Innovations by Faculty/Students

Sl. No.	Title of the Innovation/ Award	Faculty Name/ Mentor	JRF/UG/PG students/ Research Scholars	Dept.	Description (50-100 words)	Association with Academia/ Industry/ Organization	Level of Innovation
1.	Design and Development of Augmented Reality Based Laboratories for Smart Learning	Dr. N Padmaja Dr. P Bhanu Prasad Dr P V Ramana	Mr.B satish kumar Mr. D Irfan Ms. D .Karishma Mr. D Riyaz Ahmed	ECE	The project involves developing an Application/Mobile App (Android) for Augmented lab that will facilitate the students to master the concepts and procedure of experiments in an Augmented way and also can learn about electronic components information like microprocessors, transistors, antenna, etc. through AR. The built in application allows the students to scan the equipment/components through the app that would be recognized and an instant information in the format of text and video of that equipment/component will be displayed on equipment virtually. The Unity 3D software linked with Vuforia Engine is used to develop the application.	Institution Innovation Council SVEC	APP developed
2.	Development of Virtual Environment for an Assembly of Machine Components	Dr. Vara Prasad Dr. K.I.Narasimha mulu Dr. P Bhanu Prasad	Mr. A Aravind Mr.G Jaya Prakash Reddy Mr.S mohith Mr. Y vijay sai nath Mr.B sai lohith Mr.D vasif hussain	MECH	Virtual Reality (VR) provides an interface that enables to train the users and improve their skills using virtual environment. This virtual environment is developed by using Unity 3D. This project (Development of virtual environment for an assembly of machine components) is inclined to experience richer and more engaging learning experiences that can be provided through books, websites or even videos. It immerses the user in a 3D interactive experience that allows interactive learning in a controlled and safe environment.	Institution Innovation Council SVEC	Virtual Assembling of Machine
3.	Visualising G+5 Building in VR, Analysis And Design Using STAAD.Pro	Mr. P. Charan Sai Dr. P Bhanu Prasad	Mr.K. Deep sankar Mr.A. Saleem Mahammad Ms.N. Prathyusha Mr.venkat	CIVIL	A building model of G+5 is created in Revit Architecture and that same model is drawn in Unity Software and this software ensures that the building model is converted into VR. Simultaneously, the same model is created in STAAD.Pro to analyse the	Institution Innovation Council SVEC	Virtual Building was developed

					whole G+5 building by applying dead load, live load and wind load.		
4.	Development of Virtual Vudyanikethan	Dr. N Padmaja Dr. P Bhanu Prasad	Mr.B satish kumar Mr. Mourya Mr. Sumanth Ms Vaishnavi Ms. Sandhya	ECE	Virtual model of Vidyanikethan Engineering College was developed using Virtual Reality where we can visit the entire campus of Sree Vidyanikethan by walking around the college premises virtually.	Institution Innovation Council SVEC	APP developed
5.	Design and Fabrication of a Reconfigurable Novel Fractal Tree Antenna for Multiband Applications	Dr.V.R.Anitha	Ms.Yuva Sindhu	ECE	The core objective of the project is to design a novel antenna by incorporating PIN diodes with desirable properties. • Obtained 40-50% bandwidth using novel design • The proposed antenna was simulated for 1-5 GHz frequency, which finds its application in WLAN By different combinations of ON State or OFF state would have many different radiation patterns with different operating frequencies.	IIT Bomabay, Mumbai	Prototype
6.	A Compact 2X2 MIMO Antenna with Polarization Diversity for X-Band Applications	Dr.V.R.Anitha	Mr.A.Tatha Babu	ECE	The core objective of this is to design a novel compact MIMO antenna to reduce isolation. • Obtained Wider bandwidth using novel design. • The proposed antenna was simulated at X-band frequency, which finds its application in Wireless Communication. • The novel geometry described a multiband behavior with improved isolation. • By different combinations of parasitic elements would have many different reflection coefficients with different operating frequencies	---	Prototype
7.	Design and Development of Metamaterial Based Antenna for Satellite Applications	Dr.V.R.Anitha	Mr.T.Naveen Kumar	ECE	The core objective of this is to design a novel SRR based antenna for various applications. • Obtained Ultra-wide bandwidth using novel design. • The proposed antenna was simulated during 1- 12 GHz frequency, which finds its application in Satellite Communication. • The novel geometry described a multiband behavior with improved bandwidth.	ISRO-RESPOND	Prototype
8.	UWB-MIMO Antenna with Improved Isolation Using a Novel E-Shaped Tree Like Structure	Dr.V.R.Anitha	Mr.A.Tatha Babu	ECE	The core objective of this is to design a hexagonal-shaped MIMO patch antenna to reduce isolation and improve bandwidth. • Obtained Ultra-wide bandwidth using novel design. • The proposed antenna was designed and simulated at S-band (2-4 GHz), WLAN (2400–2480 MHz & 5150–5350/5725–5875 MHz), UWB (3.1-10.6 GHz) and X band (8-12 GHz) frequency, which finds its application in Wireless Communication. • Tree like structure of parasitic element has been incorporated which lead to the required objectives.	---	Prototype

