



IOT Projects List 2017

Arduino, Raspberry Pi, ESP8266, Zigbee, BLE, Cloud Integration, Analytics, Mobile Apps, Web Apps, Machine Learning

S.No	Title	Description	Project Cost
1	Intelligent Illumination system with integrated colour psychology	The proposed system maintains lighting at a low level by considering the illumination levels in the room detected by a set of LDR sensors. In this case, the level of lighting is increased in order to provide better visibility while the illumination is low outside and dims to a lower level when the room illumination is high. At the same time, it behaves according to the human psychology and adjusts the colours of the led light which changes the mood of humans.	9000
2	Green House Monitoring & Control System with Added Intelligence	Greenhouse monitoring system is used to measure the various parameters like Temperature, Humidity, Light and Soil Moisture. Based on the parameters measured and inputs from agriculture scientists the system will control the parameters in green house. The farmer will get complete details of his farm in his mobile. Provision is also given for controlling the equipments remotely from his mobile. The data from such green houses will be uploaded to Agricloud for machine leaning and data analytics.	9000
3	IoT based smart data logging & visualization system	Smart data logging data is designed to let retailers, coffee shops, co-working spaces and other places collect better data about how many customers pass through their doors. Counting customer visits is pretty useful for retailers and other venues, but the name implies, there's a particular value in having an exact count of the number of people in a location at any given time.	9000
4	Optimised energy saving solution for commercial building	Reducing electrical energy consumption is of paramount importance. One unit of energy saved is equal to one unit of energy generated. Apart from reduction in electricity bills this has a great environmental impact in reducing pollution causing gaseous and liquid pollutants. In this project energy saving system by using Green building concept is brought out. The model demonstrates the energy consumption in Conventional Building using energy saving parameters such as Temperature, Humidity, lighting controls and some of the measures. The energy saving system consists of three modes i.e., Eco Mode, Away Mode, Proximity Mode which turns on/off the electrical appliances when required ,which saves the energy. Centralized monitoring of parameters locally and remotely is possible. The sensor data is send to Cloud for future needs.	9000
5	IOT based industry equipment control with predictive maintenance analysis	This paper provides about the condition monitoring (CM) techniques for the 3- ϕ induction motor in a precise manner and while selecting proper condition monitoring techniques for specific application this will be useful. CM (Condition Monitoring) is a process of monitoring the operating parameters of machine to know the monitored characteristics and to predict machine health. Remote condition monitoring configurations in general, complement data collectors.	9000
6	IoT based Super Market Inventory Management System	This paper integrate wireless sensor networks ideology of Internet of things to realize the real-time tracking of goods information and code reading. Completion the function of supermarket chain management information system account of goods, refresh of commodity information instantly. It solve the tedious process of registration and settlement of goods, out of storage records, and transmit directly through the network showing the commodity quantity of purchased and sold. At the same time, make a study on the upper and lower limits of inventory and give a reference mathematical model. It solve the problem that shortages or excess of real- fresh products and one-time use of product loss to the enterprise. At all, this system achieves the supermarket enterprise faster, efficient and reliable management	9000
7	Personal Assistance for independent senior citizens	Personal assistant device for seniors help older people or the elderly aging in place with life activities. These include helping them manage their basic household tasks or transportation. In this project a display with buzzer will be provided to remind the elderly people about medicines, necessary task, events etc. A care taker can program the device using a mobile application and cloud platform. the dvice gets data from the cloud as programmed.	9000
8	Secured Smart Healthcare Monitoring System Based on Iot	Technology plays the major role in healthcare not only for sensory devices but also in communication, recording and display device. It is very important to monitor various medical parameters and post operational days. Hence the latest trend in Healthcare communication method using IOT is adapted. Internet of things serves as a catalyst for the healthcare and plays prominent role in wide range of healthcare applications. In this project the Arduino is used as a gateway to communicate to the various sensors such as temperature sensor and pulse oximeter sensor. The microcontroller picks up the sensor data and sends it to the network through Wi-Fi and hence provides real time monitoring of the health care parameters for doctors. The data can be accessed anytime by the doctor. The controller is also connected with buzzer to alert the caretaker about variation in sensor output. But the major issue in remote patient monitoring system is that the data as to be securely transmitted to the destination end and provision is made to allow only authorized user to access the data. The security issue is been addressed by transmitting the data through the password protected Wi-Fi module ESP8266 which will be encrypted by standard AES128 and the users/doctor can access the data by logging to the html webpage. At the time of extremity situation alert message is sent to the doctor through GSM module connected to the controller. Hence quick provisional medication can be easily done by this system. This system is efficient with low power consumption capability, easy setup, high performance and time to time response.	9000

