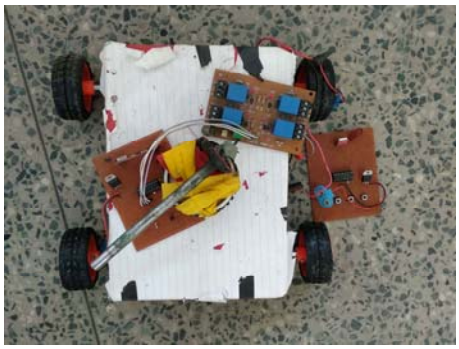
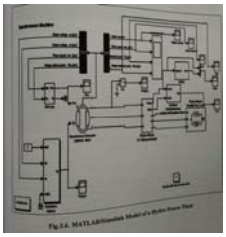
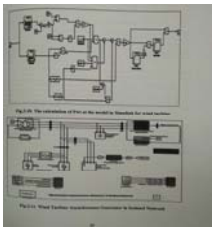
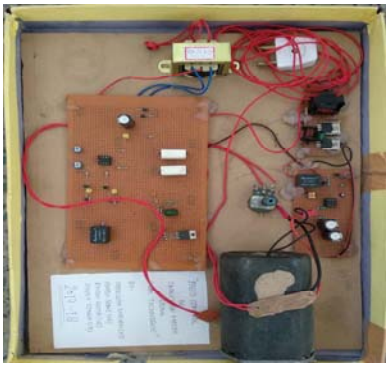
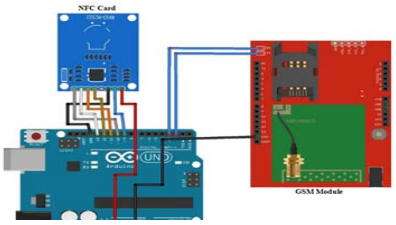
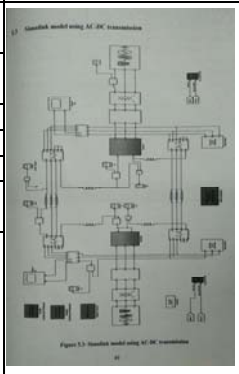
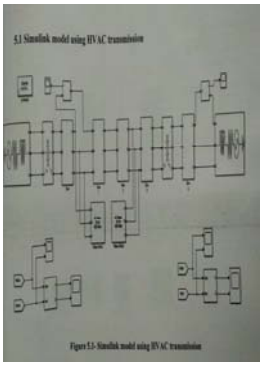
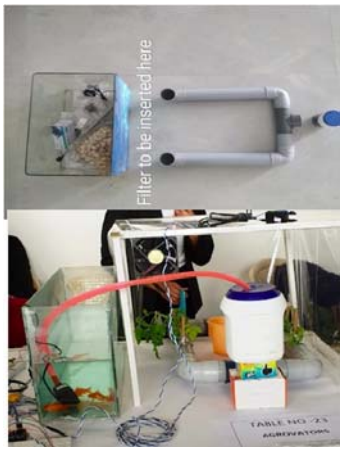
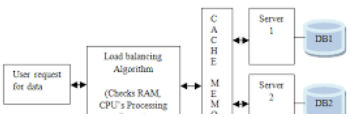
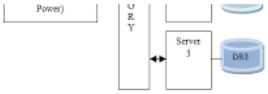
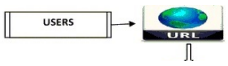
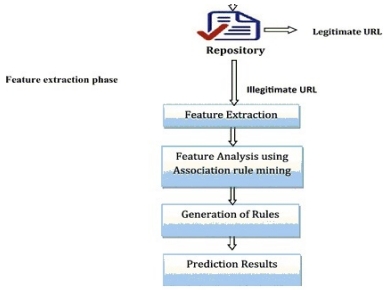
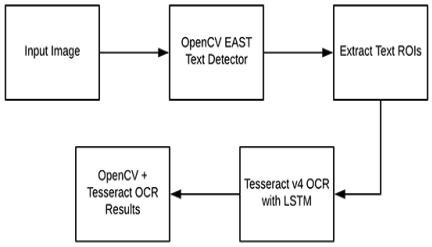
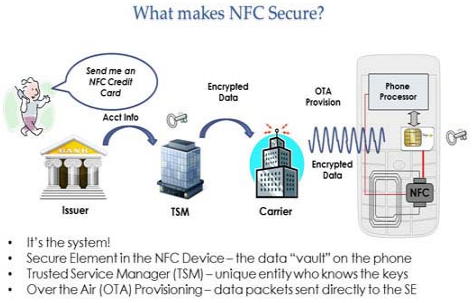
List of Students Best Innovation Projects in last five years

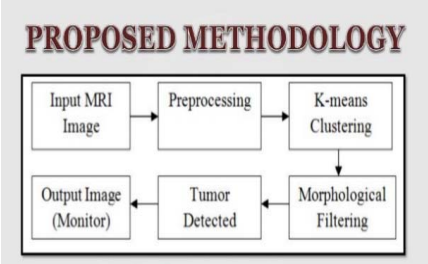
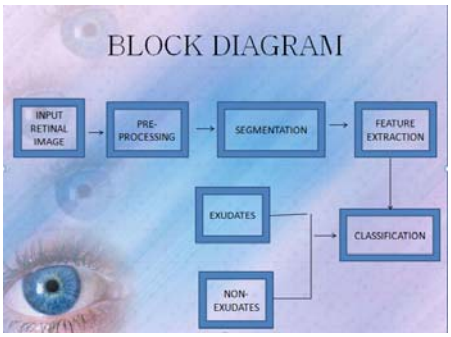
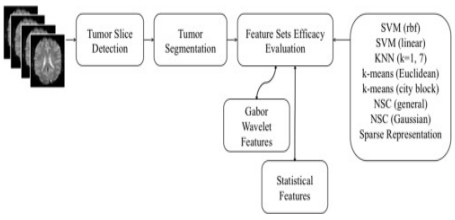
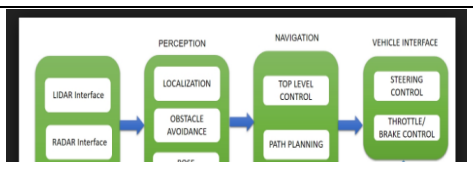
S. No	Details		Photograph of the Model for Hardware based Project/Pictorial Representation for Software based Projects along with students
1	**Name of the Students/Innovator**	Abhishek, Ankit Kumar Singh, Ajeet Singh, Mohd Saif Khan	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**EE**	
	Batch	**2014-2018**	
	Name of the Project/Innovation	Design of Electric Cannon	
	Description of the Project/Innovation	A cannon is a type of gun classified as artillery that launches a projectile using propellant. In the past, gunpowder was the primary propelant before the invention of smokeless powder in the 19th century. Cannon vary in caliber, range, mobility, rate of fire, angle of fire and firepowder, different forms of cannon combine and balances these attributes in varying degrees, depending on their intended use on the battlefield.	
2	**Name of the Students/Innovator**	Rit Tiwari, Shubham Pathak, Vikas Yadav, Sumit Kumar Sharma	 
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**EE**	
	Batch	**2014-2018**	
	Name of the Project/Innovation	Simplified Model of a small Scale Microgrid	
	Description of the Project/Innovation	Energy is one of the most fundamental elements of our universe. It is inevitability for survival and indispensable for development activities to promote education, health, transportation and infrastructure for attaining a reasonable standard of living and is also a critical factor for economic development and employment. In last decade, problems related to energy crisis such as oil crisis, climate change, electrical demand and restrictions of whole sale markets have a risen worl-wide.These difficulties are continously increasing, which suggest the need of technological alternatives to assure their solution.	
3	**Name of the Students/Innovator**	Abdullah Shayan, Akash Soni, Ayush Gupta, Ayush Singh	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**EE**	
	Batch	**2014-2018**	
	Name of the Project/Innovation	Speed Control of Induction Motor Using PWM Technique	
	Description of the Project/Innovation	Induction motors are the most widely used electrical motors due to their reliability, low cost and robustness. However, induction motors do not inherently have the capability of variable speed operation. Due to this reason, earlier dc motors were applied in most of the electrical drives. But the recent developments in speed control methods of the induction motor have led to their large-scale use in almost all electrical drives.	
4	**Name of the Students/Innovator**	Rahit Kumar Agarwal, Samrat Malik, Swatantra Kumar Dhaneshri, Gaurav Kimta	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**EE**	
	Batch	**2014-2018**	
	Name of the Project/Innovation	MATLAB modelling of hybrid electrical vechicle	