9.	Atmospheric Data Processor Package (2016-Till date)	Dr. N. Padmaja	E. Ramyakrishna (Junior Research Fellow	ECE	• Development of a GUI Model for processing MST Radar Signals consisting of efficient inbuilt algorithms using Empirical Mode Decomposition (EMD) and Hilbert Huang Transform (HHT) for processing Atmospheric radar echoes for accurate Doppler profile detection in Stratosphere and Mesosphere region and calculation of Wind Velocity using moments.	Dr. S Sridharan, SC-F & Ms P Yashoda, SC-E, National Atmospheric Research Laboratory, Gadanki, Department of Space, ISRO	Software GUI Model
10.	IOT based Stress Detection and Health Monitoring System	Dr. N. Padmaja	A. Anusha (M.Tech, DECS, 17121D3801) B. Sathish (B.Tech, ECE, 16121A0420) D V S Manaswini, B.Tech, ECE 16121A0452	ECE	A model is designed and developed to detect the stress levels using various sensors such as heartbeat rate, blood pressure (BP), body temperature and concentartion of CO_2 gas. Further based on the values of these sensors, the levels of stress is calculated and the information is transmitted using IOT to the concerned for necessary action.	---	Prototype Model
11.	Semiconductor devices for Agricultural applications (2018-19)	Dr Argha Sarkar	K Sai Priya (PG)	Interdisciplinary	Here the work approaches the detection of fruit maturity level. In addition, a gas sensor is proposed to obtain better sensitivity to know the level of ethylene gas released from matured fruit. Better sensitivity can be achieved by obtaining an enhanced active area, changing the intermediate layer thickness and the pitch value of the electrode. Hexagonal nanostructured zinc oxide is used as a sensing layer. Finally, frequency shift and a total displacement of the device are increased. Comparatively, an easy way is undertaken (low-temperature hydrothermal method) for the synthesis of highly sensitive nanostructured zinc oxide (ZnO) with a better surface area	Dr. Santanu Maity Indian Institute of Engineering Sscience Technology (IIEST) Shibpur.	soft-ware model
12.	Semiconductor devices for Environmental applications (2018- till date)	Dr Argha Sarkar	K Sai Priya (PG) T Jyosthna (PG) Ms. N Harathi (Asst Prof, Dept of EIE)	Core Electronics - VLSI & Instrumentation	• Device and Simulation of Surface acoustic wave based sensor for gas sensing application (Done) Optimization of gas sensor through formation of hexagonal ZnO Nanorod. (Done) Modeling of MEMS based Surface acoustic wave gas sensor to obtain enhanced sensitivity. (Done) A 2D Layered Surface Acoustic Wave Based Hydrogen Gas Sensor	Dr. Santanu Maity Indian Institute of Engineering Science Technology (IIEST) Shibpur. & DST Sponsored fabrication lab Tezpur University, Assam.	soft-ware model & Fabrication
13.	Semiconductor devices for Medical applications (2018-till date)	Dr Argha Sarkar	Ms. C Aswini (PG)	Interdisciplinary (Electronics – Biomedical)	From Electronics : • Performance Characteristic of Carbon Nanotube Field Effect Transistor Based on Ballistic and Non-Ballistic Transport Effects • Carbon NanoTube Field Effect Transistors for NEMS. • Carrier mobility dependency on diameter in back-gated CNT-FET	Dr. Anurag Biswas, MD PM&R, King George Medical University.	soft-ware model & Fabrication