9	Smart Waste Management system based on Internet of Things	In many places, the Municipal garbage bins are overflowing and they are not cleaned at proper time. As a result of which the consequences are severe. It includes overflow of garbage which results in land pollution, spread of diseases, also it creates unhygienic conditions for people, and ugliness to that place. There needs to be system that gives prior information of the filling of the bin that alerts the municipality so that they can clean the bin on time and safeguard the environment. To avoid all such situations we intend to propose a solution for this problem "Smart Garbage Bin", which will alarm and inform the authorized person when the garbage bin is about to fill. Now, Instead of dumping the waste on land fill area.	9000
10	Internet of Things Based Architecture of Web and Smart Home Interface Using GSM	– In 21st century the people wants the world on their hands. It outlets the revolutions of computing and smart environment. Some technologies like Ubiquitous/pervasive and ambient intelligence satisfy the maximum need of smart world but these technologies are not tightly coupled with internet, so the people needs another technology extension. Internet of Things (IoT) is an ideal emerging technology to influence the internet and communication technologies. Simply "Internet of Things" connects „living and non living things" through „internet". Traditionally in the object oriented paradigm everything in the world is considered as an object, but in the IoT paradigm everything in the world is considered as a smart object, and allows them to communicate each other through the internet technologies by physically or virtually. IoT allows people and things to be connected Anytime, Anyplace, with Anything and Anyone, by using ideally in Any path/network and Any service. This paper proposes architecture to enable the users to control and monitor smart devices through internet. It creates an interface between users and smart home by using GSM and internet technologies, or it simply creates GSM based wireless communication from the web server into the smart home. In this architecture the users give commands through web then the users inputs are converted into GSM-SMS commands. These commands are sent to embedded system module (embedded system directly connect with devices) through GSM network, and finally the user commands are parsed and executed by microcontroller to control any electronic objects like home appliances, lights, etc and it sends the acknowledgement. The embedded system module can place anywhere in the world and it will controlled by IoT Agent through GSM network	9000
11	Remote monitoring & control of Poultry Farm using IoT	The ability to monitor environmental conditions is crucial and it demands a good level of research in fields ranging from the change in climatic conditions in agriculture and zoology. This research focuses on the integration of wireless sensor and mobile network with a well known sensor integration platform using remote sensing.	9000
12	Smart fire alert system for industrial fire based on IoT	Firefighting is one of the most dangerous professions in which people are employed. The dangers associated are the result of a number of factors such as lack of information regarding the location, size and spread of the fire. The use of wireless sensor networks may be one way of reducing the risks faced by the firefighters and assist in the process of rapid extinguishment of the fire. A smart control and monitoring of fire alarm system was described which can be used in the process of remote control and monitoring for different Domestic and Industrial applications.	9000
13	WSN based Intelligent Street Lighting system	Streetlights are among a city's strategic assets: providing safe roads, inviting public areas, and enhanced security in homes, businesses, and city centers. However they're usually very costly to operate and they use in average 40% of a city's electricity spending. As the cost of electricity continues to rise and as wasting energy is a growing concern for public and authorities, it's becoming crucial that municipalities, highway companies and other streetlight owners deploy control systems to dim the lights at the right light level at the right time, to automatically identify lamp and electrical failures and enable real time control. Cities that create such controlled streetlight networks can not only save up to 50% on energy and drastically enhance the maintenance service and safety in the street, but also leverage the streetlight grid as the backbone of other smart city applications.	9000
14	Smart Security Solutions based on Internet of Things (IoT) for large industrial plants	With increasing popularity of the IoT (Internet of Things) and devices getting smarter day by day, this paper presents an idea to reform the existing access control systems. This approach of enhancing the access control system ensures that the system is wireless thereby reducing wiring issues. The prototype described in this paper has the provision of accepting inputs from a smart card reader (RFID reader) or a biometric sensor. These inputs are processed inside the controller. If the inputs are found to be valid, access is granted to the user and the logs are wirelessly transmitted to the computer using a WiFi module. Machine learning	9000
15	Smart Configurable WiFi Enabled Switch	This paper presents a reliable, fast and simple system to detect and recover faults in computer networks at control center of power automation system. There is no way to get the information of the remote devices when networked system at control center is failed. The proposed system makes use of the insertion of smart switch (SS) into the ordinary automation system of power utilities to keep the network devices work properly. The suggested system overcomes the drawbacks associated with another propose system dealing with the same problem.	9000
16	IoT Dune Buggy - Control it from Anywhere!	The IoT Dune Buggy is an attempt at controlling the locomotion of a robot over the Internet. As an Internet of Things device, its USP is that it can be controlled from just about anywhere on the globe with an internet connection. Using the lightweight M2M cloud service, Dweet.io, this robot receives commands from the service, and moves accordingly. It is also equipped with two IR Obstacle Sensors which allow it to see the obstacles that you can't, because well, you're not there. It can maneuver around these obstacles so that it does not crash. There is also a Temperature Sensor on board which can be used to detect ambient temperature, as well as a Photo-sensitive Resistor which is used to detect the ambient light intensity to tell whether it is light or dark	9000