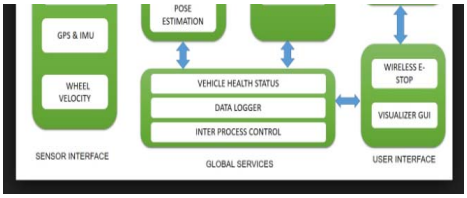
	Description of the Project/Innovation		
5	**Name of the Students/Innovator**	Nikhil Singh, Pushpraj, Vivek Kumar, Yusuf Haque	 
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**EE**	
	Batch	**2014-2018**	
	Name of the Project/Innovation	Power Capacity Improvement by Smimultaneous AC/DC Transmission Line	
	Description of the Project/Innovation	With ever-growing population, the demand of electric power is also increasing day by day. To meet this increasing demand, the power transferred should also increase. However, the existing EHV transmission lines cannot be loaded up to their thermal limits because of the consideratons of their transient stability. To address this issue simultaneous power transfer scheme came into existence. With this scheme it is possible to load transmission lines close to their thermal limits, thus increasing the power transfer capacity of the line.	
6	**Name of the Students/Innovator**	Atul Kumar, Divyani	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**Computer Science & Engineering(CSE)**	
	Batch	2015-2019	
	Name of the Project/Innovation	Integrated Farming and Fish Keeping System	
	Description of the Project/Innovation	The consumer demand for fish has been increasing, but ocean fish catches continue to decline. Aquaculture, the cultivation of freshwater and marine plants and animals, is one of the fastest growing segments of agriculture. The lack of arable land area and degradation with water scarcity are some of the current problems of agricultural production, especially in the most under developed areas with a scarcity of resources. This should make us re-evaluate the way in which food is produced. Proposed system has plants and fishes together so it can improve the soil quality and can easily provide food for the village. The overall system is divided into two parts. First of this will raise the fishes and the waste produced by fishes in this part of the system will be used up by the other part of the system. In the second part of the system we will grow eatable food. This is a fully automated system which does not require much of manpower to produce the harvest. In the system we are using the fundamentals of IoT to automate the system.	
	Name of the Students/Innovator	Amrita Bhattacharya, Shweta Arya, Tarandeep Singh	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**Computer Science & Engineering(CSE)**	
	Batch	**2014-2018**	
	Name of the Project/Innovation	Load optimization in Cloud Computing	

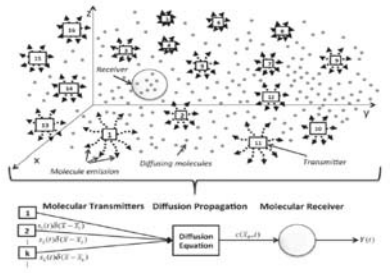
7	**Description of the Project/Innovation**	The key to existing IT establishments is virtualization. Cloud computing has been a hyped technology which is based on virtualization through which on demand computing resources can be accessed. The resources like computing power, memory, network, etc are the services actually provided by cloud over the internet. Physical servers abstracted as virtual machines forms the base for providing these services. Most concerned problem related to cloud is optimal distribution of load such that none of the VM is overloaded or under loaded. This paper discusses basics of cloud computing and existing approaches (algorithms) to optimize load on cloud servers along with a proposed work based on clustering algorithm.	
8	**Name of the Students/Innovator**	Avishi Kansal, Hari Shankar Agarwal	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**Computer Science & Engineering (CSE)**	
	Batch	**2014-2018**	
	Name of the Project/Innovation	Review Spam Detection	
	Description of the Project/Innovation	All e-commerce sites provide facility to the users for giving views and experience of the product and services they experienced. The customer‟s reviews are increasingly used by individuals, anufacturers and retailers for purchase and business decisions. As there is no scrutiny over the reviews received, spammers produce synthesized reviews to promote some products/brand and demote competitors‟ products/brand for profit or publicity. As the amount of spam has been increased tremendously using bulk mailing tools, there is an emerging need for spam detection. In this paper we propose an optimal approach to detect spam reviews based on number of reviews posted per day from a particular IP address and geographic location. In case of spam, it blocks the spammer‟s IP and also send a mail intimation to give an alert. It performs feature extraction based on the authentic reviews and also provides a star rating system. In our work we have combined LSVD and LSI algorithms to guarantee very high detection rates as well as feature extraction facility. Other concepts like ontology, spam dictionary, sentiment analysis, indexing, decision tree, opinion mining, clustering have also been included to provide the most efficient approach.	
	Name of the Students/Innovator	Mayank Motwani, Pratha Purwar, Rachit Mathur	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**Computer Science & Engineering(CSE)**	
	Batch	**2014-2018**	
	Name of the Project/Innovation	An efficient approach towards Crimes against women using time series algorithm	

