRIPTION
VTRAP01	Surveillance Camera using IoT and Raspberry Pi	**Application: Energy Management** **Description**: This paper proposed a surveillance camera by employing Raspberry Pi and IoT. It will make use of raspi-cam camera for capturing the images. The proposed surveillance system requires less storage space
VTRAP02	Real-time and Low-cost IoT based farming using raspberry Pi	**Application: Security** **Description:** This paper reflects on the implementation of IoT enabled Farming, especially for the people needed a smart way of agriculture. This research focuses on real-time observation with efficient use of cheapest security system
VTRAP03	Design and Implementation of Wifi Controlled Robotic Rover based on Raspberry pi	**Application: Bio-Medical** **Description:** The present manuscript deals with controlling a robot over Wi-Fi and maintaining an economical management over a machine we have a RaspberryPi which our iPhone, iPad or laptop can power. The RaspberryPi sends data to robot from your computer telling it what to do. The Pi is causing the info through the WiFi electronic device and therefore the management is maintained by a PC
VTRAP04	Surveillance Robot Using Raspberry Pi	**Application: Smart Surveillance** **Description:** The purpose of the paper is to define a safe keeping alert device spending little handling power by Internet of things which help out to observer plus alerts when gestures or else motion are there then send images to a cloud server
VTRAP05	Research Paper on Android based Home Automation using Raspberry pi	**Application: Energy Management** **Description :** Home automation system is implemented using a raspberry pi, android application from which you can control the devices and relay circuit. The Wi-Fi signal should be strong so that devices can control the appliances. Through relay the appliances can also be controlled The main purpose of the home automation system is to provide a cheap, secure and open source home automation which can be able to control all the home appliances through android device
VTRAP06	Web based Home Automation System Prototype using Raspberry Pi	**Application: Energy Management** **Description:** The development of a web-based home automation system prototype using the raspberry pi can provide a solution to remotely control an electronic device. The method used to develop the system is prototyping model to built, tested and refined repeatedly until a final prototype is achieved. The result of this research is a prototype will simulate 4 electric outlets using 4 lamps, and the raspberry pi will work as the web server enabling the user to be able to remotely control the electronic device and minimize excessive use of electrical energy
VTRAP07	IoT Data Logger in Irrigation Using Raspberry PI	**Application: Energy Management** **Description :** The main aim of this project is to control the switch on and switch off of the pump using raspberry pi through relay. For this purpose python programming is used. The raspberry pi is connected to temperature sensor and soil moisture sensor which are considered to be input to the raspberry pi. The relay module which act as switch used to on and off water pump and ThingSpeak account which is consider to be output get data of temperature and moisture level condition
VTRAP08	IoT based Agriculture Monitoring and Smart Irrigation System using Raspberry Pi	**Application: Energy Management** **Description:** This concept proposes a unique methodology for clever farming through linking a smart sensing gadget and smart irrigation machine through wireless communication technology. It proposes a low fee and green wifi sensor network approach to accumulate the soil moisture, Humidity, temperature from various places of field and as per the need of crop water motor is enabled. It proposes an idea approximately how automated irrigation device became developed to optimize water use for agricultural purposes
VTRAP09	IoT based Smart Cold Storage System for Efficient Stock Management	**Application: Health care** **Description:** In this paper we propose a "smart cold storage" by leveraging the latest supply chain technology and the IOT, which will serve as a hub to improve the efficiency and speedup the process throughout the entire supply chain. This proto type incorporates an IOT based smart cold storage that interacts with the items stored within, collects the information about them and process this information into relevant data

IEEE 2020 – RASPBERRY PI

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EMBEDDED

CODE	TITLE	APPLICATION / DESCRIPTION
VTEEE01	Internet of Things Enabled Power Theft Detection and Smart Meter Monitoring System	**Application: Energy Management** **Description**: The presented system is capable of detecting power theft due to meter bypass, meter tampering and direct line hooking. As an additional feature, direct control of smart meters from distribution authorities
VTEEE02	Energy-saving and Management of Telecom Operators' Remote Computer Rooms using IoT Technology	**Application: Security** **Description:** In the proposed IoT system, sensors are smart meters and temperature modules. And they are used to collect electricity usage and temperature of RCRs, respectively.
VTEEE03	Development of an IoT Driven Building Environment for Prediction of Electric Energy Consumption	**Application: Bio-Medical** **Description:** This paper demonstrates the importance integrating Internet of Things (IoT) devices and technologies for efficient energy management in a building environment. A developed for electric energy consumption prediction in an IoT driven building environment. The models predict electric energy consumption by electric loads in the near-future by recognizing the existence of a relationship between the net electric energy consumption of the building's electric loads and the ambient temperature along with the occupancy state of the building; and employing the detected relationship to predict electric energy consumption using the forecasted temperature and scheduled occupancy state

IEEE 2020 - ELECTRICAL