					From biomedical: • CNT FET Modeling and performance analysis • Responsivity optimization of prostate cancer biomarker detection using GO/Mg:ZnO and GO/Au NPs. • CNT based devices for Biomedical sensors		
14.	Efficient ohmic contact to ZnO, Ti/Al metalization scheme (2018-2019)	Dr Argha Sarkar	Mr. N Vikram Teja (PG)	Electronics	In this fabrication of Ohmic and Schottkey contacts are important. Here the parameters like Barrier height, Ideality factor and Saturation current at room temperature of very low specific resistance Ohmic contact to ZnO using Ti/Al metallization scheme are performed. Vacuum evaporation technique is performed for deposition of ZnO thin film of 200nm and Ti (100nm) /Al (100nm). The deposited contacts were annealed in a tabular furnace at different temperatures namely 3000C, 4500C, 6000C and 7000C at a time period of 20 minutes for each temperature. By using semiconductor parameter analyzer the measurement of current –voltage characteristics of the specified contacts. The parameters which are mentioned above were calculated from these characteristics. Specific resistances were estimated by using Schottkey barrier height method (SBH) instead of Transmission Line Method (TLM).	Characterization unit & fabrication lab-SV University, Tirupati & IITBombay.	Fabrication
15.	Fabrication and Characterization of Resistive Random Accesses Memories (RRAMs) for Energy Efficient Solution. (2019-till date)	Dr Argha Sarkar	Vikram Teja (PG-presently Asst prof, Dept of ECE, SVEC)	Electronics	Due to the intense demand for a high-density, high-speed, and low-power nonvolatile memory (NVM) in semiconductor industry, the market of NVM has grown much faster than the entire semiconductor market in recent years. There are various candidates competing with each other for the next-generation memory. However, MRAM and FRAM both face severe problems in scaling. Under this circumstance, a new candidate emerged: resistance switching random access memory (RRAM), in which the memory cells have the theoretical smallest area 4F2. The origin of the unipolar and bipolar switching in RRAM devices is an active area of research and is not fully understood. So, by employing various binary oxides and different bottom & top electrodes a large number of RRAMs will be fabricated and their performances will be studied through extensive physical, chemical and electrical characterization in order to develop high performance RRAMs.	Dr. Pinaki Chakraborty, (former Dean R&D, NIT Arunachal Pradesh), HoD & Associate professor, Dept. of Physics, Raiganj University (Govt. of West Bengal) 733134	Fabrication
16.	Fuzzy logic based Auto driver drowsiness	Dr. Argha Sarkar	N Sadasiva N Sreekanth N Dhabubjaya R Mounica (UG)	Interdisciplinary Electronics-	Various investigations show that driver's drowsiness is one of the main causes of road accidents. The current technology in digital computer system allows researchers around the	Dr. S K Chakraborty, Dept. of CSE NIT Arunachal Pradesh	Prototype

	detection system (2018-20)			Artificial Intelligence	world to study the fatigue behaviour. The purpose of this study is to detect the drowsiness in drivers to prevent the accidents and to improve the safety on the highways. Real time face detection is implemented to locate driver's face region. In this project the eye blink of the driver is detected. If the driver eyes remain closed for more than a certain period of time, the driver is said to be drowsy and an alarm is sounded. The programming is done in python language and OpenCV using the Haarcascade library for the detection of facial features. In this project we aim to develop driver drowsiness detection system based on artificial intelligence.		
17.	Fabrication of Microheater (2018)	Dr. Argha Sarkar	Ms. N Harathi (Research scholar+Asst Prof. EIE)	Electronics	Fabrication of micro heater, where the power consumption is important consideration. In the fabricated device, it requires less voltage to generate temperature 200 or more than that.	Dr. Santanu Maity Indian Institute of Engineering Science Technology (IIEST) Shibpur. & IITB.	Fabrication
18.	Nano Force sensor (Jan-2017)	Dr.P.Geetha	UG students K.Hari Krishna (14121A0480) M.Kishor (14121A04B4) M.Pavani Krishna (14121A04C2) K.VidyaSagar (14121A0450)	ECE	Aim:To develop a prototype for sensing force in robotic exoskeleton using Carbon Nanotube FET. Objectives: • To utilize the miniaturization using nano technology in robotic exoskeleton for supporting the elderly or people with disabilities or injuries. • To develop a stable robotic exoskeleton force sensor device that will help the challenged people for easy balance.	NEW -IEDC	Prototypedevelopment
19.	Nano Immunosensor (Jan-2017)	Dr.P.Geetha	UG students M.Dilip Kumar (14121A04B5)	ECE	Aim:To develop a prototype of immunosensor for the detection of a prostate cancer biomarker osteopontin using Carbon Nanotube FET Objectives: • To utilize excellent sensitivity and selectivity of Carbon nanotube as biosensors for detection of PSA for prostate cancer. • To fabricateCarbon Nano Tube Field Effect Transistor (CNTFET), a simple, cost-effective, high sensitive and high selectivity immunosensor that can detect a biomarker protein.	NEW -IEDC	Prototype development
20.	THINK-NANO 2017 E-paper for visually challenged	Dr.P.Geetha	UG student Mr.S.Ranjith	ECE	Aim: To develop a prototype for visually challenged people to have an experience of writing sense using ZnO Nanowire. Objectives: To utilize the miniaturization tool - nano technology for supporting the visually challenged persons. To develop an E-paper that will help the physically challenged people for writing on a paper with no difficulty.	Centre for Nano Science and Engineering (CeNSE), IISC,Bangalore	Product development