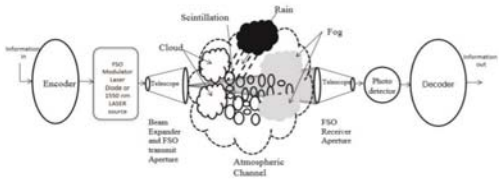
9	**Description of the Project/Innovation**	One of the major issues in every nation these days is the rise in crime against women. Every day we come across various cases of abuse against women. Study of past crime data can help us in analysing crime patterns and important hidden relations between the crimes. So, crimes predicting model can be simulated which will study verified past crime records and predict future criminal activities. In recent past, there has been an increased interest in time series research. This has been used particularly for finding useful similar trends in multivariate time series in various applied fields such as environmental research, agriculture, sales and finance. This paper elaborates upon the use of time series algorithm in accurately predicting and extracting patterns that occur frequently within a dataset to obtain useful hidden information.	
10	**Name of the Students/Innovator**	Somil Gupta, Tanvi Bansal	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**Computer Science & Engineering (CSE)**	
	Batch	**2014-2018**	
	Name of the Project/Innovation	Deep Learning based English Handwritten Character Recognition	
	Description of the Project/Innovation	In this project proposal is about a convolutional neural network based handwritten character recognitionusing SVM as an end classifier. The learning model is based on CNN (Convolutional Neural network) which is used as a feature extraction tool. The proposed method is more efficient than other existing methods and will be more efficient than modifying the CNN with complex architecture. The recognition rate achieved by the proposed method is 93.3% which is greater than other existing methods. The computation time of training phase is 13.14sec and that of testing phase is 13.27 sec. The proposed system was validated by 6 validation points. The overall accuracy of system is 93%	
11	**Name of the Students/Innovator**	Deeksha Gupta, Divyani Yadav	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**Computer Science & Engineering (CSE)**	
	Batch	**2015-2019**	
	Name of the Project/Innovation	NFC System construction and its Security	
	Description of the Project/Innovation	Over the past few years, smart cards have achieved a growing acceptance as a powerful tool for security, identification, and authorization. Financial card issuers are moving to replace magnetic stripe cards with chip cards to reduce counterfeiting and fraud. The increasing computational power placed on the chip along with advances in cryptography has made the smart card a very powerful tool for identification. So, in this Research paper we are proposing an unification of all the smart card which are currently present in the market which are used in the transaction process. We will create a system that will have a single card along with RFID technology, which will be used to carry out transaction in different places.	
12	**Name of the Students/Innovator**	Anubhav /A. Ambikapaty /Dr.V.K.Dwivedi (Already patent filed)	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**EEE**	
	Batch	**2015-2019**	
	Name of the Project/Innovation	High voltage shield	

	Description of the Project/Innovation	High voltage shield suit that protect the user (Mainly womens or girls in Inia) by shielding him with high voltage so that anyone even touching him or him will receive a non lethal high voltage shock. The suit protect the user by not shocking the user itself. Women safety, security guards, individual protection from physical harassment.	
13	**Name of the Students/Innovator**	Anubhav /A.Ambikapaty/Dr. V.K.Dwivedi/Dr. Praveen (Already patent filed)	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**EEE**	
	Batch	**2015-2019**	
	Name of the Project/Innovation	Brain wave controlled vehical's	
	Description of the Project/Innovation	The proposed system is consist of electric skate board as a vehicle and a brain wave detecting helmet. The both setups are interconnected through RF. The attention and focus required to trial any vehicle on the road is detected through the electrodes which are implanted in the helmet. The signals are amplified through the buffer and a differential amplifier and send through a transmitter to the skate board to control the speed of the motors. The proposed system is useful to eliminate distraction caused accident as the electrode planted in the helmet detect the focus and attention of the user and control the speed of the vehicle , if the person is distracted from the road ,the vehicle will automatically slow down the speed.	
14	**Name of the Students/Innovator**	Anubhav /A. Ambikapaty /(Already patent filed)	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**EEE**	
	Batch	**2015-2019**	
	Name of the Project/Innovation	Shield for car(Scar)	
	Description of the Project/Innovation	High voltage shielding for vehicle is a product which can be installed below the vehicle which can protect the passenger and vehicle by shielding the vehicle body with high voltage, which in turn make the whole body of the vehicle untouchable by any human being. Instead of tracking the car after it has been stollen this device will protect the vehicle from steeling steeling.	
15	**Name of the Students/Innovator**	Naveen /A.Ambikpathy(Mentor)/ (patent in progress)	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**EEE**	
	Batch	**2015-2019**	
	Name of the Project/Innovation	LOCO-LIANCES	
	Description of the Project/Innovation	Inside the house we may use limited lights. The lights can follow the human inside the house according to their movement. There will be a magnet path on the top of the ceiling on which the light gets moved. The number of lights can move accordingto the number of person inside and their location.	
	Name of the Students/Innovator	Raghav Dwivedi/ A.Ambikapathy (Mentor) (Patent in progress)	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**EEE**	
	Batch	**2016-2020**	
	Name of the Project/Innovation	Smart tyre	

16	**Description of the Project/Innovation**	presenting this technology so that we can overcome many problems like traffic, potholes roads, water logging and muddy pits on road and enjoy a smooth and relaxed journey. Today the over increasing congestion is a serious issue in metropolitan cities; so we need to ensure maximum utilisation of surface area of our road. One way to do so is that we can increase the width of the road but that's expensive, the other way is to reduce the size of the vehicle.With this technology we can alter the size of the vehicle. You can use alfa when you encounter narrow roads and bridgesand enjoy our memorable trips. In the previous version of this technology we have seen a vehicle in which when we increase the length of axle simultaneously the height of vehicle also increases and this leads to shift of centre of mass of vehicle upwards and hence the stability of the vehicle decreases. However in this technology the centre of mass of the vehicle is shifted downwards due to which became more stable. The added stability is advantage when we drive fast. Upgraded version: In the upgraded version the angle on each axel can be rotated by 90° in this version the car can move laterally. It may happen wheels are not of same diameter; in that event the angle of one wheel can be changed.	
17	**Name of the Students/Innovator**	DEEPAK BUDHWANI, HIMANI SHARMA, MANSI GOYAL	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.TECH	
	Branch	**INFORMATION TECHNOLOGY**	
	Batch	**2014-2018**	
	Name of the Project/Innovation	Segmentic segmentation for brain tumour MRI image segmentation	
	Description of the Project/Innovation	This research helps in finding brain tumour in early stages through image processing techniques more accurately.	
18	**Name of the Students/Innovator**	ANAND SINGH, ARYAN GOSWAMI, ASEEM SAXENA	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.TECH	
	Branch	**INFORMATION TECHNOLOGY**	
	Batch	**2014-2018**	
	Name of the Project/Innovation	Automatic detection of exudates in diabetic retinopathy images	
	Description of the Project/Innovation	Through this research we have presented an automated system which can detect exudates(inflammatory fluid leaking between cells) for diabetic person. It hampers normal vision ability by causing the person to see black patches, High blood sugar level damages retinal vessels causing DR.	
19	**Name of the Students/Innovator**	NAKUL VERMA, ROBIN BHARDWAJ	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.TECH	
	Branch	**INFORMATION TECHNOLOGY**	
	Batch	**2015-2019**	
	Name of the Project/Innovation	Brain tumor extraction from MRI images using MATLAB	
	Description of the Project/Innovation	Brain tumor cases are increasing nowadays. With the advancement in healthcare sector it can be cured if detected in initial stages. So we are using image processing techniquies to detect more accurately by using MRI images.	
	Name of the Students/Innovator	PRAGATI JAISWAL	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.TECH	
	Branch	**INFORMATION TECHNOLOGY**	

