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ADITYA

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Tekkali-532 201, Srikakulam Dist., AP
Tel: 0845-245666, 245266, 92466 57908
Email: info@adityatekkali.edu.in

ADVITYA 2K20

ADITYA INISTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)

Department of Electronic and Communication Engineering

Vision of the Institute:

To evolve into a premier engineering institute in the country by continuously enhancing the range of our competencies, expanding the gamut of our activities and extending the frontiers of our operations.

Mission of the Institute:

Synergizing knowledge, technology and human resource, we impart the best quality education in Technology and Management. In the process, we make education more objective so that the efficiency for employability increases on a continued basis.

Vision of the Department:

Create high-quality engineering professionals through research, innovation and teamwork for a lasting technology development in the area of Electronics and Communication Engineering.

Mission of the Department:

1. To offer a well-balanced Program of instruction, lab practices, research & development activities, product incubation.
2. Develop accomplished technical personnel with a strong background on fundamental and advanced concepts, have excellent professional conduct.
3. Enhance overall personality development which includes innovative and group work exercises, entrepreneur skills, communication skills and employability.
4. Ensuring effective teaching–learning process to provide in-depth knowledge of principles and its applications pertaining to Electronics & Communication Engineering and interdisciplinary areas.
5. Providing industry and department interactions through consultancy and sponsored research.

Message from Dr. K. Someswara Rao, CHAIRMAN

At AITAM, we are committed to excellence in everything we do. We strive to mould the students in balancing intellectual and practical skills to become leaders in all the fields of Technical know-how and Management. We have created the finest facilities for the students to make the most of their scholastic pursuits. We are closely aligned with the corporate world which ensures exchange of ideas and experiences that keep our curricula focussed on current developments and challenges in the field of engineering. We are firmly committed to research and consulting activities to contribute to the development of the discipline of engineering. Our vitality lies in our spirit of innovation. Our strength lies in our pragmatic approach. Our success lies in our will to do.

Message Sri L.L. Naidu, SECRETARY

Aditya Institute of Technology and Management is founded to meet the increasing demand for competent engineering graduates. Within a short span of its inception, AITAM has grown to be a premier engineering college of its kind and has won laurels and kudos from the industry. The faculty and staff in AITAM are dedicated to providing first-class education that instils strong and potent basic knowledge for sound practice in science and engineering for the well-being of the society. The Institute offers curricula that nurtures creative thinking and prepares students for productive and rewarding careers. The Institute offers programmes that deepen learning experiences of our students and prepare them for successful careers as engineers.

Message from Prof. V.V. Nageswara Rao, DIRECTOR

Engineering education at AITAM is indeed a rewarding intellectual experience. The Institute prepares the engineering professionals of tomorrow imbued with insight, imagination and ingenuity to flourish as successful engineers. Our programs are attuned to the needs of the changing times. The classrooms are ultra-modern; the library and labs are cutting-edge; and all the members of the faculty are workaholic professionals and masters in their fields. Not surprisingly, our students are recruited by such renowned organizations as HCL, Satyam, WIPRO, INFOSYS, TCS, Visual Soft, Innova-Solutions and InfoTech. The exceptional dedication of our students, faculty and staff, and our collaborations with Industry and other institutions ensure that the Institute is well-poised to create a unique niche in the horizons of engineering education.

Message from Dr. A. S. Srinivasa Rao, PRINCIPAL

It is only through knowledge that man attains Prosperity. Prosperity has to expand or grow to become excellence. The road to excellence is toughest, roughest and steepest in the universe. The world requires and honours only excellence. Excellence has to be acquired form wisdom and intelligence to establish innovation. Promotion of innovation is the new role of education. It is only through innovative thinking the present and the future challenges can be addressed to find dynamic solutions. Technology, a part of excellence, is helpful in removing poverty from the world. According to the statistics 40% of the world's poor are in India. Solution to this challenge relies on Technocrats with confidence and self-reliance. AITAM is the pioneering platform for this expected output. The institution mends the students

in building character, strengthening mind, expanding intellect and establishing the vision with a new perspective. The student of AITAM is prepared through rigorous training that makes him to stand on his own feet to lead a prosperous career and life.

Message from Dr. B. RAMA RAO, H.O.D of ECE

Aditya Institute of technology and management (AITAM) is one among the reputed engineering colleges imparting finest quality education. The department of Electronics and Communication Engineering was established in the year 2001. The department has experienced and well qualified faculty members, well equipped laboratories such as Digital Signal Processing Laboratory, Communication and Microwave Engineering Laboratory, VLSI Design Laboratory, Microprocessor Laboratory and Antenna Design/ Simulation Laboratory etc. Our aim is to produce graduates capable of effectively using professional skills with values for betterment of society and to meet the varying demands of industry and research environment. Our department has a fine blend of a team of qualified and experienced faculty. We are committed to give our students an outcome based education through outcome based teaching and learning process which provides them an environment to develop critical thinking and problem-solving skills as they advance through the programme. The faculty and students are associated with memberships of professional bodies such as Institution of Electronics and Telecommunications Engineering (India), Institution of Engineers (India), Indian Society for Technical Education. Our students earned name and fame all over the globe and rendering best of their services to topmost companies. We as a team resolve to take the department to heights of success and prepare our students for future challenges. The activities like Expert Lectures, Site Visits, Technical Events, Sports and Cultural Events, Soft Skills etc widens their horizon and avert them from being monotonous with academics. To conclude, the department catalyzes and assures a very healthy, amicable but a competitive ambience for our future engineers.

B.TECH PROJECT ABSTRACTS

Sl. No.	Roll No.	Name of the Student	Project Title
1	19A51A0446	Sravanthi	Smart Power Management System using IOT
	19A51A0410	Hemasree	
	19A51A0443	P.Ravali	
	19A51A0451	R. Mounika	

ABSTRACT

Internet of things has been a great use in the modern world and the importance ofIoT is increasing day by day. The wastage of energy is a very serious concern, and energy consumption of all our appliances are in huge level. So, proper usage of this resource is of immense important. And this increase in power requirement has pushed the researchers and industrialist to design low power systems with smart power management. In this project, we design a smart system for energy conservationandtoreducetheenergyconsumptionwhichisbasedonsomedistributed components like sensors, micro controller and google analytics. This project presents a smart power management system and this proposed system canmonitorandmeasureelectricityusageinreal-time.Withthisproposedsystem,userscan automatically control real-time electricity usage, which can also be viewedthroughgraphicalrepresentation.

(Key words: - Sensors, IOT, Arduino IDE, Google analytics, Power managementsystem)

Sl. No.	Roll No.	Name of the Student	Project Title
2	20A55A0410	K. Kasi Rao	HELMET WEAR DETECTION FOR ATM SECURITY
	19A51A0493	K. Jeevan	
	19A51A04A9	P. Gowtham	
	19A51A0492	K. Aditya	

ABSTRACT

Automatic Teller Machine (ATM) is easy way to withdraw money as well as other Banking services; it has high risk so security should be needed. Generally, video surveillance system at ATM Centre captures every activity of user, but many times any fraudster does fraud wearing Helmet it is difficult to investigate and find them because of occulted face by helmet, so our system will automatically detect helmet in surveillance videos and generates SMS. Here, we proposed a framework to detect occulted face by wearing helmet in surveillance videos. We used object detection weight of yolo model, to get detecting person and helmet. Initially used background subtraction process to eliminate other part from video. After that, will extract skin-color ratio and LBP feature. We experimentally evaluate the effectiveness of our approach in terms of speed and accuracy.