21.	Fabrication of photovoltaic cell, MOSFET Making thin films (Nov' 2016)	Dr.P.Geetha	---	ECE	Hands-on training to fabricate photovoltaic cell, MOSFET and Making thin films	Centre for Nano Science and Engineering (CeNSE), IISC,Bangalore	Prototype development
22.	Design of Textile array Antenna	K.S. Chakradhar	---	ECE	A microstrip patch antenna is designed in the textile or clothes for the off body communications. An array antenna is printed in the cloth in the frequency range 60GHZ.The Antenna parameters like S11, radiation patterns are studied in free space, with and without bending, and on a homogeneous skin-equivalent phantom. This is the first wearable millimeter wave antenna for off body communications.	Mr.D.Nataraj, Assoc. Prof. Pragati Engineering College, Kakinada. Dr.B.Ramarao, Professor and Mr.M.Balakrishna, Asst.Prof. Aditya Institute of technology and Management,Tekkali.	Simulation
23.	Automation of Irrigation by Monitoring and Harvesting Rain Water Third Best Award AP International Conference on Transformations in Engineering Education (APICTIEE) 2018 at SRM University, Amaravathi	Mr. P. Madhu Kumar, Mr. R. Nagendra, Ms. M. Bharathi Mr. G. Guru Prasad	---	ECE	Automation of Irrigation by Monitoring and Harvesting Rain Water	---	---
24.	Project Quantum India Innovation Challenge (IIC) by Texas	Mr. P. Madhu Kumar, Mr. P.V. S. R. Bharadwaja	14121A0487 14121A04P1 14121A0350	ECE	Project Quantum: The major factor for crop loss in today's agriculture scenario is lack of information with the farmer. This tends to a lower yield and henceforth leading to less production. The onsiderable problem areas are irrigation, pest prevention, weather forecast and yield estimation. Due to the traditional and unscientific methods of agriculture, the output obtained is low. Proper precautions would suffice the farmer's need	---	---

	Instruments Quarter Finals				regarding the present day problem. Therefore, we put forth the idea for minimizing the problems. We introduce a new product which can estimate the yield from time to time by considering all the physical and environmental factors like temperature, moisture, etc. This can help them in identifying the problem area and enhance the production.		
25.	"Automatic Water Leak Detection Using IoT" using NI Software and Hardware, State Level Competition on Build Your Own IoT System [BYOIS] June- October 2018	Ms. K. Neelima	IV B.Tech (ECE-D), M. V. Akhila, V. Bhanu Prakash Reddy and V. Prathyusha Naidu	ECE	Automatic Water Leakage detection using IoT was developed by using NI Software and Hardware. The instruments cost was only 2500/- excluding the NI Hardware. It was useful for industrial applications where in person checking and automatic stoppage of oil or other fluids could be detected and controlled.		Prototype
26.	In-plane ultrasonic needle tracking using a fiber-optic hydrophone	Ms. K. Neelima	IV B.Tech , ECE-Yatam Narayana Reddy (16125A0450)	ECE	In-plane ultrasonic needle tracking using a fiber-optic hydrophone is a software model to track the depth of needle insertion to inject medicine accurately into the vien of human body. It is essential for critical cases like during injuries or illness caused especially during war times.	---	---
27.	The real time monitoring of water quality using IoT	Ms. K. Neelima	IV B.Tech, ECE - Thenebanda Afrid (16125A0447), M.Madhurima (16125A0430)	ECE	The real time monitoring of water quality using IoT is a prototype used to monitor the quality of water for the parameters like PH value, temperature, amount of dust particles present in water, distance up to which the water is filled in a tank by using ultrasound sensor, etc. This prototype was intended to serve at villages where water tanks are build and are not monitored for quality which usually lead to water borne diseases.		
28.	"Electric Lineman Safety with Advanced Password Management System Using GSM Interface "Marri Laxman Reddy Institute of Technology STATE AWARD for Best Innovator . 12th	Mr. T. Ravikumar Naidu, Assistant Professor	UG students M. Mouneesh Krishna (13121A04A8) K.Sivaram (13121A0471) L.Aravind naidu (13121A0484) M.Nirmal Kumar (13121A0487)	ECE	Electric Lineman Safety with Advanced Password Management System Using GSM Interface	---	Prototype