17	Smart Parking System for Smart Cities	Smart Parking systems typically obtain information about available parking spaces in a particular geographic area and process in real-time to place vehicles at available positions. It involves using low-cost sensors, real-time data collection. Using the slot allocation method we can book and block our own cheapest and shortest distant parking slot. The slot allocation data is stored in cloud, the information of the slots sent by parking gateways and parking information is made available through Mobile Phones.	9000
18	IoT Power Strip with MQTT enabled control	The device that allows to turn on/off two pairs of the outlet sockets via Web browser through Wi-Fi. Based on ESP8266 and Arduino Mini.IoT Power Strip is a DIY device that allows to turn on/off two pairs of the outlet sockets via Web browser through Wi-Fi. It doesn't require any infrastructure besides the Wi-Fi enabled device with HTTP browser (e.g.: smartphone, tablet, laptop). That means that you don't need some IoT server to be installed in your intranet (like MQTT server or Web Server), you even don't have to have internet access to operate the IoT Power Strip.	9000
19	Fall Detection and Alerting System for Elderly People	Unintentional falls are a common cause of severe injury in the elderly population. By introducing small, noninvasive sensor nodes in conjunction with a wireless network, the Ivy Project aims to provide a path towards more independent living for the elderly. Using a small device worn on the waist and a network of fixed nodes in the home environment, we can detect the occurrence of a fall and the location of the victim. Low-cost and low-power accelerometers are used to detect the fall while RF signal strength is used to locate the person	9000
20	IoT-based Intelligent for Fire Emergency Response Systems	Modern buildings around the world have become complex and augmented. Given the structural characteristics of modern buildings, quick evacuation using emergency exits or evacuee guidance markers during blackouts due to fire, building collapse, earthquakes, or aging of buildings need to be possible. This paper suggests an Internet of Things(IoT)-based intelligent fire emergency response system that can control directional guidance intelligently according to the time and location of a disaster and the design of an integrated control system using wireless sensor networks to address the problems with existing fire emergency response systems in times of fire or building collapse.	9000
21	RFID Modular System for the Internet of Things (IoT)	Our paper presents an approach of how RFID technology can be used to simplify operations and improve the effectiveness and efficiency of inventory management. The goal of our research is to design system architecture for identifying and monitoring movement of monitored items. The basic requirement is to create a modular system and application of this system for real hospital laundry management application. We analysed possible solutions and available technologies. We also analysed a specific use-case of laundry management process for designed laundry monitoring system based on the IoT platform principles. The development is related to the hot topic of the Internet of Things and the utilization of RFID technology as a key technology for detection and identification of monitored objects.	9000
22	Talking Plant - Smart Plant Monitoring System	This IoT project tutorial describes how to build an IoT project that monitors plant health status. As a result, we want to check some environment parameters like temperature, humidity and light intensity that have effects on the plant. In addition, we want to retrieve the soil moisture.All this information is sent by Arduino to the cloud using Ubidots IoT cloud platform. In this blog, we talked already about IoT ecosystem and you know already what it means. The plant will be provided with a screen to display the mood of the plant based on its watering state.	9000
23	Smart Home Automation Hub with MQTT Protocol (with NodeMCU & MQTT Protocol)	A smart home is one that is equipped with lighting, heating, and electronic devices that can be controlled remotely by Smartphone or via the internet or through cloud. A cloud based home automation system focuses on controlling home electronic devices whether you are inside or outside your home. Home automation gives an individual the ability to remotely or automatically control things around the home. A home appliance is a device or instrument designed to perform a specific function, especially an electrical device, such as a refrigerator, for household use.	9000
24	Smart Doorbell with cloud based notifier	A smart doorbell is a device that your visitors push just like a normal doorbell. However, that's where the similarities between traditional and smart doorbells end, because you also get all kinds of cool features like the ability to connect to a WiFi network.	9000
25	Cloud Based Weather Prediction & Notification System	Cloud Based Weather Notifier which stores the weather condition data sends trigger through sms or call etc. Weather monitoring system is used to measure various parameters like Temperature, Humidity using sensors. Based on the parameters measured the system will display the parameters in the web page. The user will get complete details of the weather conditions in his mobile or webpage remotely. The data is stored in the cloud for future purpose.	9000

26	Project KOOL: Temperature and Humidity Remote Monitoring	This KOOL project is a proof-of-concept implementation of temperature and humidity remote monitoring for a cold water delivery company. It's a cool water supply management projects, which monitors the temperature at delivery points and maintains the optimized operation of chiller plant	9000
27	Smart Allergen Notification & Registering System	Most of the people are allergenic to common substances (allergens) like dust, hot air, cold waves, chemicals, smoke, Humidity etc. This smart care allergen notifier detects the allergens before the person subjected to allergy and notifies the person to take immediate action. This product is a wearable built on internet of things platform with mobile notifications. Product will provide care against following allergies	9000