Key Words: Machine Learning, CNN algorithm,Yolo detection module.

Sl. No.	Roll No.	Name of the Student	Project Title
3	19A51A0452	S. Rajsekhar	DATA HIDING SCHEME BASED ON PIXEL-VALUEDIFFERENCING IN DUAL IMAGES
	20A55A0402	B. Deepak	
	19A51A0401	A. SaiSrihitha	
	19A51A0406	B. Raju	
	19A51A0457	S. Mahesh	

ABSTRACT

Data hiding is to conceal the secret message into cover objects without distortion. In the

proposed method, a new data hiding method is proposed to provide high embedding capacity in dual images. The proposed method generates two stego-images after embedding the secret bits into a cover image. A sub-block of two consecutive pixels is used to have different length of embedding bits by applying the difference value of two pixels. The experimental results show that the proposed method can have a high embedding capacity maintaining less distortion.

Sl. No.	Roll No.	Name of the Student	Project Title
4	9A51A0431	K.Drakshayani	Real Time Traffic Sign Board Recognition and Voice Alert System using Deep Learning
	19A51A0449	P.Padhmaja	
	9A51A0431	K.Drakshayani	
	19A51A0449	P.Padhmaja	

ABSTRACT
Road signs are crucial for ensuring a safe and orderly flow of traffic. A significant factor in road accidents is carelessness in failing to read the traffic signs and misinterpreting them. The proposed system assists in identifying traffic signs and alerting the driver via speaker. This can be done by using pyttsx3 library. So that he or she may make the appropriate selections. This project was trained and recognized the traffic signs using Convolution Neural Network (CNN) this has been done using open cv and real-time using webcam. In this project, The German Traffic sign Benchmarks Dataset is used. Traffic signs are detected with over 35,000 images of 43 different classes with the help of tensor flow and keras. To increase the accuracy of a given data, a set of classes are created and trained. About 98 percent of the execution was accurate. A voice alert is received through the speaker after the technology recognizes the sign to inform the driver. The proposed system also has a feature where drivers of moving vehicles are informed of nearby traffic signs so they are aware of the laws they should observe. The system's goal is to protect the driver, passengers, and pedestrians from accidents

Sl. No.	**Roll No.**	**Name of the Student**	**Project Title**
5	19A51A0486)	G.Vandana	Mux based cell design for testing of integrated circuits through scan insertion using Mentor graphics – Tessent
	(19A51A0472)	B.Satish	
	(19A51A0495)	K.Josoda	
	(19A51A0467)	B.Venkata Sai Kumar	
	(19A51A04A7)	P. Krishna Vamsi	

ABSTRACT
In the design of Integrated circuits defects arise in the fabrication process which leads to malfunctioning of the chip. The defect is a physical imperfection that occurs in the manufacturing process. These defects are tested with test logic that is to be inserted along with the actual logic that resides on the chip. The test logic will identify the manufacturing defects. The defects are analyzed in the form of logical faults. The chip logic consists of combinational logic gates and flip-flops. Fault may occur in the combinational logic or sequential logic. To target these faults due to defects with the help of test logic which is based on multiplexer logic. The project aims at adding the multiplexer logic to flip-flop will be used to identifying the defects, that cause faults will be analyzed using Mentor graphics.
Keywords : Mentor graphics, Tessent, Fabrication

Sl. No.	**Roll No.**	**Name of the Student**	**Project Title**
6	19A51A04F2	J.VINEETHA	EXPOSURE ON PHYSICAL DESIGN FLOW
	19A51A04J0	Y.VIJAYA RAM	
	19A51A04F8	E.KEERTHANA	
	20A55A0417	M.INDIRA PRIYADARSHINI	

ABSTRACT
The physical design is the process of transforming a circuit description into the physical layout, which describes the position of cells and routes for the interconnections between them. The

main concern in the physical design of VLSI-chips is to find a layout with minimal area, further the total wire length has to be minimized. The Physical design is all about placing instances defined in the net list and connecting them by routing through metal layer stack to satisfy design specifications such as performance, power and area (PPA). Current IC designs have multi-million instances that are interconnected with several stack of metal layers that connect these instances. Manually performing each step in the design process is not feasible, takes huge amount of time and is error prone.

Sl. No.	Roll No.	Name of the Student	Project Title
7	(19A51A04B4)	S. ROSHINI	EEG SIGNAL ANALYSIS BASED ON CASCADED OPTIMIZED ADAPTIVE FILTERS
	19A51A04A5)	P. SAI POOJA	
	(19A51A0489)	K. AKHILA	
	(19A51A0497)	M. CHANDRA SEKHAR	

ABSTRACT

Electroencephalogram (EEG) plays an important role in identifying brain activity and behaviour. It is used to detect rhythms during sleep. Polysomnographic (PSG) is a test conducted to study sleep and to diagnose a variety of sleep disorders. It is a technique for sleep study. PSG records brain waves, oxygen levels in blood, heart rate (Electrocardiogram), breathing as well as eye movements (Electrooculargram) and muscle (Electromyogram) during the study. However, the recorded electrical activity always be contaminated with artifacts like Baseline, ECG, EOG, EMG and power line, and then affect the analysis of EEG signals. For this purpose, the cascade of Adaptive filters with LMS algorithm is used to remove artifacts and extract the clean EEG signal, finding best coefficients of Adaptive LMS filter which minimizes the mean square error(MSE).We have implementing Genetic algorithm (GA) on adaptive noise canceller provides better performance than adaptive techniques used to enhance the EEG signal. We also measures the metrics like Signal to noise ratio (SNR), Mean Average Error (MAE), Least Mean Square Error (LSE) of proposed technique and compared with conventional techniques.

Keywords: Electroencephalogram, Genetic Algorithm and LMS algorithm.

Sl. No	Roll No.	Name of the Student	Project Title
8	19A51A04C0	T. Aishwarya	EFFICIENTENERGYCONSUMPTIONINA D HOCNETWORK USING AOMDV-FF
	19A51A04B3	S. Neeraj Kumar	
	19A51A0490	K. Sumalatha	
	19A51A0482	G. Vinod Kumar	
	19A51A04C0	T. Aishwarya	

ABSTRACT

In the mobile ad hoc network, the nodes are connected without infrastructure. In the manet, while the data transmit or receive between the nodes the energy consumption was main issue because it have a limited battery power . We can transmit the data in efficient manner with the help of fitness function on ad hoc on demand multipath distance vector (AOMVD-FF) routing protocol. In the existing system the AODV protocol is worked. The fitness function is primarily used to reduce energy consumption in multipath routing by determining the best route from source node to destination node. Utilizing and the performance of the FF-AOMDV protocol has been assessed and contrasted with that of the AOMDV protocol and optimized link state routing (OLSR).

Keywords:MANET, AOMDV, QoS Parameters.