	ISTE AP & TS 2017						
29.	Design Of An Intelligent Shopping Basket Using IOT	Ms. K. Lalitha	A.Tejaswi (13121A1505)	CSSE	The Intelligent shopping basket is a smart trolley which uses an embedded chip with a bar-code scanner and a battery to allow users to self-egress at the supermarkets. The main theme of the paper is to decrease the time consumption in the billing counters at the supermarkets by designing a smart shopping basket which allows users to checkout from the malls and increase the time of Production. The IoT kit which contains the barcode scanner will automatically detects the product dropped into the basket using ultrasonic sensor	---	Prototype
30.	Modern Car Parking Used to Identify the Empty Parking Slots	Dr.G.Sasikumar	P. Kranthi Kumar (14121A1561)	CSSE	Now days in many multiplex systems there is a severe problem for car parking. There are many lanes avbailable for car parking, but one must look for the all lanes. So, the need is to develop a system which indicates directly which lane is vacant. In this project, microcontroller, Infrared transmitters and infrared receivers are used for indicating each vacant parking slot. Here we are using infrared communication because it can support LOS, and while enter gate for parking there is the display to get the information regarding which line is empty. This information gives the microcontroller. The microcontroller first gives the information to the IR transmitter then it gives to the IR receiver then this information shown on the display, so by this process the parking is easy process. Display unit is installed on entrance of parking lot which will show LEDs for all Parking slot and for all parking lanes. Empty slot is indicated by the respective glowing LED. This design is mainly comprised of low manual operation, used for commercial, industrial, apartments, institutions/universities, etc.	---	Prototype
31.	Emergency Response Drone using IOT	Mr. D. N. Kartheek	S Stephen Sudheer (16121A1595) M Raghu (16121A1562) M Pranav (16121A1584)	CSSE	When a medical emergency takes place, the response time can make all the difference between a life saved and a life lost. Drone is an all-purpose medical tool kit that can be automatically flown to any emergency situation and used to guide citizens to make non-technical life saving procedures. In this project, a person calls an ambulance and sends information about the accident to nearby hospitals. The hospital management activate GPS location and drone with live streaming will come with first aid kit and informs doctor about the type of injuries happened and then comes ambulance and takes patient to hospital and by the time doctors are waiting to give treatment as they already know the	National Instruments	Prototype

					type of injuries and they can also get patient health data.		
32.	Solar Power Monitoring System	Ms. K. Thejaswi	U.SreeHariChandana (16121A15B1) P.Sneha Reddy (16121A1594) S.SaiNikitha (16121A1576)	CSSE	Efficient Power monitoring, maintenance of voltages in solar power plants. In project monitors solar power plants.	National Instruments	Prototype
33.	Disease Detection in Agricultural Crops	Mr. A. Chandra	B Swetha Reddy (16121A1513) D Thanmayee (16121A1524) M Thanvika (16121A1560) A Kathyayani (16121A1504) N Lakshmi Samyuktha (16121A1574)	CSSE	In the present era, farming became major source of life. But the farming rate was lower than expected due to less fertile lands and many others. Even the growth of farming was reducing due to lack of knowledge on diseases and crop maintenance. To overcome this problem we are developing an app for smart phone. Identification of the plant diseases is the key to preventing the losses in the yield and quantity of the agricultural product. Health monitoring and disease detection on plant is very critical for sustainable agriculture. It is very difficult to monitor the plant diseases manually. Innovation in farming is not new but IoT is set to push smart farming to next level Internet of things is a system consists of actuators or sensors or both provides connectivity to the internet directly or indirectly. This work includes various features like detection of leaf disease, server based remote monitoring system, Humidity and temperature sensing, Soil Moisture Sensing etc. Leaf disease can be detected by camera interfacing with Raspberry PI RPI. Immediate status of a farm like a leaf disease and other environmental factors affecting crop like humidity, temperature and moisture is sent using WIFI Server through RPI to the farmers. This work uses IOT technology in Agriculture and also provides farmer with superior information about best remedies like pesticides and fungicides to recover from the effect using this app.	---	Mobile App
34.	Smart Health Care Using IoT	Mr. A. Chandra	Achakkagari Naveen Kumar (16121A1503) Achyutha N B S (16121A1502)	CSSE	The IOT Based Health Care System for the Elderly is the cheapest healthcare device based on the IoT platform for the patients and doctors. It provides a solution for measurement of Heartbeat to detect Cardiac Attacks. It also detects the body condition and location of the patients. In this project, we are using various sensors and modules for performing different functions and it provides security and facility of accessing the patient's heartbeat through a GSM message. This system also generates an alert SMS when it required that means at the time of any critical conditions of Heartbeat and about the	National Instruments	Prototype