28	SCADA system with power quality monitoring in Smart Grid model	The paper deals with designing and implementation of Smart Grid model with designing of power quality measurement software in these networks. There was created a simulation model which has the same parameters setting as the real network. Various renewable energy sources represented by small hydropower plant, photovoltaic power plant and wind power plant are integrated in the designed scheme of Smart Grid. A part of the real network model in laboratory environment is controlling and evaluating SCADA system. This system provides real-time control of power switching relays, obtains information about their status and performs three-phase measurement. The basic system displays information about voltage, current, and total harmonic distortion. SCADA system can perform detailed power quality measurement in individual points. The system supplies three types of customers, namely industrial zone, a city and two villages. The entire system is connected into a mesh-grid structure. Several analyses and measurements were carried out for the given structure in order to obtain results for optimal operation of the network focusing on the power quality in Smart Grid.	9000
29	Smart Environment Monitoring system Integrated with cloud	This project proposes a cost-effective cloud connected environmental monitoring system with real time parameters representation on google maps, which enables citizen's participation in building smart cities. The environmental parameters are continuously monitored by the sensors and they are processed using micro-controller unit. All the monitored parameters are uploaded to the cloud for remote monitoring from anywhere and anytime	12000
30	Smart Vehicle Tracking System with Notification Service	This project mainly works on GPS and GSM systems. Vehicle is traced by using information from satellite systems and send to GSM systems. Vehicle and user are connected initially by using GSM network. User will send message to Moving vehicle for connectivity, hardware mounted on vehicle reacts to message and send conformation message to user and then if the message is valid one then GPS modem is initiated and requested for location. The latitude and longitude values are compared with the values stored in the memory and corresponding location name is given to the Controller which in turn uses GSM/GPRS to send the location name by means of Short Message Service back to USER.	12000
31	Realtime weather based smart spinkler system for agriculture	Water management plays crucial role in our everyday life as the availability of water resource are getting down. Most of the Indians waste 20 – 25% water resources due improper water management. The proposed solution distributes the water to the gardens.This solution is built on internet of things (IoT) platform which will provide real time data like current soil moisture levels. This system will control the water pump and Sprinkler systems. We can operate this sprinklers from anywhere through the webpage. Proposed water management system reduces the waste of water resource, increases the productivity of the soil and reduces the stress of the farmers. Water management plays crucial role in our everyday life as the availability of water resource are getting down. Most of the Indians waste 20 – 25% water resources due improper water management. The proposed solution distributes the water to the gardens.This solution is built on internet of things (IoT) platform which will provide real time data like current soil moisture levels. This system will control the water pump and Sprinkler systems. We can operate this sprinklers from anywhere through the webpage. Proposed water management system reduces the waste of water resource, increases the productivity of the soil and reduces the stress of the farmers.	12000
32	IoT Based smart health monitoring system	The IoT has the potential to give rise to many medical applications such as remote health monitoring, fitness programs, chronic diseases, and elderly care. Compliance with treatment and medication at home and by healthcare providers is another important potential application. In this project we propose a wearable module which provides the Heart rate of the person.	12000
33	IoT based weather monitoring & prediction system using MEMS sensors.	In this project off-the-shelf MEMS sensors and hardware is used to get the local weather information and weather forecast is obtained from cloud platforms like wunderground , open weather and accuweather using API calls . From there, we can analyze our collected data in real-time or historically. a realistic prediction of weather will be performed in this project using combination of hardware, software and networking is now being referred to as IoT (Internet of Things).	12000
34	WSN based smart irrigation system for agriculture	Water management plays crucial role in agriculture as the availability of water resource directly affects the annual production. Most of the Indian farmers waste 20 – 25% water resources due improper water management. The proposed solution distributes the water to the farms by considering following parameters	12000

35	Multidisciplinary Model for Smart Agriculture using Internet-of-Things (IoT), Sensors, Cloud-Computing, Mobile-Computing & Big-Data Analysis	In this paper we proposed a multidisciplinary model for smart agriculture based on the key technologies: Internet-of-Things (IoT), Sensors, Cloud-Computing, MobileComputing, Big-Data analysis. Farmers, AgroMarketing agencies and Agro-Vendors need to be registered to the AgroCloud module through MobileApp module. AgroCloud storage is used to store the details of farmers, periodic soil properties of farmlands, agro-vendors and agro-marketing agencies, Agro e-governance schemes and current environmental conditions. Soil and environment properties are sensed and periodically sent to AgroCloud through IoT. Bigdata analysis on AgroCloud data is done for fertilizer requirements, best crop sequences analysis, total production, and current stock and market requirements. Proposed model is beneficial for increase in agricultural production and for cost control of Agro-products.	12000
36	Health Monitoring and Management Using Internet-of-Things (IoT) Sensing with Cloud-based Processing	Among the panoply of applications enabled by the Internet of Things (IoT), smart and connected health care is a particularly important one. Networked sensors, either worn on the body or embedded in our living environments, make possible the gathering of rich information indicative of our physical and mental health. Captured on a continual basis, aggregated, and effectively mined, such information can bring about a positive transformative change in the health care landscape. In particular, the availability of data at hitherto unimagined scales and temporal longitudes coupled with a new generation of intelligent processing algorithms can: (a) facilitate an evolution in the practice of medicine, from the current post facto diagnose-andtreat reactive paradigm, to a proactive framework for prognosis of diseases at an incipient stage, coupled with prevention, cure, and overall management of health instead of disease, (b) enable personalization of treatment and management options targeted particularly to the specific circumstances and needs of the individual, and (c) help reduce the cost of health care while simultaneously improving outcomes. In this paper, we highlight the opportunities and challenges for IoT in realizing this vision of the future of health care.	12000