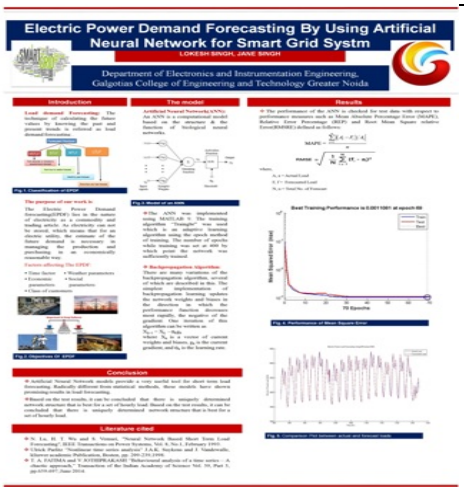
20	**Batch**	**2015-2019**	
	Name of the Project/Innovation	Self-driving car using smartphones	
	Description of the Project/Innovation	This project aims at providing an app through which one can drive a car with using smartphones. This will help those who dont know car driving or dont want drivers with them. It also help physically challenged person.	
21	**Name of the Students/Innovator**	Ashish Kumar Singh, Shashank Srivastava	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**Electronics and Communication Engineering**	
	Batch	**2014-18**	
	Name of the Project/Innovation	A Compact Multiband Dual-Polarized Microstrip Patch Antenna for Satellite Communication	
	Description of the Project/Innovation	A novel double-layer multiband dual-polarized microstrip patch antenna is proposed. The design employs the concept of slotted patch fed with proximity coupled feed having defected ground plane (DGS). The proposed antenna achieved multiple operating frequency bands for satellite communication including FB1 (11.15 GHz), FB2 (4.17 GHz), FB3 (4.87 GHz) and FB4 (1.98 GHz). The proposed antenna has obtained bandwidth of 12.98%, 4.7%, 4.69% and 5.39% at FB1, FB2, FB3 and FB4 bands, respectively. The proposed antenna also exhibits circular polarization in the frequency band FB4. The 3dB ARBW of the proposed antenna is 9.23% at 11.2 GHz. Finally, a metallic cavity is used with the desired antenna to achieve a unidirectional radiation pattern. The designed antenna radiation characteristics are verified with the experimental results	
22	**Name of the Students/Innovator**	Shubham Kumar Mangal, Sujay Kumar, Tanuj Agarwal and Ujjawal Sarkar	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**Electronics and Communication Engineering**	
	Batch	**2014-18**	
	Name of the Project/Innovation	Gain Enhancement of Circularly Polarised Microstrip Patch Antenna using Metasurface	
	Description of the Project/Innovation	A circularly polarized microstrip patch antenna is designed using metasurface as superstrate to achieve enhanced gain, so as to make it desirable for practical communication purposes. A parametric study of the effect of variation in the air gap between two substrates and variation in the truncation length of metasurface patches with antenna characteristics is conducted. The results from the parametric study are used to determine optimized values of the different parameters of antenna to get the optimum results and performance. The design and simulation of the antenna is carried out using CST Microwave Studio 2016 simulation software. The return loss is below -10dB from 6.91GHz to 7.94GHz with an impedance bandwidth of 8%. The gain obtained for antenna without superstrate is 4.33dB. A maximum gain of 6.08dB is achieved at 7.24GHz for proposed antenna with superstrate. A significant increase of 1.7dB in gain is hence achieved by the proposed stacked layer. The axial ratio is less than 3dB within the operating frequency range of 6.91 GHz to 7.57GHz which comes under the impedance bandwidth of antenna. The VSWR is less than 2 within the frequency range of 6.91GHz to 7.57GHz. The proposed antenna prototype has been fabricated and tested using VNA and anechoic chamber facility in order to verify the simulated results. Within fabrication tolerances, the agreement with the simulations has been satisfactory.	
	Name of the Students/Innovator	Divy Sindhu, Kunwar Kuldeep Singh, Pragyesh Rastogi, Prakhar Jadaun	

23	**College Name**	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**Mechanical Engg**	
	Batch	**2014-18**	
	Name of the Project/Innovation	Design and development of tool force dynamometer	
	Description of the Project/Innovation	A turning tool force dynamometer that can measure static and dynamic cutting forces by using strain gauge has been designed and developed. The orientation of octagonal rings and strain gauge locations has been determined to maximize sensitivity and to minimize cross-sensitivity. The developed dynamometer is connected to a data acquisition system. Cutting force signals were captured and transformed into numerical form and processed using a data acquisition system consisting of necessary hardware and software. The obtained results of machining tests performed at different cutting parameters showed that the dynamometer could be used reliably to measure cutting forces.	
24	**Name of the Students/Innovator**	Shekhar Singh, Parul Raj, Srishti Sharma, Utsav Verma	 Fig. 1. Reference diffusion-based molecular nanonetwork considered for the interference modeling.
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**Electronics and Communication Engineering**	
	Batch	**2014-18**	
	Name of the Project/Innovation	Interference Modelling & Analysis For Molecular Nano Communication	
	Description of the Project/Innovation	Exchange of information via nano devices is a has been defined as "Nano Communication (NC)". Also, NC based on molecules has been termed as Molecular NC (MNC). In literature it is found that the Diffusion based MNC uses the Poisson Point Process (PPP) to define the random distribution of transmitters and receivers in either a two dimensional or a three-dimensional space. However, PPP is the oversimplified distribution. In this project, PPP has been replaced by Mat'ern Hard-Core Process (MHCP), specifically, MHCP Type 2 has been used to mitigate the interference. The analytical model for interference has been proposed and validated through numerical comparison with the results available in the literature	
25	**Name of the Students/Innovator**	Abhishek Tyagi, Ashish Gupta	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech.	
	Branch	**Electronics and Communication Engineering**	
	Batch	**2014-18**	
	Name of the Project/Innovation	Waveform optimization for Cognitive Radio using Convex Optimization	
	Description of the Project/Innovation	For cognitive radio, a spectral mask for the transmitted waveform is determined on spectrum sensing, and arbitrary transmitted spectral shaping is required. Meanwhile, the interferences from primary radios should be canceled at the receiver of cognitive radio. Here, we optimize the MISO cognitive radio communication link by jointly considering the optimization objective, the spectral mask constraint at the transmitter and the interference cancellation at the receiver. Therefore, various practical constraints for waveform optimization in the context of cognitive radio could be considered. The optimization problem and its solution can be acheived by the use of SDP iterative method in the CVX tool.	