Sl. No.	Roll No.	Name of the Student	Project Title
9	19A51A04E2	D.LIKHITHA	HOUSE PRICE PREDICTION USING MACHINE LEARNING
	19A51A04G0	K.JANARDHANARAO	
	19A51A04D7	B. VASU	
	19A51A04F7	K.SAHITYA	

ABSTRACT
Machine learning aims at developing self learning algorithms using datasets, such that the machine can be enabled to project future activity based on the past data. It has exhibited impressive developments over the years with the rapid increase in storage capacity and processing power of computers. Taking a case of one such application in real-estate for predicting the price of a house in this project. Machine learning has been employed to help and predict the prices of houses by learning from a sample dataset consisting of attributes which influence cost and other parameters. Firstly, fundamental concepts of a machine learning along with its applications are explored, next in reference to house price prediction, feature assessment, learning techniques and the libraries used for implementation of the project are discussed. Based on the obtained prediction results, performance of the machine learning by linear regression approach is evaluated and conclusions are drawn.

Sl. No.	**Roll No.**	**Name of the Student**	**Project Title**
10	19A51A0468	B. Alekhya Krishna	Performance Enhancement of Phase Sensitive OTDR based DIS System using Different Signal Processing Techniques
	19A51A04C2	V. Sravani	
	20A55A0413	K.Sai Venkatesh	
	19A51A04B2	S. Bharath	
	19A51A0474	B.Raj Kumar	

ABSTRACT
In this work the performance of phase sensitive optical time domain reflectometry (phase sensitive OTDR) based distributed intrusion sensing (DIS) system is analyzed. In order to effectively detect/identify the positions of multiple intrusions on the sensing fiber of the proposed DIS system, we have applied the few signal processing techniques (discrete wavelet transform-hard threshold, discrete wavelet transform-soft threshold and moving average). The proposed DIS system has a 50 km length of sensing fiber and 10dBmof an optical source power. The relevant results are obtained using MATLAB 8.0 version software.
Keywords:Distributed intrusion sensing (DIS), Phase sensitive OTDR, Intrusion detection, Sensing Range and Discrete wavelet transform-hard threshold, Discrete wavelet transform-soft threshold and Moving average.

Sl. No.	**Roll No.**	**Name of the Student**	**Project Title**
11	19A51A04D4	Behara Lokesh	CLASSIFICATION OF BUTTERFLIES BY USING CONVOLUTIONAL NEURAL NETWORK
	19A51A04D0	Arisetty Likhitha	
	19A51A04H5	Potnuru Sangeetha	
	19A51A04I4	Suru Sai Rakesh	

ABSTRACT
Butterflies are the important creature of the ecosystem. The relation involving plants and butterflies are playing a vital role in maintaining many natural processes of the ecosystem. They are sometimes called flying flowers of flowers with variant colors. Butterflies strongly help in the process of pollination. Due to many human activities such as the use of pesticides in the plants, destruction of habitats, unawareness of the importance of butterflies to the ecosystem decline the population of this beautiful species. This research follows an investigation on butterfly classification using image processing with Deep Learning Methods. Butterflies can be classified by their external morphological characters(structure) and genital characters. There are many types of butterflies and the research on classification of butterfly species is of great significance in practical work such as

environmental protection and control of agriculture and forest pests. They are, however, difficult to recognize due to several varieties and patterns and this means there is a need to group based on type for easier recognition. For that, some of the Machine Learning methodologies likeTraditional machine learning, Deep learning and Transfer learning are used by training and testing on a butterfly dataset and determine the optimal solution. This application can detect the category of a butterfly by either capturing a real time picture of a butterfly or choosing one picture from gallery.

Sl. No.	Roll No.	Name of the Student	Project Title
13	(19A51A04I7)	T. Janaki	AVOIDINGRUNOVER ACCIDENTS: A LARGE VEHICLE SAFETY SOLUTION
	(19A51A04I1)	A. Satyanarayana	
	(19A51A04G3)	K. Abhishek	
	(19A51A04J3)	S.Bhargav	

ABSTRACT

Cancer is an extensive global and universal disease now days which pretend to be an utmost cause for large impermanence rate among men and women every era. Approximately 80-85% of the people who get affected by cancer are being succumbed to death Recognition of cancer at the first stage is an only aspect in front of us to give proper treatment. Among numerous types of cancers, lung cancer is a very fearful and complicated one. Lung cancer means growing of tumor cells briskly and having chances of spreading those cancer cells to other organs which in turn damaging other normal tissue cells of the body. Noticing tumor prematurely can be helpful in curing disease completely and it becomes pivotal to find out whether the tumor has been changed to cancer or not, if the prognostication is made at an initial stage, then countless lives that are at risk could be rescued and moreover accurate prediction can help the doctors to start their treatment at the earliest. In this paper, we have proposed a simple, easy and precise method for accurate prediction of stage of cancer using CT image of the lungs in Image processing. For this process, a CT image will be considered, and then the image will be pre-processed for noise removal. Further segmentation is done to identify and separate desired tumor nodule and extraction of morphological features such as area, perimeter, eccentricity and diameter is carried out under feature extraction. Finally, the classification of lung cancer into different stages based on the size of tumor results have been proposed using MATLAB which are more accurate and less time consuming when compared to other lung cancer prediction systems. The method proposed in this paper to detect tumor in lungs is simpler when compared to applying other difficult algorithms.

Sl. No.	Roll No.	Name of the Student	Project Title
14	19A51A0424	J. Pavan Kalyan	A Model to offer Reliable Data Transmission in Vehicular Ad Hoc Network
	19A51A0460	T.Jeevitha	
	19A51A0463	V.Mohan Mouli	
	19A51A0462	V.Ravi Teja	

ABSTRACT

Vehicular Ad-hoc Network (VANET) is one of the widely used networks across variousintelligenttransportapplicationsinordertosupporttheautonomousdriving,reducenetworkcongestionandovercomeanykindoftheaccidentsoccurringontheroad.Thisreportinvolvesin focusing on the safety applications where the vehicles involve in broadcasting the safetymessages that are highly time critical and reliability sensitive. The importance of delivering The broadcasted safety messages of VANET in highly timely and reliable manner has resulted in undertaking this research work. In order to support there liable delivery of the broad casted safety messages, thisre search has developed a model called Reliable Vector Clustering (RVC) which involves in neigh bour node identification, vehicle cluster formation and broad casting the coded data using the network coding method. In order to evaluate this developed model, analytical model developed and simulation

studies have been carried out in this report. The analytical model has developed a criterion that helps in choosing the best vehicle as the cluster head node and the simulation studies have compared the effectiveness of the developed method. These simulation studies have revealed the effectiveness of proposed RVC method in improving the packet error recovery probability and packet delivery ratio when compared to the existing methods.

Key Words: Vehicular Ad hoc Networks, Cluster Communication, QOS, Reliable Communication.

Sl. No.	Roll No.	Name of the Student	Project Title
15	(20A55A0415)	S.Devipriya	Human Emotions Classification using Deep Convolution
	(19A51A0488)	H.VinayKumar	
	(19A51A04B8)	T.Praveen	
	(19A51A0476)	B.Sneha	

ABSTRACT

Human facial emotions are an integral means of displaying sentiments and these are important featuresforhumancommunications. Automaticanalysisoftheseunspokenexpressionshasbeen an interesting and challenging task inthe domain ofcomputer vision. The applicationofthistask is ranging across multiple domains including psychology, productive marketing, process automation,etc. Deep learning has been instrumental in making breakthrough process in many fields of research including computer vision to implement various real-world problems.