37	Smart Water Management System for Smart Cities	In this project we will address the potential problems of urban water management system like identification and control of water leakages, centralized monitoring of storage tanks, utilization data of individual house, water supply notification service to the people.The system involves instrumentation system for measurement of water level in tanks, flow rate through distribution networks and water metering system. The data from sensors is continuously uploaded to the cloud hosted for water management system. People can get their consumption data from the cloud to their mobile applications. This system also enables notification services for the people. With an intelligent data analytics algorithm this system can optimize the utilization of precious water resources in upcoming smart cities.	12000
38	An Internet of Things Oriented Approach for Water Utility Monitoring and Control	This paper aims to propose a more efficient distributed monitoring and control approach for water utility in order to reduce the current water loss. This approach will help utilities operators improve water management systems, especially by exploiting the emerging technologies. The Internet of Things could prove to be one of the most important methods for developing more utility-proper systems and for making the consumption of water resources more efficient.	12000
39	Connected Kitchen - Kitchen Integrated to Store	In this project we build smart jars which will monitor the volume of contents in the jar and alerts the user if volume falls below the threshold. These jars can also be linked with stores to place the order automatically. LPG leak sensors are also provided to monitor the gas leakage and alert the users accordingly.	12000
40	WiFi Enabled Connected Robots for Industrial Applications	The advent of new high-speed technology and the growing computer capacity provided realistic opportunity for new robot controls and realization of new methods of control theory. This technical improvement together with the need for high performance robots created faster, more accurate and more intelligent robots using new robots control devices, new drives and advanced control algorithms. This project describes a new economical solution of robot control systems. The presented robot control system can be used for different sophisticated robot applications. This WiFi Robotic smart car is designed and developed based on ESP-12E from ESP8266, which can be controlled by mobile, PC.The control system consists of on chip WIFI , a microcontroller that collects data from the modem and controls the robot. A complete solution of a robot control solution is presented in this project. The robot is fully controlled by the ESP8266 and the information received by the module is received by the microcontroller. The mechanical arrangement to the robot is arranged to the robot as a robotic car. Thus, in order to control the robotic car using Wifi, the user can issue commands in the mobile or pc. When the module receives these predefined commands from ESP. The Robo car upon receiving the information from the ESP acts in accordance to the Commands, making it a highly automated application.	12000
41	IoT Pill Bottle	This project show how to build a IoT pill bottle prototype. This IoT bottle use 2 type of sensors for helping doctor and patient: A cap button for detect pill bottle opened, it help to monitor the time pattern of patient take the pill An IR sensor for detect the pill fill status, it help to alert the refill schedule	12000

42	iPot "The intelligent plant pot"	Intelligent plant pot integrated with Alexa, Cortana, Siri, Google Assistant. The aim of this project is to build our own self watering plant pot that will notify you via push notification. Water itself when soil moist level are low, Dashboard where you can login anywhere in world to monitor the plant health, Integrate Alexa functionality to the plant pot	12000
43	IoT Enabled SCADA system for Electric Substations	Supervisory control and data acquisition systems (SCADA) are widely used in industry for supervisory control and data acquisition of industrial processes. The process can be industrial, infrastructure or facility. With the advances of electronic and software technologies, the SCADA systems are widely used in industrial plant automation. It provides an efficient tool to monitor and control equipment in manufacturing processes. This paper describes development of SCADA system for laboratory based mini thermal power plant setup using arduino data logging and supervisory control (DSC) module.	12000
44	Smart Mirror - Connected with Internet	A smart mirror that can recommend you clothes to wear and display metric data like time, weather and plans.	12000
45	Predictive Analytics for Turbine Lube oil Management	Equipment failure can cause a huge impact on business in the manufacturing industry. It is critical to keep production line rolling. One of the reasons, this can occur is due to insufficient oil level. Sometimes the oil is not in the stock and takes a few days to procure it. This system monitors the oil level and indicates to the user, if the level is below certain level. The backend of the system uses AWS IOT stream analytics and shows the trend of oil consumption. It can be used for predictive maintenance. The system can also tell, if there is unusual consumption of oil that can be caused by potential leakage or other issues.	12000
46	Project "Gallon" - Smart Drinking Water Monitoring Platform	This project focuses on one of the most vital nutrient for our body, drinking water. the term "gallon" refers to an infrastructure for drinking wate.This project is implemented to monitor the water level. This project also shows the proper development technique and toolset for developing Arduino software, for the perspective of software developer.	12000