26	**Name of the Students/Innovator**	Sharmishtha srivastava,Rajnish singh,Saurabh suri,Vibudh upadhyay ,Pratyush kumar,Yash kumar,Ayush goyal,Himanshu singh ,Chhayank srivastava ,Nishant yadav,Saksham goyal ,Saurabh kuntal,Rajat jain	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech.	
	Branch	**Mechanical Engineering**	
	Batch	**2014-18**	
	Name of the Project/Innovation	Design and Fabrication of an energy efficient Hybrid human powered three wheeled electric vehicle driven by two drivers	
	Description of the Project/Innovation	This project was meant to participate in SAE-NIS efficylce event 2017. Galgotias SAE collegiate club team Zyklus participated in SAE-NIS efficycle at LPU Jalandhar, and won overall first runner up award, best durability award and best women participation award.	
27	**Name of the Students/Innovator**	Maneesh Chauhan	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech.	
	Branch	**Electronics and Communication Engineering**	
	Batch	**2014-18**	
	Name of the Project/Innovation	Electronic , Line Step-on Detection System	
	Description of the Project/Innovation	Consider the case of runout in a cricket game . Sometimes(in very close calls) it becomes very difficult to makeout which event occurred first i.e. the bat came inside the crease line first or the bails were dispatched first. Prevailing method of video photography proves inefficient in such cases because of the low frames per second of the camera and zooming into the image distorts the pixels hence degrading image quality. The proposed project devises a new electronic method of detecting the sequence of the two events in such critical cases. In this, series of pressure senors are placed just behind the crease line to detect the presence of bat and generate an electrical signal when the the bat is put upon it. The bails are already elctronic. So an electronic signal can be derived from it when dispatched. The timing of two electrical signals are then compared to decide which event ocuured first. This method has very high accuracy as electronic systems work in MHz or GHz range.	
	Name of the Students/Innovator	Saurabh Katiyar, Parul Katiyar, Rushil Johri, Shubhankar Jagdish, Suryavrat Tiwari	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech.	
	Branch	**Electronics and Communication Engineering**	
	Batch	**2014-18**	
	Name of the Project/Innovation	Channel Modelling and Performance Analysis for Free Space Optical (FSO) Communication	

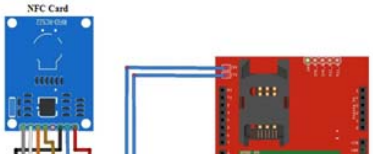
28	**Description of the Project/Innovation**	In the past decades a renewed interest has been seen around wireless optical communications, commonly known as free-space optics (FSO), because of the ever growing demand for high-data-rate data transmission as to a large extent, current applications, such as high-definition (HD) contents and cloud computing, require great amount of data to be transmitted, hence, demanding more transmission bandwidth. The major drawback when deploying horizontal (ground-ground) wireless links based on FSO technology, where lasers are used as sources, is the perturbation of the optical wave as it propagates through the turbulent atmosphere. Moreover, fog, rain, snow, haze, and generally any floating particle can cause extinction of the signal carrying laser beam intensity. The objective is to analyze the effects of the atmospheric perturbations on the FSO communication link and performance, study the existing channel models in defining these perturbations through mathematical model and finally to adopt a new model more flexible than the existing models.

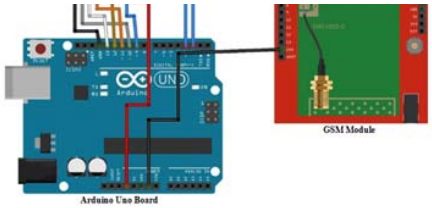
29	**Name of the Students/Innovator**	LOKESH SINGH / JANE SINGH / GUIDE:-Mr. HITESH KUMAR
	College Name	Galgotias College of Engineering and Technology, Greater Noida
	Program	B.Tech.
	Branch	**EIE**
	Batch	**2014-18**
	Name of the Project/Innovation	Electric Power Demand Forecasting By Using Artificial Neural Network for Smart Grid system
	Description of the Project/Innovation	Electric load demand modeling and forecasting has fundamental importance to various practical domains and a lot of active research work is going on in this area during past several years. In this work, an artificial neural network based model is used for load forecasting. Further, its performance is improved by using algorithm. The method is supported by giving the forecasting result via simulation for real time series of the electric load demand of Delhi region. To evaluate forecasting accuracy as well as to compare different models, three performance measures, viz. RMSE (Root mean square Error), MAPE (Mean Absolute Percentage Error) and REP (Relative Error Percentage) have been used. In this paper, all the simulations are carried out in MATLAB 7.10.0 environment using core i5 Intel processor.



	Name of the Students/Innovator	Prateek Gupta / sushmita day (Guide :- Ms. Kriti Tripathi)
	College Name	Galgotias College of Engineering and Technology, Greater Noida
	Program	B.Tech.
	Branch	**EIE**
	Batch	**2014-18**
	Name of the Project/Innovation	Piezo Power Charging System