					medicines, location change, conditions etc. The patient's condition will be sent as an SMS to either a preferred doctor or a family member. This makes life's easier and simpler		
35.	Development of Website for International Conference by Students	Mr.D.Ganesh	UG INUKURTHI TEJA SAI(17121A0572) MAHASOOL DADA SAHIL (17121A05C0)	CSE	Development of Website for International Conference by students from requirements to development and maintenance	---	Software Model
36.	Mobile App development for One stop CIVIL Infrastructure requirements for contractor	Mr.S.Srinivasa Chakravarthy	MALEPATI POOJITHA (17121A05C2) VELAMJERI CHANDRAMOULI(17121A05M9)	CSE	Development of Mobile App as part of solutions for challenges faced by Civil Engineers during construction	---	Software Model
37.	Entrepreneurship Club	Mr.N.Bala Krishna Dr.k.suresh	30 students from III CSE	CSE	Mentoring Students towards development of Innovative Product and Process development	---	Development of Business Plans/Models for Innovative Product/Process development for Business
38.	Text to Speech Processing- Voice user Interface with Linux environment	Dr.K.G.Suma	M. Sreeja (17121A05C9) P. Harsha (17121A05G5) P. Naveen (17121A05H1) P. Achyutha (17121A05H3)	CSE	Development of Open source software product to process text and convert to speech in Open platforms based systems	---	Software Model
39.	Baby Activity Tracker	Dr.J.Avanija Associate Professor, CSE Mr.Hemanth, Assistant Professor, EIE	1.K.Vinay Kumar Reddy,IVB.Tech EEE 16121A02A9 2.R.Hitesh Sai Vittal 16121A05J8 IV B.Tech CSE	CSE,EEE	Nowadays we are seeing most of the women are working women. After their delivery they are going back to their normal day to day works i.e., to their offices, so they do not have enough time to take care of their babies. In such conditions, they are approaching people who can take care of babies (babysitters). Those people may or may not look at babies in a good manner. In such conditions, the mothers are panic of how their babies are so in order to track the baby activities, this kind of baby tracker is used.	---	Prototype
40.	Smart Cane for visually Impaired People through IoT	Mr. P. Basha	UG Students: Ms. Y. Supraja, Ms. P. Aishwarya, Ms. Y. Divya Sree,	Information Technology	Smart Cane for visually Impaired People through IoT is a Sensor based guiding system to visually impaired through voice commands and it detects	---	Prototype

	Best Student Innovator by ISTE AP State Awards 2018		Mr. R. C. Pradeep Kumar		obstacles and moisture and provides the right direction to the concerned blind person.		
41.	Smart Shopping cart Research Expo 2K19	Ch.Prathima	V. Harsha Vardhan 16121A12B5 P. Janaki 16121A1273 M. Chandrika 16121A1265	Information Technology	The Internet of Things (IoT) is changing human lives by connecting everyday objects together. For example, in a grocery store all items can be connected with each other, forming a smart shopping system. In such an IoT system, an inexpensive RFID tag can be attached to each product which, when we placed into a shopping cart, can be automatically read by a cart equipped with an RFID reader. As a result, billing can be conducted from the shopping cart itself, preventing customers from waiting in a long queue at checkout.	---	Software Model
42.	Design and fabrication of three axes pneumatic trailer- Paricipated in JNTU University level Tech FEST	Dr. K. C. Varaprasad	M.V. Manolatha, 15121A0389 R. Bhavana Anand, 15121A03C4 Nikhat Shaik, 15121A03D9	MECH	The problem of difficulty in unloading the materials is taken and a suitable arrangement has been designed to overcome this difficulty. Our design involves unloading of trailer in three axes without application of any impact force	---	Prototype
43.	Design and fabrication of solar powered agri-bot:	Mr. Dileep Kumar	J.keerthika, 15121A0351, D.V.Vidhyadhari, 15121A0331	MECH	The Innovative idea in present project is to monitor the process of ploughing and water spraying of farmlands by using solar rover which runs by solar energy without consuming any fuel resources.	----	Prototype
44.	Deaerator – A New Era	Dr. Sadu Venkatesh	T.D.Shankar Narayana, 14121A03F8, Syamala bonish, 14121A03F0	MECH	Deaerator is a device which removes Oxygen and other gases from the feed water before entering the drum of the boiler. In order to avoid such effects, we adopt a deaerator after condenser and before pump.	---	Prototype
45.	Design and fabrication of Radio controlled air craft and safety system	Dr. R. Satya Meher	P.Manohar, 15121A03B9, K. Swapna, 15121A0372, M. Mounica, 15121A0379	MECH	A radio-controlled aircraft (often called RC aircraft or RC plane) is a small flying machine that is controlled remotely by an operator on the ground using a hand-held radio transmitter. The main aim is to design a model airplane that can fly as high as possible & indefinitely with a constant power source	---	Prototype
46.	Drowsy Accident Precautionary Systems	Mr. Ganga raju	S. Sreekanth, 14121A03E7, K. Mohanlal Yadav, 15125A0316	MECH	If the driver is feeling drowsy while driving then the whole manual control is shifted to artificial intelligence system and the vehicle stops in a safe place with a buzzing alarm by awaking the driver and other passengers with prior indications for oncoming vehicles by avoiding the fatal accidents. If this is equipped in every automobile we can avoid drowsy	---	Prototype