In this work, deep convolutional neural networks are proposed todetect various humanemotions such as sad, happy, neutral, surprise, fear, disgust and angry. We tested, two customized deepconvolutional neural network models for classifying human facialemotions. To validate and test the network, Kaggle face expression recognition (FER) dataset is used and experimentation is performed based on python tools. Our proposed models achieved an effective significant performance compared to state of art techniques with accuracies of71.19% and 83.69%.

Keywords: Deep learning, Facial emotion analysis, Convolution Neural Network.

Sl. No.	Roll No.	Name of the Student	Project Title
16	17A51A04B0	SANAPALA REVATHI	DESIGN OF EFFICIENT PROGRAMMABLE TEST-PER-SCAN LOGIC BIST MODULES.
	17A51A04A0	PAYALA MANASA DEVI	
	18A55A0402	DOLA GOWTHAMI	
	17A51A0497	PALLI KIRAN KUMAR	
	18A55A0403	J. VINEELA	

ABSTRACT

Built-in-self-test (BIST) is a design technique that allows a circuit to test itself It is a set of structured test techniques for combinational and sequential logic, memories, multipliers and other embedded logic blocks. The principle is to generate test vectors, apply them to the circuit under test or device under test, and then verify the response. Being an automated testing, BIST enables testing at high speed and high fault coverage. BIST controller coordinates the operations of different blocks of the BIST. Based on the test mode(TM) input to the controller, the system either operates in the normal mode or in the test mode. In this project we explain an implementation of a restart able logic BIST controller for a combinational logic circuit using Verilog.

Sl. No.	Roll No.	Name of the Student	Project Title
17	19A51A0448	P.S.V.L Sai Suguna	IMPLEMENTATIONOFMIXED LOGIC LINE DECODERS
	19A51A0455	S. Joshana	
	19A51A0444	P. Hruthik	
	19A51A0464	V.k.NPrasanth Raju	

ABSTRACT
Mixed logic designs take a prioritized place in logic design approaches which will give a simplified mechanism for the analysis of digital circuits. The right utilization of mixed logic notation produces logicexpressions and logic relations that are analogs of each other. Also, a mixed logic implementation gives clear ideawith regards to the activity of a circuit. Here , introduced mixed logic designs like pass transistors(DVL), transmission gate (TGL), static CMOS. By using CMOS technology, it requires 20 transistors to design2:4-line decoder but by using this mixed logic we can design the same 2:4-line decoder with the use of 14 transistors(14T) only. These logics proves in reducing the transistors count, power and delay in a satisfying level and simulations are carried out using tanner EDA tools.

Sl. No.	Roll No.	Name of the Student	Project Title
18	17A51A04A6	POTNURU SUNEETHA	An efficient CMOS current reuse capacitive divider low noise amplifier circuits for better communication
	17A51A04B5	VALUROUTHU DEEKSHA	
	17A51A0466	BAGGU PAVAN KUMAR	
	17A51A0475	DOMPAKU GANESH	

ABSTRACT
The main important aspect in a Communication system is a Receiver. If receiver receives weak signals from an antenna makes communication system be weaker Due to improved parameters like gain, noise, bandwidth, linearity, chip area and power consumption of a Low noise Amplifier (LNA) makes receive part be an efficient for amplification. The pre and post simulation waveforms obtained for transient analysis and AC analysis. This Project is designed an efficient LNA with very low voltage supply as well as it provides high gain and bandwidth with a small chip area occupancy. This will make receiver section in communication part be strong in amplification. We want to design the CMOS system by using EDA tool. The proposed LNA includes a CS & CG amplifier stages The NC technique is adopted to decrease the noise involvement of the amplifier. Compared with CS, in the interim, the power gain & the total NF performances are also improved further. It has been experiential that the proposed LNA's linearity has little effect on the CG path. Consequently, the bias voltage of the circuit and power consumption is optimized to reduce in the path.The different noise cancellation of paths for CMOS LNAs goes during bring in a phase mismatch among the 2 parallel paths. This phase mismatch harmfully impacts the system noise cancellation &gain. For that reason, its cause on performance of NF and gain is furthermore quantitatively with analyzed. So we designed this model as current reuse technique, which greatly reduces power consumption at 2.4GHZ LNA input in 90nm CMOS technology node.

Sl. No.	**Roll No.**	**Name of the Student**	**Project Title**
19	17A51A04B3	TANGUDU HARITHA	Industrial temperature monitoring and fault detecting system
	17A51A04A8	ROSHINI SAHU	
	17A51A0482	JONNADA MITHIN KUMAR	
	17A51A0461	AMARA KALYAN KUMAR	

ABSTRACT
Industries like petroleum, chemicals, oil and gas have a high risk of fire out breaks which could lead to huge destruction and loss of property. It is very important to have some system that can keep the premises secure and also inform the authorized people within the stipulated time if such an incident takes place. Internet of Things (IOT) is rapidly increasing technology . It is the network of

physical objects or things embedded with electronic software, sensors, and network connectivity which enables these objects to collect and exchange data and then deals with bringing control of physical devices over the internet we are developing a system which will automatically monitor the industrial applications and generate alerts/alarms or make intelligent decisions. A number of sensors are deployed in our project to monitor industrial parameters like temperature, pressure, gas, etc. These parameters carefully selected on the basis of the potential hazards they can cause to the normal working of the industry machine. The sensors used in our project are temperature sensor DHT11. This sensor will collect their respective data and then send the same data to node MCU ESP8266 which also acts as a Wi-fi module

Sl. No.	**Roll No.**	**Name of the Student**	**Project Title**
20	17A51A04B8	YENDUVA MADHAVASAI	Frequency reconfigurable folded dipole antenna for WLAN and Satellite communication applications
	17A51A04A2	PONNADA SANDHYARANI	
	17A51A0490	KURAKULA KEERTIKA	
	17A51A0471	BEJJIPURAM NAGA VENKATA SAI	

ABSTRACT
The implementation of a frequency reconfigurable antenna with a folded shaped patch is proposed. The Centre frequency of the antenna is electronically tuned by changing the effective electrical length of the folded dipole, which is achieved by employing pin diodes. The antenna enables discrete tuning using PIN diodes to operate in either the 5.3-6.6 GHz band or the 6.4-10.7 GHz band. Measured Results on tuning range, radiation patterns and gain will be provided. The deigned antenna will be applicable at wireless local area network (WLAN) and Satellite communication applications. Index Terms - Folded Dipole, pin diodes, HFSS Software and Reconfigurable antenna

Sl. No.	Roll No.	Name of the Student	Project Title
21	17A51A0484	KENGUVA MOUNIKA	ENSEMBLE EMD BASED DATA HIDING TECHNIQUE IN AUDIO SIGNALS
	17A51A0478	JADDU GOVINDA	
	17A51A04A1	PEDADA NIRMALA	
	17A51A0465	ATTADA AKASH KALYAN	

ABSTRACT
In this project a novel data hiding algorithm based on Ensemble Empirical Mode Decomposition (EEMD) to decompose the watermark signal, combined with the decomposed data is introduced. The audio signal is decomposed by Ensemble Empirical Mode decomposition (EEMD) into intrinsic oscillatory components called Intrinsic Mode Functions (IMFs). Approach consists of shifting an ensemble of white noise. This added signal and considered the mean. The effect of the added white noise is to provide a uniform reference frame in the time frequency space; therefore, the added noise collates the portion of the signal of comparable scale in one IMF. The secret data is embedded in the last IMF of the signal, which is a low frequency mode, will be stable under different attacks. Finally, the exactness of the EEMD method for decomposition and extraction is verified with the simulation results.