47	Connected Vehicles in Smart Cities: Interworking from Inside Vehicles to Outside	There is an urgent need for smart transportation, to enable safer, efficient and more enjoyable journeys, and connected vehicles are a way to realise that. Modern cars feature embedded systems that monitor and manage all the critical sensors and actuators. The vehicle connectivity can be further extended with Vehicle-to-Vehicle (V2V) technology, which allows cars to exchange that collected information and even act on it. In this demo we present our latest simulation environment, that takes advantage of the in- vehicle (e.g, PLC, Ethernet) and inter-vehicle communications (e.g., DSRC and LTE-V) for the exchange of data between cars or infrastructure in a city scale. The simulator is an essential tool for our study in connected vehicle communications.	12000
48	Earthquake early warning system by IOT using Wireless sensor networks	The Wireless sensor network (WSN) is spatially distributed sensors in an autonomous manner to monitor physical environmental conditions. The Internet of things (IOT) is the network of computed physical objects which enables these things to connect, collect and exchange data. In this paper, we propose an earthquake early warning system by means of an IOT in WSN. The sensors are placed in the surface of the earth. When an earthquake occurs, both compression P wave and transverse S wave radiates outward the epicenter of the earth. The P wave, which travels fastest, trips the sensors, placed in the landscape. It causes early alert signals to be transfer ahead, giving humans and automated electronic system a warning to take precautionary actions. So that before the damage begins with the arrival of the slower but stronger S waves, the public are warned earlier. The signal from each sensor which senses the P wave and which has Zigbee transmitter transfers the alert signal to the gateway. The gateway which has the Zigbee receiver and acts as an IOT transfers the warning to smart phones. Thus early alert message is received by the people in terms of location, time and other parameters. Eventually, many of the human lives can be saved. The software used here is LABVIEW where the three angle axis of the sensor can be sensed and detected when the sensors are interfaced with this software.	12000
49	Internet of Things (IoT) enabled smart animal farm	Farming plays an important role in today's world and it requires proper environmental and diet care. A smart system is needed to operate and monitor animal farm remotely. This system should provide feed and water as required, exhaust the excess of biogas which is produced by the animals' waste, and detect fire in the farm. Moreover, this intelligent system should also do surveillance of the entire farm. This kind of intelligent system can be designed cost effectively by using microcontrollers, water level sensor, ultrasonic sensor, gas sensor, temperature, humidity sensor, and an IP Camera along with Internet or Intranet connectivity with the devices i.e. smart phones or computer. In this paper, we develop an IoT based smart animal farm with above mentioned features.	12000
50	A computer vision based vehicle detection and counting system	A vehicle detection and counting system plays an important role in an intelligent transportation system, especially for traffic management. This paper proposes a video-based method for vehicle detection and counting system based on computer vision technology. The proposed method uses background subtraction technique to find foreground objects in a video sequence. In order to detect moving vehicles more accurately, several computer vision techniques, including thresholding, hole filling and adaptive morphology operations, are then applied. Finally, vehicle counting is done by using a virtual detection zone. Experimental results show that the accuracy of the proposed vehicle counting system is around 96%.	12000

51	Smart Security for Homes using Raspberry Pi	In current world the usage of sophisticated security systems is going up year by year due to increased rate of crime. There are different types of surveillance systems available in the market to detect the intrusion at homes, offices and critical centers. The cloud based recording systems are very expensive hence general public cannot afford to setup existing system at their homes.	15000
52	Alterrain Robo car with live video streaming at extreme human abnormal conditions.	This project was build based on idea on how to make a simple and cheap online surveillance camera robot that everyone can build. Not only that the robot also have to be easy to use and maintain. Using the raspberry pi, few cheap components, a robot chassis/RC car	15000
53	Raspberry pi Based Smart Supervisor using Internet of Things (IoT)	Smart supervisor system using internet things is based on embedded Linux operating system with ARM11 architecture, this paper implemented in a real-time digital video monitoring system with data control and acquisition. Based on the ARM - Linux embedded platform, the real-time video monitoring system fulfills the following functions: to collect video with USB camera, to encode video based on ARM - Linux platform; to transmit video through LAN or internet; to receive, to decode, and to display the H.264 video data in real-time. In order to fulfill the functions above, the chipset BCM2835 from Broadcom is chosen as MCU which has powerful ARM11 application. They are collect and encode video, device operation at a time it is necessary to apply multiple threads to real-time video monitoring system to ensure its real-time performance. The real-time embedded video monitoring system sends video in child thread captures video and encodes it in main thread, and they interact through a circular buffer queue in order to reduce influence between data sending and encoding.	15000
54	Home Automation using Raspberry Pi and Windows 10 IoT	In today's era, technology can enhance human life. Technology is evolving decade by decade. Automation was a science fiction earlier but not today. By combining latest technology with home, we can build an awesome home. With the Raspberry Pi and Windows 10, we can build a home automation system that is capable of operating home devices automatically A Raspberry Pi will serve as a master device. For each room, want to automate, an Arduino UNO is needed. Arduino UNO will act as a secondary controller, which takes command from the Raspberry Pi and operates specific device. Here, Raspberry Pi and all Arduino UNOs are connected together on a I2C bus. All Arduino UNOs act as slaves. Each Arduino UNO have unique I2C slave address on the bus. You can add /remove Arduino UNOs(rooms) that is explained later in this project.	15000