					accidents and save our lives and others lives and can have a safe journey.		
47.	Bright Idea Innovator Award DSIR-PRISM-TOCIC, Sri Padmavati Mahila Visvavidyalaya mu (Women's University), Tirupati, 29th April 2016.	Mr. K. Leleedhar Rao, Assistant Professor	-	EEE	Electricity Consumption Exhibit Clock and Announciator is a system proposed to steer the budget based consumers on how to limit their electricity consumption and maintain it within Critical Consumption Units by Performing the following tasks. Educating the ultimate consumers about their electricity consumption Making them set their own maximum consumption limit Alert them formally for and about any deviation in the actual energy consumption Inform about the actual cause behind the excess consumption	---	Prototype (Base level)
48.	Young Scientist Award by International Association of Research and Development Organization (IARDO) (5th May, 2019)	Mr. K. Leleedhar Rao	Assistant Professor	EEE	For contributed an extensive focused scientific research on pure and green energy systems and established an optimistic path for effective utilization of green energy resources, in particular geothermal and solar. The proposed and elevated technology realizes improvement in utilization factor of the resources and use factor of the generators, and adaptive to practicing engineers.	International Association of Research and Development Organization (IARDO) in association with Vedant College of Engineering & Technology, Kota, Rajasthan	Technology development
49.	Preparation of Nano fluid in transformer	Mr. J. Rafi, Assistant Professor	Mr. R. Siva Sai (17121D0714)	EEE	The concern work focuses on how nanotechnology can improve the properties of the transformer oil viz.. electrical properties like BDV & Tan delta; chemical and physical properties. Experimentation revealed that nanoparticles improved dielectric strength of transformer oil.	Er. Ramachandra Reddy, Asst Engineer (SPM), Rajampet Er. Ramachandra Murthy (Deputy Engineer) & Er. Sudhakar (Asst Executive Engineer) APTRANSCO Kadapa. Dr. T. Nageswara Prasad, SVEC Dr. MS Sujatha, SVEC Dr. Dadamiah PMD shaik, SVEC Dr. Meera Parthasarathy, SVEC	Product development
50.	Baby Activity Tracker	Dr.J.Avanija Associate Professor, CSE	K.Vinay Kumar Reddy,IV B.Tech EEE (16121A02A9 R.Hitesh Sai Vittal (16121A05J8)	CSE,EEE	Nowadays we are seeing most of the women are working women. after their delivery they are going back to their normal day to day works i.e., to their offices, so they do not have enough time to take care of their babies. In such conditions, they are	---	Prototype

		Mr.Hemanth, Assistant Professor, EIE	IV B.Tech CSE		approaching people who say they take care of babies (babysitters). Those people may or may not look at babies in a good manner. In such conditions, the mothers are panic of how their babies are so in order to track the baby activities this kind of baby tracker is used.		
51.	Smart Helmet	Dr. M. S. Sujatha & Mr. B. Hemanth Kumar	Gunje Natasekhar (17121A0266) Illuri Charitha Reddy (17121A0270) Kethepalli VineethKumar (17121A0290)	EEE	It contains an innovative idea which indicates major difference by implementing vibration sensor which indicates the rate of severity of damage to the person. And we can also used the camera in front of the bike to know the situation before the accident happens	---	Product
52.	Artifacts products	Mr.A.Chandra	UG student Uday Radhesh, EIE (17121A1017) K.Charan Tej, ECE charantej4324@gmail.com K. Ranadeeswar, ECE charantej4324@gmail.com	EIE, Mech, ECE CSE, Civil	E-waste management system- RE4-Reduce, Reuse, Recycle, Recreate is a multilevel enterprise that involves an online application meant for collection of e-waste and a processing unit for segregation of thus collected e-waste into different categories and trading this processed e-waste to the respective recycling firms	Under TEP , ISB Hyderabad	Prototype
53.	Color Based Vegetable Sorting Using PLC	Mr. G. Hemanth Kumar	15121A1029 15121A1030 15121A1004 15121A1050	EIE	This technology which is used to separate the vegetables based on color using programmable logic controller	--	Prototype
54.	Design of mems based Cantilever Sensor For Biomedical Applications	Mrs N Harathi	15121A10091512 1A103315121A10 2515121A1046	EIE	This technology can detect this cancer in the early stage and can be eradicated to some extent. Cancer is of different types like colorectal, breast, bone, liver etc. By the use of cantilever we are going to detect the presence of cancer in the blood cells.	--	Simulation
55.	Multi Sensor Multi Sensor Based Non-Invasive Type Blood Glucose Measurement System System	Dr. A. Yasmine Begum	15121A1024	EIE	Multi Sensor Based Non-Invasive Type Blood Glucose Measurement System is used to measure blood glucose non- invasively.the data extracted from the sensor is used to measure glucose concentration rate.it can be used in hospitals and homecare	--	Prototype
56.	Animal health monitoring system and disease detection	Dr. A. Yasmine Begum	15121A1015 15121A1016 15121A1013	EIE	This device is used to monitor physiological parameters such as rumination ,body temperature and heart rate of animal.this is helpful for inexpensive health care of livestock.	---	Prototype