Sl. No.	Roll No.	Name of the Student	Project Title
22	17A51A04B4	UDANDARAO TARUN KUMAR	COMMUNICATION ESTABLISHMENT FOR AERIAL & AQUATIC NAVIGATION OF
	17A51A0472	BOTCHA NIVEDITHA	
	17A51A0489	KUNA JHANSI	
	17A51A0483	KAIBADA RAMESH	

			DRONE

ABSTRACT
The advancements in automation lead to the invention of remotely operated vehicles and unmanned vehicles. This paved a path for the invention of many automated vehicles namely autonomous cars, remotely operated drones, autonomous underwater vehicles [AUV], remotely operated underwater vehicles [ROV], and many more. There are countless inventions in aerial domains and aquatic domains separately, but the international approach of developing one common vehicle to serve both aerial and underwater purposes, which is widely used in air-aquatic maneuvering and aquatic diving is a significant challenge. An aerial-aquatic drone is a quad copter that can be able to handle aerial longitudinal stability, propulsion system, air transition, underwater stability. It is a remotely operated aerial-aquatic quad copter with active buoyancy control which is capable of aerial flight, water surface operation, and also aquatic diving. When it comes to point of communication when it is in the air, it simply works on RF communication, the complete navigation and control is completely based on the radio frequency range of communication. When it comes to the point of communication underwater, the RF is not suitable it is because the high-frequency signals are having larger bandwidths and travel shorter distances, high-frequency electromagnetic signals cannot penetrate and propagate deep in underwater environments. The EM properties of water tend to resist their propagation and cause severe attenuation. For underwater communication, the widely used signals are acoustics, optical signals, and many more. In this project, underwater acoustic communication is used, the sound travels faster in water compared with air because water particles are more densely packed. Thus, the energy the sound waves carry is transported faster; this should make the sound appear louder.

Sl. No.	**Roll No.**	**Name of the Student**	**Project Title**
23	17A51A0468	BARATAM SRILAKSHMI	SOMNOLENCE DETECTION AND ALERTING
	17A51A04B6	VARISHA SRAVYA	
	17A51A0476	GEDELA PRAVALLIKA	
	17A51A0486	KOMMU NEELARANI	

ABSTRACT
Nowadays, more and more professions require long-term concentration. Drivers must keep a close eye on the road, so they can react to sudden events immediately. Driver fatigue often becomes a direct cause of many traffic accidents. Therefore, there is a need to develop the systems that will detect and notify a driver of her/him bad psychophysical condition, which could significantly reduce the number of fatigue-related car accidents. However, the development of such systems encounters many difficulties related to fast and proper recognition of a driver's fatigue symptoms. One of the technical possibilities to implement driver drowsiness detection systems is to use the vision-based approach. This article presents the currently used driver drowsiness detection systems. Here we are detecting the driver drowsiness by estimating vision system of him.

Sl. No.	Roll No.	Name of the Student	Project Title
24	18A55A0407	TALAGANA SUNEETHA	Comparative analysis between median filter and its variants for removal of impulse noise in gray scale images
	17A51A04A3	POTNURU KAVYA	
	17A51A0496	NUKARAPU LEELA KRISHNA PRAKASH	
	17A51A0474	CHOUDHURY DURGA PRASAD	

ABSTRACT

In this project a comparative analysis to the problem of impulse noise reduction in grey scale image is presented. The basic idea behind this analysis is the maximization of the similarities between pixels in a predefined filtering window. The comparison introduced to this median filter and adaptive filter lies in the establishment of parameters of the similarity function and hence further improvement is possible in adaptive filter and also adapts itself the fraction of corrupted image pixels. The improved adaptive filter preserves edges, corners and fine image details, is relatively fast and easy to implement as compared to median filter. The results show that the adaptive filter outperforms most of the basic algorithms for the reduction of impulsive noise in grey scale images.

Sl. No.	Roll No.	Name of the Student	Project Title
25	17A51A0469	BASITTI SANJANA	Brain tumor extraction using image processing
	17A51A0488	KORADA SAI KUMAR	
	17A51A0491	LOKANADHAM VENUKA RANI	
	17A51A0485	KOMARA SUMANTH	

ABSTRACT

The project main aim is to detect brain tumor which helps in finding the exact size and location of the tumor.

Sl. No.	**Roll No.**	**Name of the Student**	**Project Title**
26	17A51A04B2	TAMARAPALLI LOHITA KUMAR	REAL TIME FACE RECOGNITION BY USING HISTOGRAM OF ORIENTED GRADIENT FEATURES
	18A55A0406	PATHINA HARIKA	
	18A55A0405	KONDE VARAPRASAD	
	17A51A0494	MUDDADA KRANTHI KUMAR	

ABSTRACT

Face recognition is widely used in computer vision and in many other biometric applications where security is a major concern. The most common problem in recognizing a face arises due to pose variations, different illumination conditions and so on. The main focus of this project is to recognize whether a given face input corresponds to a registered person in the database. This project proposes a new algorithm to detect faces in real time using HOG descriptors. Taking the HOG features of pre-processed image and are given to the Support Vector Machine classifier for classification. The SVM classifier is trained with AT&T database. The entire proposed work is carried using MATLAB 2019A Software with help of image processing tool box and Support Vector Machine classifier algorithms.

Sl. No.	Roll No.	Name of the Student	Project Title
27	17A51A0470	BASWA VEERA SAI DHANA SREE	Smart Foot Power Generation
	17A51A0492	MOJJADA LEELAPRASAD	
	17A51A0479	JAMI GOVINDA	
	17A51A0462	ANAKAPALLI HARI KRISHNA	

ABSTRACT

Day by day, the population of the country is increasing and the power requirement is also

increasing. The main theme of this project is to use renewable energy sources to generate electricity and to charge our mobile phones or like to charge any device. As the usage of mobile phones is increasing rapidly in day-to-day life, so to operate these mobile phones mobile charging system at public places play a very important role. Nowadays non renewable energy is available in less percentage. So, the use of renewable energy is worth billions of dollars. In this project we are using renewable energy sources like piezo electric transducers to charge or like to store the power in the storage device as battery. In thus project we had used some important components like voltage regulator and a transistor for the charging controlling purpose. If the scanned their accessed card, then he will charge two munities to his phone. RFID module is used for the user accession purpose. And we can also observe or like to see the output voltage of the piezo electric transducers.