55	IOT based Traffic density monitoring system	In recent years popularity of private cars is getting urban traffic more and more crowded. As result traffic is becoming one of important problems in big cities in all over the world. Some of the traffic concerns are congestions and accidents which have caused a huge waste of time, property damage and environmental pollution. The proposed system presents a novel intelligent traffic density monitoring system, based on Internet of Things, which is featured by low cost, high scalability, high compatibility, easy to upgrade, to replace traditional traffic management system and the proposed system can improve road traffic tremendously. The Internet of Things is based on the Internet, network wireless sensing and detection technologies to realize the intelligent recognition on the tagged traffic object, tracking, monitoring, managing and processed automatically.	15000
56	Minimizing Electricity Theft using Internet of Things	IOT use things to things connection to access the internet of things, allow data to store and access services. Services over internet of things development according to need of person to person and thing to person, machine to machine interaction without human interaction. As there is limited non-renewable resources are present in our daily life, Electricity is one of them which utilized in every country that results abundant losses due to electricity larceny. Power theft is going to be the key challenges. A smart energy meter is used to minimize the electricity larceny. Basically energy meter is a device that calculates the cost of electricity consumed by homes, business, or an electrical device. It reduces the theft of electricity. In this paper a government person can find the dishonest user by showing the status of energy meter at the back end of electricity office. To attain this, every energy meter will be fixed with a wireless communication device, which interacts with wireless device fixed on top of electricity pole. these devices will form a wireless sensor network and the data from each meter will be exchanged to centralized station where a user can identify the difference in electricity supply and accounted consumption.	15000
57	Intelligent Traffic Information System Based on Integration of Internet of Things	In recent years popularity of private cars is getting urban traffic more and more crowded. As result traffic is becoming one of important problems in big cities in all over the world. Some of the traffic concerns are congestions and accidents which have caused a huge waste of time, property damage and environmental pollution. This research paper presents a novel intelligent traffic administration system, based on Internet of Things, which is featured by low cost, high scalability, high compatibility, easy to upgrade, to replace traditional traffic management system and the proposed system can improve road traffic tremendously. The Internet of Things is based on the Internet, network wireless sensing and detection technologies to realize the intelligent recognition on the tagged traffic object, tracking, monitoring, managing and processed automatically. The paper proposes an architecture that integrates internet of things with video analytics into a single platform where the traffic cameras recognizes the number and type of vehicles and uploads the data to the cloud platform for analytics.	15000

58	Intelligent Restaurants with Smart Beacon	Modern, Smartphone-toting humans spend most of their time indoors. But indoor spaces often block cell signals and also make it nearly impossible to locate devices via GPS. Beacons are a solution. Beacons are small, Bluetooth enabled devices that are attached to wall or counter top inside a store or an educational organisations, hotels etc. These are proximity based that is they send signals to a customer's smart phone once he/she is within the reach of device (Beacon). Modern, Smartphone-toting humans spend most of their time indoors. But indoor spaces often block cell signals and also make it nearly impossible to locate devices via GPS. Beacons are a solution. Beacons are small, Bluetooth enabled devices that are attached to wall or counter top inside a store or an educational organisations, hotels etc. These are proximity based that is they send signals to a customer's smart phone once he/she is within the reach of device (Beacon).	15000
59	Design and Control of Internet of Things Enabled Wireless Sensor Network	In this paper, we have reported an effective implementation of Internet of Things used for monitoring and control of regular domestic conditions by means of low cost sensor network. The interconnecting mechanisms for reliable measurement of parameters by smart sensors and transmission of data via internet are being presented. This paper presents a low cost and flexible home control and monitoring system using an embedded hardware mote, with IP connectivity for accessing and controlling devices and appliances remotely using mobile application. The proposed system does not require a dedicated server PC with respect to similar systems and offers a novel communication protocol to monitor and control the home environment. To demonstrate the effectiveness of this system, devices such as room temperature, humidity sensor, current sensor and atmospheric pressure sensor have been integrated with the proposed home control system.	15000
60	A Design of the IOT EDGE Gateway for Agricultural Greenhouse	This article put forward a method to realize the transmission between wireless sensor network and the Internet. The IOT (Internet of Things) gateway is used as part of the greenhouse monitoring system. The design compatible multiple access method such as LAN, Wifi, GPRS, EDGE, 3G and so on, also the data can stored locally. The IOT gateway uses Raspberrypi as the computing machine, raspbian as the embedded operating system. The application demonstrates the gateway is reliable, compatible, and extendible. Because of this gateway the greenhouse monitoring system realized the real-time detection and control of the greenhouse, and improved the ability of the automation and the intelligent of the greenhouse monitoring	15000
61	Smart Briefcase - Track, Monitor and Control your Briefcase from a Mobile Application	Smart brief case is implemented to assure security to the brief case. A web page is implemented to track your briefcase if that is lost. You can even unlock or lock your system from anywhere in the world.	15000