57.	Automatic garbage extracting from streets	Dr. P.Srinivasa Rao	15121A1051 15121A1075 15121A1075 16125A1004	EIE	This device would be useful for automatic garbage collection. this extraction of garbage is based on Arduino controller. Garbage collected by smart bin is detected by the weight sensor when it reaches desired level automatically weight sensor activates	--	Prototype
58.	Smart helmet	Mr C kala Krishna	15121A1056 15121A1073 15121A1052 15121A1072	EIE	When accident occur this smart helmet is tracked and message will be sent through GSM modem.this idea is useful in preventing and detecting the accidents precisely by means of sensors fixed in helmet	---	Prototype
59.	Aadhar based prepaid vending machine	Mr M Srikanth	14125A1006 14125A1023 14125A1004 14125A1002	EIE	This vending machine is based on aadhar or student or employee id using source arduino mega2560 development board .this machine to eliminates the need for using card readers or money note or coin identifiers and respective software.	---	Prototype
60.	Design and analysis of MEMS Gyroscope	Mr C Ravindra Murthy	14121A1026 14121A1035 14121A1053 14121A1051	EIE	Tracking the position of an object problem is effectively solved with gyroscopes ,and these find the orientation and angular velocity knowing the linear acceleration in three dimensions using MEMS gyroscope	---	Simulation
61.	Biogas Generator (2017-18)	Dr. Hemadri Prasad Raju	G. Lohith Reddy (14121A0124), and G. LekhyaGowd (14121A0123)	Civil Engg	Biogas typically refers to a gas produced by the biological breakdown of organic matter in the absence of oxygen. Biogas is produced by the anaerobic digestion or fermentation of biodegradable materials such as dead plant and animal material, animal dung, kitchen waste, manure, sewage, municipal waste and greenwaste. Bio-gas comprises primarily of methane (CH_4) and carbon dioxide (CO_2) and may have small amounts of hydrogen sulphide (H_2S), moisture and siloxiles.	---	Process Development
62.	Experimental study on vegetable waste composting	Dr. Hemadri Prasad Raju	G.Lohith Reddy (14121A0124), G.LekhyaGoud (14121A0123), N.MuniDevika (14121A0165), C.Venkataramudu (14121A0112), K.Madhu Sai Prasad (14121A0147)	Civil Engg	Biogas typically refers to a gas produced by the biological breakdown of organic matter in the absence of oxygen. Biogas is produced by the anaerobic digestion or fermentation of biodegradable materials such as dead plant and animal material, animal dung, kitchen waste, manure, sewage, municipal waste and greenwaste. Bio-gas comprises primarily of methane (CH_4) and carbon dioxide (CO_2) and may have small amounts of hydrogen sulphide (H_2S), moisture and siloxiles.	---	Process Development
63.	Smart Decentralised Municipal Solid Waste Management for	Dr. Hemadri Prasad Raju	V.VishnuVardhan Reddy (16125A0124)	Civil Engg	The primary aim of sustainable solid waste management is to address concerns related to public health, environmental pollution, land use, resource management and socio-economic impacts associated with improper disposal of waste.	---	Process Development

	Sustainable Cities						
64.	Low Cost Electrostatic Precipitator	Dr. Hemadri Prasad Raju	D.Pragathi (16121A0123), B.Sujan Kumar (16121A0109), and S.P.Karthik (16121A0187)	Civil Engg	An electrostatic precipitator (ESP) is a filtration device that removes fine particles, like dust and smoke, from a flowing gas using the force of an induced electrostatic charge minimally impeding the flow of gases through the unit.	---	Product Development