Sl. No.	Roll No.	Name of the Student	Project Title
28	17A51A0480	JAMI SRILIKHITHA	Simulation of Micro strip patch antenna with periodic defected ground structure for LTE applications
	18A55A0408	JAMI YASWANTH	
	17A51A0473	BURAGAPU JHANSI	
	17A51A0464	ARTHAKATLA SOMASEKHARA	

ABSTRACT

The study of micro strip patch antennas has made great progress in recent years. Compared with conventional antennas, microstrip patch antennas have more advantages and better prospects. They are lighter in weight, low volume, low cost, low profile, smaller in dimension and ease of fabrication and conformity. Moreover, Micro strip patch antennas can be easily designed to operate in dual-band and multiband applications, for dual or circular polarizations. Thus, they are widely used in many practical applications such as medical, satellite, military...Etc. With the rapid development in wireless communications, much effort has been devoted to reduce the size of Microstrip antennas. In this way, several methods have been proposed recently, such as using a dielectric substrate of high permittivity, Defected Microstrip Structure (DMS), Defected Ground Structure (DGS) at the ground plane are a combination of them. Mainly DGS is a periodic or non-periodic cascaded defect configuration etched in the ground plane of a planar transmission line. The defected geometry is easy to implement and does not need a large area. DGS has been widely used in the development of miniaturized antennas. This project, proposed a low cost compact edge fed rectangular patch antennas by way of the Defected Ground Structure (DGS). The proposed

Vertically Periodic Defected Ground Structure microstrip patch antenna. The performance measures of Vertically Periodic Defected Ground Structure microstrip antenna is going to be simulated in “ANSOFT HIGHFREQUENCY STRUCTURE SIMULATOR” software.

Sl. No.	Roll No.	Name of the Student	Project Title
29	17A51A04D0	BOTTA KHAGESWARA RAO	Implementation Of Improved Watchdog Timer For Safety Critical Applications
	17A51A04E1	JAMMU SIMHACHALAM	
	17A51A04F9	PATNANA LAKSHMI BHARGAV	
	16A51A0493	MAJJI TEJONIDHI	
	16A51A04H9	YACCHINA JAGADEESH	

ABSTRACT

Embedded systems that are employed in safety critical applications require highest reliability. External watchdog timers are used in such systems to automatically handle and recover from operation time related failures. Most of the available external watchdog timers use additional circuitry to adjust their timeout periods and provide only limited features in terms of their functionality. This project describes the architecture and design of an improved configurable watchdog timer that can be employed in safety-critical applications. Several fault detection mechanisms are built into the watchdog, which adds to its robustness. The functionality and operations are rather general and it can be used to monitor the operations of any processor based real-time system. This project also discusses the implementation of the proposed watchdog timer which makes the design to be easily adaptable to different applications, while reducing the overall system cost. The effectiveness of the proposed watchdog timer to detect and respond to faults is first studied by analyzing the simulation results. The design is implemented in verilog language by using Xilinx software tool.

Sl. No.	Roll No.	Name of the Student	Project Title
29	17A51A04C3	ARANGI RESHMA	Face Mask Detection System Using Image Processing Techniques
	16A51A04E4	SEELANKI ANUSHA	
	17A51A04D9	GUJJU SAI PRASAD REDDY	
	16A51A0459	JAKA JEEVAN KUMAR	
	16A51A04G4	UNGATI SUNEETHA	

ABSTRACT
In today's era of automation and smart devices, there is a crucial need to alter the security and health measures. It is essential to take safety measures in this pandemic situation. In traditional systems many of the doors are having mechanical locks which were restricted on the number of keys. This article proposes a Smart Door Unlock System based on Face Recognition to enhance the health issues. In this system a camera sensor is used to capture the face whether the person is wearing the mask or not. Only the person whose face with mask can be able to entire through the door. So, limitation of spreading virus will be resolved. The security system is also made by means of maintaining into the eye of old age humans for whom it is hard to open the door manually.

Sl. No.	Roll No.	Name of the Student	Project Title
30	17A51A04E5	KARANAM SUDHARSAN	VOICE CONTROLLED WIRELESS ELECTRONIC NOTICE BOARD USING ANDROID
	17A51A04C5	BAGATHI YASASVEE	
	17A51A04C1	ALLADA MANASA	
	16A51A0441	DUNNA PAVAN	
	15A55A0414	N. PRAVEEN KUMAR	

ABSTRACT
Now a days every advertisement is going to be digital. The big shops and shopping centers are using the digital moving displays now. In Railway station and bus stands everything that is ticket information, platform number etc is displaying in digital moving display. But in these displays if they wants to change the message or style they have to go there and connect the display to PC or laptop. Suppose the same message if the person wants to display in main centers of the cities means he have to go there with laptop and change the message by connecting into PC.

Sl.	Roll No.	Name of the Student	Project Title

No.			
32	17A51A04C8	BAVANA SRIRAKSHA	A Robust Digital Image Watermarking based on DWT, DCT And SVD
	17A51A04G8	SIKHA RAJA RATNAM NAIDU	
	17A51A04G2	POTNURU YESWANTH KUMAR	
	17A51A04H6	VOONNA NAVEENKUMAR	

ABSTRACT
Presented, in which the main focus is to provide proper solutions for reducing effect of geometric attacks. To address this goal, we divide host image into four non overlapping rectangular segments called sub-images and then watermark is independently embedded into each of them, using the hybrid scheme. The redundancy reduces effect of cropping attack. Moreover, in order to correct main geometric attacks, such as rotation, translation, and affine translation, we propose an intentional synchronization technique to recover geometrically attacked image via detection of desired image corners. A binary image in the first experiment and some 1D binary random sequence with different lengths in the next experiments are used as watermarks. Since the studied binary sequences have generally smaller lengths than the capacity offered by the proposed scheme, we are motivated to utilize error correction techniques, such as data replication and hamming code for them. Achieved results, compared with other geometric robust schemes, shows that the proposed scheme has stronger or comparable robustness against common signal processing and geometric attacks.

Sl. No.	Roll No.	Name of the Student	Project Title
33	17A51A04D2	CHALLA NEEHARIKA	Surveillance Robot controlled using an android application
	17A51A04F8	PANAPANA PRAVEENKUMAR	
	17A51A04E4	KANUGULA THANUSHA	
	17A51A04H2	TAMIRE CHANDU	

ABSTRACT
The robotics and automation industry which is ruled the sectors from manufacturing to house- hold entertainments. It is widely used because of its simplicity and ability to modify to meet changes of needs. The project is designed to develop a robotic vehicle using android application for remote operation attached with wireless camera for monitoring purpose. The robot along with camera can wirelessly transmit real time video with night vision capabilities. This is kind of robot can be helpful for spying purpose in war fields. The wifi technology is relatively new as compared to other technologies and there is huge potential of its growth and practical application. The android application loaded on mobile devices, can connect with security system and easy to use GUI. The security system then acts on these command and responds to the user. A robot is a machine capable of carrying out a complex series of actions automatically, especially one programmable by a computer. A robot can be controlled by a human operator, sometimes from a great distance. In such type of applications wireless communication is more important. This Project also shows general idea and design of the robot. Surveillance security robot provides safety like man. Automatic patrolling vehicle for periodic patrolling in defined or a restricted area, the patrolling vehicle can move automatically to monitor the dead zones and capture the images by using the camera.

Sl. No.	Roll No.	Name of the Student	Project Title
34	17A51A04H4	THUTA SAITEJA	GPS BASED UNMANNED GROUND VEHICLE FOR SELF MANEUVERING
	17A51A04E3	KANAKAM SAI SANDEEP	
	17A51A04E7	KOTLA PRUDHVI RAJ	

	17A51A04G0	PONDURU CHANDRA MOULI	

ABSTRACT
This project aims to build a Self-Navigation robot that monitors its surroundings to provide security. The self-navigation refers to the autonomous mobility of the robot, where it chooses its path along with the pre-defined coordinates. This robot can be used by an individual, organization, or for defense applications. It comprises of obstacle avoidance mechanism to avoid obstacles along its way of reaching the destination and this operation is served by an ultrasonic sensor that is capable of finding obstacles and detecting the motion around them. It also contains a GPS module that helps the robot in identifying the path along its journey by transmitting and receiving the coordinates using the GPS and the Bluetooth module. To communicate with the observing station from a remote location the robot uses the Bluetooth module attached. The camera module attached to the robot continuously monitors the surroundings and streams the live visuals to the observing station over the internet provided by the external source. Arduino microcontroller is used in integrating all the components and in the proper functioning of the robot. The user can set the coordinates where the robot is supposed to navigate or travel ceaselessly and can also observe and control the robot manually if needed.