30	**Description of the Project/Innovation**	In the present times electric energy plays a vital role in our day to day life and as all the appliances used today need electricity to operate therefore, need of ample amount of electricity is required. As the world's population is rising and also due to the drastic progress of mankind day by day the electric consumption is increasing drastically on the other hand the production of electric power is limited and it is not increasing to the extent that it meets the ever increasing demand and due to which there is scarcity of electricity not only in India or particular region but across the whole world as the development is taking place at a very high rate. Actually today, the demand of electricity is continuously growing in this world and set to be doubled by 2030, so it is necessary to increase the supply of electric power according to the demand and for that it is very essential for us to find other alternative methods to produce electric-energy. Electricity can be produced using renewable sources of energy such as solar energy, wind energy, tidal energy, hydropower energy , sound energy
31	**Name of the Students/Innovator**	Mohd Usman Ansari / Parvez Ahmad
	College Name	Galgotias College of Engineering and Technology, Greater Noida
	Program	B.Tech.
	Branch	**EIE**
	Batch	**2014-18**
	Name of the Project/Innovation	SMART SHOPPING TROLLEY USING RFID
	Description of the Project/Innovation	A shopping mall or complex is a place where people buy product/s for their regular use. The customers have to wait in long queues to get their products scanned using barcode scanner and get it billed. To get rid of this, we have proposed a new 'Smart Shopping Trolley using RFID (Radio Frequency Identification)'. This implementation is used to assist a person while shopping and also to avoid standing in long queues and thus saving time. The smart shopping trolley would consist of a microcontroller, Android Device, RFID Reader and an Electronic Display. The products in the shopping centers will have RFID tags to retrieve/access information about it. When a customer places a product in the smart trolley, the RFID Reader will read the Product ID and the information related to it will be stored in controller. Index Terms- RFID Reader, RFID tags, Central Billing System, Wireless ZigBee Module, Android, Security, Central Server Database
	Name of the Students/Innovator	Dhananjay Singh/Rahul Singh
	College Name	Galgotias College of Engineering and Technology, Greater Noida
	Program	B.TECH
	Branch	**INFORMATION TECHNOLOGY**
	Batch	**2015-2019**
	Name of the Project/Innovation	An IOT based secure transaction system using NFC



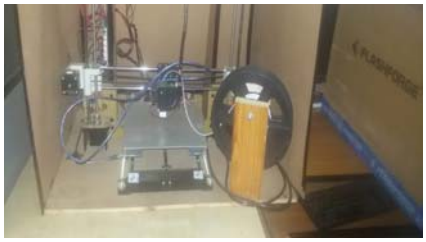
32	**Description of the Project/Innovation**	The humans have always tried to improve quality of living and technology plays a major role in this cause. Modern technology has been evolving with the emergence of smart technologies. Cash Based transaction involves lot of human effort of withdrawing and then storing the cash. It is also an insecure way of payment involving fears of theft etc... With large amounts of data transfer and e-payment needs, NFC is one of the prime technologies contributing towards fast and secure transmission of electronic signals, data and money. This paper focuses on NFC technology utilisation for a simplified and secure unified transaction system using IOT. Internet of things is a technology of present and future which has its applications in various fields like healthcare, transportation, manufacturing etc... There has already been a lot of research and developments on utilisation of NFC technology for transactions, but we propose a secure wireless transaction system by providing features such as database connectivity and user authentication in the system	
33	**Name of the Students/Innovator**	Nakshatra Gupta, Syed Akbar Abbas Jafri, Nishit Arun Nigam	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.TECH	
	Branch	**INFORMATION TECHNOLOGY**	
	Batch	**2015-2019**	
	Name of the Project/Innovation	A New User Identity Based Authentication, File Encryption/Decryption and Distributed Database For Cloud Computing	
	Description of the Project/Innovation	The Cloud based Computing is a trending technology in present IT scenario in which data is stocked in a Scattered or distributed manner & resources are shared among people. The data centers are widely distributed across the globe and are accessed by anyone at any time. Data is fetched, uploaded and manipulated by several users simultaneously hence identification and authentication of users who are fetching the data need to be done mandatorily without any error. In this Research Paper we have presented a new advanced security architecture for user identification which includes two factor authentication, AES based file encryption and decryption of data uploaded on cloud, admin verification and locking of users, fetching IP details of users, distributed database storage i.e. data is stored in tiers which means user login details is stored in one database &encryption/decryption details such as (files uploaded, key) is stored on different database. Whole work deals on enhancing security for cloud computing.	
	Name of the Students/Innovator	Dhananjay Singh,Rahul Singh, Sanjay Kumar	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.TECH	
	Branch	**INFORMATION TECHNOLOGY**	
	Batch	**2015-2019**	
	Name of the Project/Innovation	Vulnerabilities and Security of web applicatiions	

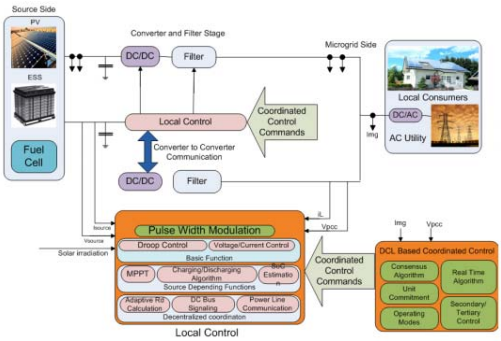
34	**Description of the Project/Innovation**	Web applications are active websites which are composition of server based programs serving user interaction and various other functionalities. Web Server security is thus an important aspect for any organisation having web server connectivity with the internet and also to ensure customers using their websites, for a secure online portal. In this age of digital revolution, there has been a rise in demand of web developers who can produce user friendly web platforms such as mobile applications, web applications. The user base for online web applications is on a rise too. We have seen a huge emphasis on creating visual and catchy web applications but with large amount of sensitive user data at stake there should be more focus on providing web security to the applications developed.	
35	**Name of the Students/Innovator**	Harsha chaudhary, Harshit tyagi, Kshitij bajpai	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**Computer Science & Engineering (CSE)**	
	Batch	**2016-2020**	
	Name of the Project/Innovation	Object Detection using Remote Sensing Images	
	Description of the Project/Innovation	The project deals with remote sensing images, to detect building or roads in the images and make use of those extraction in daily life.	
36	**Name of the Students/Innovator**	Abdul Raheem, Gauri Mishra,Kshitiz Singh	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**Computer Science & Engineering(CSE)**	
	Batch	**2019-2020**	
	Name of the Project/Innovation	Directional Location Routing in Vehicular Adhoc Network	
	Description of the Project/Innovation	A vehicular ad hoc network (VANET), a type of wireless network, is able to provide many communication services via the collaboration of the vehicles in the network.Aim is to compare the various concepts used in field of VANET and provide an efficient solution for Directional Location Routing in VANET.	
37	**Name of the Students/Innovator**	Ankita, Durgesh Kumar Yadav, Iftisham Anjum	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**Computer Science & Engineering (CSE)**	
	Batch	**2016-2020**	
	Name of the Project/Innovation	Accident Detection Using Deep Learning	
	Description of the Project/Innovation	Accidents have been a major cause of death in India.In most of the case of road accident the victim dies due to lack of required medical aid on time. This is because of lack of awarness to inform medical sevices from the spot.The main objective of our project is to detect any accident in a video using herarichal recurrent neural network and raise an alert in case of accident. This model could be further used to notify the nearby medical sevices in case of accident and provide medical aid on spot within short time frame.	
	Name of the Students/Innovator	Anushka Chitransh, Annapurna Singh, Ashish Kumar Singh	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**Computer Science & Engineering(CSE)**	
	Batch	**2016-2020**	