62	Image Classification using Machine Learning & Low Power Hardware (Using Tensor Flow on Raspberry Pi)	State-of-the-art Image Classification using Machine Learning is becoming as good and, in certain cases, better than Human accuracy at the same tasks. The problem is these algorithms continue to require massive amounts of computational horsepower to achieve these accuracies, which couples them to desktop or server-grade hardware. This research works to identify a possible path forward to marry these highly accurate algorithms with an ultra low-power device. The results, if successful, would have powerful implications. Providing low-cost, highly portable hardware the ability to understand the world in which it finds itself has usefulness far outside the scope of this preliminary research.	15000
63	Smart Cap: Vision for the visually impaired using Deep Learning	Smart Cap is an assistant for visually impaired which narrates the description of scene. The objects in the scene are detected by a deep learning algorithm.	15000
64	Equipment Monitoring And Control Using Wireless Sensor Networks	The aim is to monitor and control devices from a central point. In this paper we present a economically feasible yet flexible and secure Accessible Interface based remote monitoring and control system of equipments applicable at different levels including houses, offices, hospitals, multiplexes etc.	15000

65	IoT based Biometrics implementation on Raspberry pi	Developments in the field of Information Technology also make Information Security a devoted part of it. In order to deal with security, Authentication plays an imperative role. In this paper, Biometrics is used for authentication. This paper also describes how biometrics can leverage cloud's boundless computational resources and striking properties of flexibility, scalability, and cost reduction in order to reduce the cost of the biometrics system requirements of different computational resources (i.e. processing power or data storage) and to enhance the performance of biometrics systems' processes (i.e. biometric matching). Here, Raspberry Pi is used to build a low-cost biometric system. Raspberry Pi (RPI) is a credit-sized mini-computer with great capabilities similar to a PC. In this study it is used as a remote enrollment node. The application of Raspberry Pi and cloud computing has given a new direction of research into the field of Internet-of-Things (IoT). Using the biometric technology, a new system of IoT based biometrics is proposed. To maintain the security of biometric traits over the internet channel from RPI client to the cloud, cryptographic algorithms are applied like RSA and enhanced AES-256. The encrypted biometric information is stored on the cloud and the authentication can be done by Biometric service hosted on Azure cloud. Thus, this papers covers the following topics: attracting power of biometrics into the authentication services, biometrics leveraging the power of cloud, Raspberry Pi- a low-cost IoT device, enhanced AES-256 with Round structure and dynamic S-box generation and the new emerging trend of Internet-of-Things.	15000
66	An IoT based patient monitoring system using raspberry Pi	In the recent development of, Internet of Things (IoT) makes all objects interconnected and it has been recognized as the next technical revolution. Some of the applications of Internet of Things are smart parking, smart home, smart city, smart environment, industrial places, agriculture fields and health monitoring process. One such application is in healthcare to monitor the patient health status Internet of Things makes medical equipments more efficient by allowing real time monitoring of patient health, in which sensor acquire data of patient's and reduces the human error. In Internet of Things patient's parameters get transmitted through medical devices via a gateway, where it is stored and analyzed. The significant challenges in the implementation of Internet of Things for healthcare applications is monitoring all patient's from various places. Thus Internet o Things in the medical field brings out the solution for effective patient monitoring at reduced cost and also reduces the trade-off between patient outcome and disease management. In this paper discuss about, monitoring patient's body temperature, respiration rate, heart beat and body movement using Raspberry Pi board.	15000
67	IoT Based Driver Assistant with Vehicle Diagnostics	Smart healthcare monitoring systems have been given more attention in recent research efforts as they are not only used for patients but also recommended for old age people, sports persons, drivers' community and home makers. Some road accidents may happen due to driver's poor health condition like heart stroke while driving, over stress due to continuous work, etc. Hence, if a smart healthcare monitoring system is available at an affordable cost, it can be used for drivers' community to take some preventive measures, thus road accidents may be reduced. In this work, a healthcare monitoring system is designed to monitor the health status periodically and abnormal values are informed to both transport office and healthcare provider.	18000
68	Integrating Wireless Sensor Networks into Internet Of Things For Security	A secure channel between a sensor node and internet host is created, hence new security challenges arises and wireless sensor networks is integrated into internet of things. We use heterogeneous online/offline signcryption scheme so that secure communication is provided. We use bilinear diffie-hellman inversion problem in random oracle model, it provides indistinguishability against adaptive chosen ciphertext attacks and existential unforgeability against adaptive chosen messages attacks. This scheme has the following advantages: First, it achieves confidentiality, integrity, authentication, and non-repudiation in a logical single step. Second, it allows a sensor node in an identity-based cryptography to send a message to an Internet host in a public key infrastructure. Third, it splits the signcryption into two phases: i) offline phase; and ii) online phase. In offline phase heavy computations are carried out and in online phase light computations are done. This scheme is suitable to provide security solution for integrating WSN into the IoT. We use The concept of cellular communication and use implement for an industrial application.	18000