Sl. No.	Roll No.	Name of the Student	Project Title
35	17A51A04G9	SIMMA DEVI	LOW POWER MULTIPLIER DESIGN USING DADDA ALGORITHM AND OPTIMIZED FULL ADDER
	17A51A04F5	MAGATAPALLI SOURAV	
	17A51A04E2	JAYAKRISHNA BADIA	
	17A51A04F7	P SUSHANT VENKATESH	

ABSTRACT
This project presents the model of 8-bit multiplier having high performance and high speed using Algorithm named Dadda and the basic building block used is optimized Full adder having low power dissipation and minimum propagation delay. Full and half adder blocks have been designed using pass-transistor logic to reduce the power dissipation and propagation delay. We have applied Dadda algorithm to reduce the propagation delay. This project is implemented in Xilinx ISE using VERILOG language and waveforms will observe through simulation, area and propagation will be measured before and after application of Dadda Algorithm.

Sl. No.	Roll No.	Name of the Student	Project Title
36	17A51A04D3	DASARI LAVANYA	Design of efficient BCD Adders in Quantum dot cellular automata
	17A51A04H0	SIMMA GANESH RAJA	
	17A51A04H3	TAMMIREDDY DEEPIKA	
	17A51A04D7	GANGITLA PAVAN KUMAR	

ABSTRACT
The modern world is getting advanced and enhanced in implementing the complex and huge structures in a minute design area, as per the Moore's transistor integration law the integrationoftransistorsareprocessed.Asfarthedifficultyhasbeenraisedinidentifying the individual transistor, power supply, power dissipation of each transistor, for fixing this problems many studies and practices are performing. In such Nano technologies evolved QCA is termed as the efficient technology. This technology is employed as the transistor lessstructureswhichistermedasthereplacementofCMOScircuits.TheQCA technology is involving day by day and are employed in arithmetic circuits. This project flaunts QCA-based

BCD adder. In this project BCD adder is developed using majority gates. The Xilinx-ISE tool is used for implementation, synthesis and simulation of the project and the results are noted.

Sl. No.	Roll No.	Name of the Student	Project Title
37	17A51A04C2	ANNEPU DIVYA	Low cost high performance VLSI architecture for Montgomery modular multiplication
	17A51A04G4	SAMBANA MANOJ KUMAR	
	17A51A04C0	ADDANKI VAIJAYANTI MALA	
	17A51A04D6	ERA JUDHISTI PRODHAN	
ABSTRACT The Montgomery multiplication algorithm such that the low-cost and high-performance Montgomery modular multiplier can be implemented accordingly. The proposed multiplier receives and outputs the data with binary representation and uses only one-level carry-save adder (CSA) to avoid the carry propagation at each addition operation. This CSA is also used to perform operand pre computation and format conversion from the carry save format to the binary representation, leading to a low hardware cost and short critical path delay at the expense of extra clock cycles for completing one modular multiplication. To overcome the weakness, a configurable CSA (CCSA), which could be one full-adder or two serial half-adders, is proposed to reduce the extra clock cycles for operand pre computation and format conversion by half. In addition, a mechanism that can detect and skip the unnecessary carry-save addition operations in the one-level CCSA architecture while maintaining the short critical path delay is developed.			

Sl. No.	Roll No.	Name of the Student	Project Title
38	17A51A04G6	SANAPALA DEEPIKA	Implementation of low power multiplier using approximate higher order compressors
	17A51A04F6	MALLA SUPRIYA	
	17A51A04G5	SANAPALA AISHWARYA	
	17A51A04D1	BURILLI KIRAN KUMAR	
ABSTRACT Multipliers play an important role in today's digital signal processing and various other applications. With advances in technology, many researchers have tried and are trying to design multipliers which offer either of the following design targets – high speed, low power consumption, regularity of layout and hence less area or even combination of them in one multiplier thus making them suitable for various high speed, low power and compact VLSI implementation. To reduce hardware complexity of multipliers, truncation is widely employed in fixed-width multiplier designs. Then a constant or variable correction term is added to compensate for the quantization error introduced by the truncated part. The proposed multiplier in saves few adder circuits in partial product accumulation. In, two designs of approximate 4-2 compressors are presented and used in partial product reduction tree of four variants of 8 × 8 Dadda multiplier.			

Sl. No.	Roll No.	Name of the Student	Project Title
40	17A51A04D8	GORU VAMSEE	High performance analysis of a cordic architecture
	17A51A04D5	*DONKA YAMUNA*	
	17A51A04F0	KUNA HEMACHALAM	
	17A51A04C9	BONTA ABHINAYAKARTEEK	
ABSTRACT			

CORDIC is an acronym for Coordinate Rotation Digital Computer. The CORDIC algorithm is a repetitive calculation approach ability of emerging different basic functions with a proper shift-and-add method used to evaluate a large amount of functions. It has been used for many years for efficient implementation of vector rotation operations in hardware. It is executed merely by table look-up, shift, and addition operations. Rotation of vectors through fixed and known angles has many applications in animations, robotics, games, computer graphics and digital signal processing.

Sl. No.	Roll No.	Name of the Student	Project Title
41	17A51A04F1	LENKA SRAVANI	OBJECT DETECTION USING SSD DEEP LEARNING
	17A51A04D4	DHARMANA RAVI KUMAR	
	17A51A04F4	MACHERLA PREETHI	
	17A51A04C6	BALAGA BHANU PRASAD	

ABSTRACT
Deep learning is a powerful machine learning technique that automatically learns image features required for detection tasks. There are several techniques for object detection using deep learning such as Faster R-CNN, You Only Look Once (YOLO v2), and SSD. Object detection is a computer vision technique for locating instances of objects in images or videos. Object detection algorithms typically leverage machine learning or deep learning to produce meaningful results. When looking at images or video, humans can recognize and locate objects of interest in a matter of moments. The goal of object detection is to replicate this intelligence using a computer. SSD (Single Shot Multi Box Detector) is an object detection algorithm based on deep learning. As one of the most mainstream detection algorithms, it can greatly improve the detection speed and ensure the detection accuracy. In this paper, the Batch Norm operation is added to the network in order to improve the generalization of the network and speed up network training. The object counting function is added to the image recognition. This paper uses SSD algorithm that incorporates Batch Norm algorithm. The object detection system was built by the Flask framework and the Layui framework. The system can select the data to be detected on the front-end page, the detection results and the number of each type of object were displayed on the front-end page in real time.