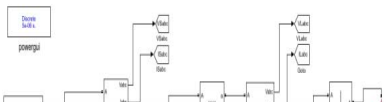
38	**Name of the Project/Innovation**	Raspberry Pi based Weather reporting system over IoT	
	Description of the Project/Innovation	This proposal is based on Raspberry Pi where we intend to measure different Weather parameters like temperature, humidity, rainfall, Pressure, light intensity and altitude with the help of sensors attached to it. We know that the weather can change abruptly, so we intend to make a system that gives accurate data about the weather both online and offline. Our aim is to create a more portable, cost effective module with good processing speed. This project can be further extended to observe the weather patterns in a particular area.	
39	**Name of the Students/Innovator**	Aishwarya Shukla, Nikita Chaudhary, Mahak Saxena	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**Computer Science & Engineering(CSE)**	
	Batch	**2016-2020**	
	Name of the Project/Innovation	Application of regression tree in detecting heart abnormalities.	
	Description of the Project/Innovation	The idea behind this project is to develop such a system which takes common human traits such as bloodpressure, heart beat rate and predicts if there is any abnormal activity going on inside the heart by running this input data on the algorithm. Data mining techniques are used to develop this algorithm.	
40	**Name of the Students/Innovator**	Abdul Ajij Ansari, Ashutosh Singh, Ayush Kumar Singh	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**Computer Science & Engineering(CSE)**	
	Batch	**2016-2020**	
	Name of the Project/Innovation	Human speech recognition using CNN	
	Description of the Project/Innovation	The Human Emotion Recognition aims to obtain emotional related response from robots, computer and other intelligent machines, the first and decisive step is accurate emotion recognition. In this project, the challenge is to overcome the major constraints and carry out the basic functionalities of such systems. The target audience who wants to make use of this system, can find all related requirements information in this document. It assists the software developer team, the stakeholders and the end users.	
41	**Name of the Students/Innovator**	Ankit Kumar,Arqaan Ali,Darsh Dixit	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**Computer Science & Engineering(CSE)**	
	Batch	**2016-2020**	
	Name of the Project/Innovation	Medical Image Analysis(Alzheimer Disease) using Artificial Intelligence and Image Processing	
	Description of the Project/Innovation	The analysis of the neuroimaging data has achieved much attraction recent years,which provide early and accurate detection of Alzheimer disease.Alzheimer disease is widely studied from MRI data,captured by MRI scanner and creates the picture of scanned tissue.Alzheimer Detection is possible by grey matter volume loss in the Cognitive impairment group compared to the natural person.	
	Name of the Students/Innovator	Shaurya Bhardwaj, Siddhika Tripathi, Yash Kumar, Ravi Shankar Agrahari	
	College Name	Galgotias College of Engineering and Technology	
	Program	B.Tech	
	Branch	**ME**	
	Batch	**2015-2019**	
	Name of the Project/Innovation	Design and fabrication of stir casting furnace	

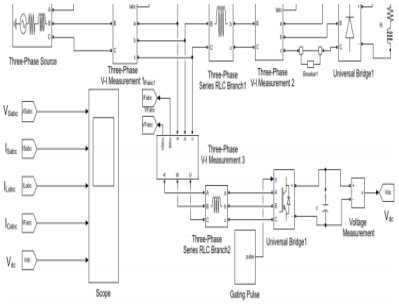
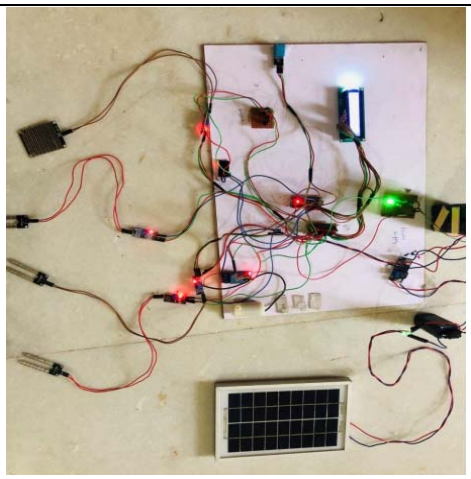
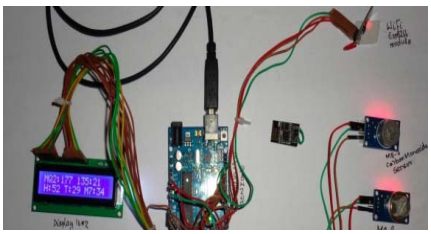
42	**Description of the Project/Innovation**	liquid state fabrication metal matrix composities involves incorporation of dispersed phase into a molten metal matrix, followed by its solidification. In order to provide high level mechanical properties of the composite, good interfacial bonding (wetting) bwtween the dispersed phase and the liquid matrix should be obtained. wetting improvement may be achieved by coating the dispersed phase particles (fibers). proper coating not only reduce interfacial energy, but also prevents chemical interaction between the dispersed phase and matrix	
43	**Name of the Students/Innovator**	Pushpendra Kumar, Piyush Pateriya, Umesh Singh, Nitesh Yadav	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**ME**	
	Batch	**2015-2019**	
	Name of the Project/Innovation	Design and fabrication of drill jig	
	Description of the Project/Innovation	The objective of this project work is to design a drill jig for crankshaft parts of the engine, generating holes in diesel fuel injection nozzles, producing holes in turbine blades for aerospace industry and in defence sector. The CATIA V5R20 is used to model the anugular drill jig. The analysis work is carried out by ANSYS WORKBENCH to determine the stress, strain and deformation.	
44	**Name of the Students/Innovator**	Ayush Tripathi, Anuraag Dubey, Balbir Singh, Kartik Dobhal	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**ME**	
	Batch	**2015-2019**	
	Name of the Project/Innovation	Fabrication of solar dryer	
	Description of the Project/Innovation	The solar drying system utilizes solar energy to heat up air and to dry any food substance loaded, which is beneficial in reducing wastage of agricultural product and helps in preservation of agricultural product. This projects presents the design and construction of a domestic indirect solar dryer. The dryer is composed of solar collector (air heater) and a solar deying chamber constraining rack of the two cloth (net) trays both being integrated together. the air allowed in through air inlet is heated up in the solar collector and channelled through the drying chamber where it is utilized in drying.	
45	**Name of the Students/Innovator**	Abhishek, Saurav Kishore, Shashank Agrahari, Shubham Kumar	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**ME**	
	Batch	**2015-2019**	
	Name of the Project/Innovation	Experimental study of active solar distiller unit incorporation with evacuated tube collectors	
	Description of the Project/Innovation	The purpose of this project is to design, fabricate, assemble and study the efficiency of the solar distillation unit which can purify water from nearly any source, which depends only on renewable solar energy. In this comparision the study of solar still incorporated with 13 identical evacuated tubular collectors with the theoretical calculation for the same type still incorporation with N identical evacuated tubular collectors.	
	Name of the Students/Innovator	Abhinav Gupta. Akshat Khare, Neelaksh Sharma, Loveishan Sexena	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	

46	**Program**	B.Tech
	Branch	**ME**
	Batch	**2015-2019**
	Name of the Project/Innovation	Fabrication of 3D Printer
	Description of the Project/Innovation	3D printing is an additive manufacturing technique in which 3D object are printed with the help of CAD (computer aided design) software. This technology used fused deposition modeling (FDM). Production parts in FDM is broken up into 3 steps, which includes pre-processing, producing, anf post processing.
47	**Name of the Students/Innovator**	Aayush Jain, Deepak Sharma, Anurag Agnihotri, Kishan Dubey
	College Name	Galgotias College of Engineering and Technology, Greater Noida
	Program	B.Tech
	Branch	**ME**
	Batch	2015-2019
	Name of the Project/Innovation	Fabrication of maually operated plastic injection moulding machine
	Description of the Project/Innovation	In this injection moulding machine the raw material (polypropylene) is compress in heating chamber (barrel) with the help of plunger and pre-heater convert plastic polymer into molten (semi-solid) state. The plastic ploymer is forced through the nozzle into the die under pressure. The natural cooling cool down the desired product and molded product is withdrawn by ejector pin.
48	**Name of the Students/Innovator**	AdeepMahrotra ,AshishAgarwal,Ravi Subramanian ,AvanishGautam,Divyansh
	College Name	Galgotias College of Engineering and Technology, Greater Noida
	Program	B.Tech
	Branch	**EEE**
	Batch	**2018-19**
	Name of the Project/Innovation	Design of Droop Control Based Real-Time Battery Management System for Automated DC Microgrid
	Description of the Project/Innovation	This report presents a method to control the charging and discharging rate and supply of power from the batteries in a DC microgrid by employing adaptive droop control utilizing State of Charge(SoC) as a parameter for droop coefficient. In a DC microgrid it is essential to maintain uninterrupted power supply to the load, this is readily achieved by utilizing Energy Storage Unit (ESU) consisting of multiple batteries. In such a system it is while essential to maintain a constant power at the load end and ensure that the batteries provide power to the load and not to themselves due to the flow of circulating current however, the State of Charge (SoC) of different batteries is not always the same so we employ droop control to attain pro-rata power sharing in them. In this study a SoC balancing method with an inherent circulating current blocking system is proposed.
49	**Name of the Students/Innovator**	Naman Agrawal, Prasanjit Gaur, Surya Shrivastava, Vishwajit Singh
	College Name	Galgotias College of Engineering and Technology, Greater Noida
	Program	B.Tech
	Branch	**EEE**
	Batch	**2018-19**
	Name of the Project/Innovation	Energy Auditing:A case study of GCET campus
	Description of the Project/Innovation	This paper presents energy audit of college premises (GCET Institute). Energy audit includes an in-depth examination of consumption in electric power, value of this power consumption, and lastly, a steered program for changes in operating practices or power intense instrumentation that may effectively save the value. The energy audit could be a positive involvement with a major blessing to varsity. The review method begins by gathering knowledge concerning facility's operation and its past record of service bills. This knowledge is then inspected to appreciate what quantity energy is employed and wasted.
	Name of the Students/Innovator	Vikas Kumar, Shashank Sharma, Shubham chauhan, Sandeep Jain
	College Name	Galgotias College of Engineering and Technology, Greater Noida
	Program	B.Tech







50	**Branch**	**EEE**	
	Batch	**2018-19**	
	Name of the Project/Innovation	Three Phase Shunt Active Power Filter For Power Quality Improvement in Power Distribution System	
	Description of the Project/Innovation	This project discusses the Benveniste's function based least mean square (LMS) for the improvement of the power quality (PQ) in three phase three wire distribution system. Distortion in supply grid are observed in power distribution system, due to presence of the non-linear loads in the system, therefore it becomes the foremost duty to improve the power quality. The proposed algorithm generate the gating pulse for shunt active power filter (SAPF) to compensate the PQ problems such as load unbalancing, harmonic reduction etc. These technique is modeled using Matlab/Simulink. Simulation outcomes explains the functioning and implementations of the proposed techniques and method.	
51	**Name of the Students/Innovator**	Akhil Dubey	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**EEE**	
	Batch	**2018-19**	
	Name of the Project/Innovation	POSITION CONTROLLED ARM	
	Description of the Project/Innovation	This Arduino Robotic Arm can be controlled by four potentiometer attached to it, each potentiometer is used to control each servo. You can move these servos by rotating the pots to pick some object, with some practice you can easily pick and move the object from one place to another. We have used low torque servos here but you can use more powerful servos to pick heavy objects.	
52	**Name of the Students/Innovator**	Anam Khan, Abhivan Peter Chang,Ashutosh, Akash Gupta, Vishal Ojha	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**EEE**	
	Batch	**2018-19**	
	Name of the Project/Innovation	IoT based Irrigation System	
	Description of the Project/Innovation	India is mainly an agricultural country. Agriculture is the most important occupation for the most of the Indian families. It plays vital role in the development of agricultural country. In India, agriculture contributes about 16% of total GDP and 10% of total exports. Water is main resource for Agriculture. Irrigation is one method to supply water but in some cases there will be lot of water wastage. Water requirements in irrigation zone is quite large, so therefore there's a need for the irrigation system which have to be smart enough to tackle the water scarcity problem and also saves the water. So, as a result to save water and time we have proposed project titled IoT BASED IRRIGATION SYSTEM. This system, hence, saves time and avoids problems.	
	Name of the Students/Innovator	Faisal Raza, Maneesh Kumar, Devesh Bharadwaj, Anmika Singhal	
	College Name	Galgotias College of Engineering and Technology, Greater Noida	
	Program	B.Tech	
	Branch	**EEE**	
	Batch	**2018-19**	
	Name of the Project/Innovation	IoT based Indoor Air quality monitoring system	

53	**Description of the Project/Innovation**	In the increasing era of industrialization and modernization, we have introduced pollution to our not so healthy environment which is creating irreversible change to it. Apparently, not only the outdoor environment but as well as the indoor environment is also very unhealthy for sustainable human life. Problems such as sick building syndrome (SBS) and Building related illness (BRI) ultimately causing cardiovascular and respiratory disease, heredity disease, premature death, etc. With an improvement in technology and miniaturization of sensors, there have been attempts to utilize the new technology in various areas to improve the quality of human life. As a result, this research paper encompasses a way to monitor indoor air quality (IAQ) using advanced technology such as IoT and a micro-controlling unit, Arduino UNO.