Sl. No.	Roll No.	Name of the Student	Project Title
42	17A51A04G3	RUPPA NISHITHA	A Compact Rectangular dual patch Antenna for Multiple Satellite Communication Applications
	17A51A04E9	KOTTAPALLI VENKATESH	
	17A51A04C4	BAGADI DEEPIKA	
	17A51A04B9	AAITHI JYOTHI	

ABSTRACT
With the advance of satellite communication systems and their increasing importance, wide band antennas are in great demand for both military and commercial applications. Most of the Communication Systems need a wide band antenna that operates on multi-octave frequencies. Diverse techniques have been developed for a patch antenna for increasing the gain or increasing the bandwidth. A new design concept of compact rectangular dual patch antenna has been developed and it provides both high gain and wider bandwidth. In this paper, a compact rectangular dual patch antenna is proposed as a wide band antenna for multiple satellite communication applications such as Global Positioning System (GPS), Global Navigation Satellite System (GNSS), Indian Regional Navigation Satellite System (IRNSS), and S-Band Satellite Communication. Gain performance and

wider bandwidth have achieved with the help of dual rectangular patches and their energy distributed on the surface of the dual patches simultaneously. The rectangular dual patch antenna is simulated and analyzed at the operating frequencies of the GPS, GNSS, IRNSS and S-Band Satellite communications for various characteristics such as VSWR, gain, axial ratio and 3dB beam width. Simulation results are obtained using HFSS software.

Sl. No.	Roll No.	Name of the Student	Project Title
43	17A51A04G1	POTNURU SRUTHI	Adaptive protocol for quality of service enhancement in mobile ad hoc network
	17A51A04E8	KOTTAKOTA TEJASWI	
	17A51A04F2	LUKALAPU SAI KUMAR	
	17A51A04C7	BARATAM VENKATA SAIRAM	

ABSTRACT

Mobile Ad Hoc Networks (MANETs) are a self-configuring network of mobile nodes connected by wireless links where each mobile node works as a host as well as a router. Applications supported by MANETs have stringent Quality of Service (QoS) requirements and to support these QoS parameters MANETs should have efficient routing protocols. Most of the reactive routing protocols like AODV provide a single route for packet delivery. However, when the single route fails, it results in a decline in a performance of various QoS parameters.

Providing a single backup route also does not solve the problem completely as the backup route may also fail. Also, providing multiple backup routes may lead to multiple packets flooding the network. Hence, an efficient routing protocol is required which provides solution to this problem. This project proposes AODV routing protocol with nth backup route (AODV nth BR) that provides source node with more than one back up routes in case of a link failure. The proposed scheme results in better throughput, lesser delay, lesser energy consumption, packet delivery ratio, .

Sl. No.	Roll No.	Name of the Student	Project Title
44	17A51A04E6	KORADA HARI PRIYA	Implementation of bilbo with star EDT technology for high fault coverage using compressed test patterns
	17A51A04G7	SEELA MAHESH	
	17A51A04H7	YENDA CHANDRAMOULI	
	16A51A0435	DASARI PAVAN KUMAR	

ABSTRACT

An ASIC chip designed may not meet the functionality requirements. There may be lot of conditions which may cause damage to the designed circuit and effect its functionality. Those conditions include processing faults (such as missing contact windows, oxide breakdown), material defects (such as cracks, crystal imperfections), packaging failures etc. These problems may cause faults in the digital logic circuits and effects circuit functionality. Therefore, the circuit must be tested in order to know whether it is working properly or not.

Several testing methods and algorithms have been proposed such as D-algorithm, PODEM algorithm, Built-in-self-test etc in literature. In this dissertation, Built-in-logic- block-observer (BILBO) method of testing is implemented. A test pattern compaction method, STAR-EDT is combined with BILBO to derive minimum number of test data for detecting all faults that are injected into the circuit. The combined method called BILBO with STAR-EDT methodology is proposed in this thesis. Existing and proposed methods are implemented and applied to various test circuits. After that, a Scheduling method is applied to BILBO with STAR-EDT method for all test circuits at a time. The proposed method requires a smaller number of test patterns than the number of patterns required in existing BILBO methodology. Scheduling concept applied to proposed method results in reduced timing requirements for test procedures.

Sl. No.	Roll No.	Name of the Student	Project Title
45	17A51A04H1	TALASU VINEESH	RFID BASED E-PASSPORT SYSTEM
	17A51A04H5	VANGARA VIDYASRI	
	17A51A04E0	HARIDASU RAKESH	
	17A51A04F3	LUKULAPU PREM SAI	
	17A51A04H1	TALASU VINEESH	

ABSTRACT
A technique of programming the system for creating the valid and an electronic identification document are provided. Where in the electronic certificate or identification an electronic sign mark is received from the user and attached to the electronic document .An electronic license signature is attached to the document, and the whole a data is encrypted. An electronic passport act as a legal usable form of identification. The data is uploaded from the universal computing device to an approving machine which decrypts the documents. The digital license and electronic signature involved to the document are the confirmed for authenticity. Smart cards provide portable containers for an account, public key, and biometric data. They are increasingly prevalent for payment mechanisms (e.g., mobile telephone SIMs and credit cards).Advancement in technology comes with so many possibilities that all information can be stored electronically. The purpose is to limit the use of counterfeit documents. This, in turn, will prevent illegal entry of the travelers into any specific country at the same time maintaining the privacy and personal security of the e-passport bearers and track the person in which country. Our proposal uses one of these smart card methods to automate and popularize the e-passport system.

STUDENT - FACULTY PUBLICATION ABSTRACTS

EXTRACTION OF EEG SIGNALS FROM POLYSMNOGRAPHIC RECORS BY APPLYING COMBINED CASCADED ADAPTIVE FILTERS

Jaya Laxmi. Anem1, P. Srujana. Sai Kumar, M. Soni, B. Sarath Kumar, K. Rajasekhar,

Abstract
Polysomnographic (PSG) is a technique used to diagnose the various sleep disorders. PSG is also called as sleep study. Blood oxygen levels, brain waves, body positions, eye movements, heart rate (ECG) are some of the signals involved in PSG. Especially EEG signals are examined by doctor in order to identify neural oscillations during sleep. Artefacts in EEG records are caused by various factors like Base interference(BE), muscle artefacts (EMG), Electrocardiogram (ECG) and power line noise. These noise sources increase the difficulty in analysing the EEG signals and obtaining original information. For this reason, it is necessary to design specific filters to decrease such artefacts in EEG signals. In this project a combined cascaded LMS & NLMS algorithm is proposed and measure the metrics like SNR, MSE, LSE, MAE.
Keywords: EEG signal, Artefacts, LMS & NLMS, SNR, MSE, LSE, MAE.

EFFICIENT ENERGY CONSUMPTION IN AD HOCNETWORK USING AOMDV-FF

M.V.H.Bhaskara Murthy, T. Aishwarya, S. Neeraj Kumar, K. Sumalatha, G. Vinod Kumar

Abstract:
In the mobile ad hoc network, the nodes are connected without infrastructure. In the manet, while the data transmit or receive between the nodes the energy consumption was main issue because it

have a limited battery power. Ad hoc on demand multipath distance vector (AOMDV) routing protocol energy consumption optimisation via fitness function. By the AOMDV protocol, we get the all possible routes from source to destination node. The suggested technique uses the fitness function of AOMDV (FF-AOMDV). The fitness function is primarily used to reduce energy consumption in multipath routing by determining the best route from source node to destination node. The FF- AOMDV protocol's performance has been evaluated using network simulator version 2 and compared to that of the AOMDV protocol with optimised link state routing(OLSR).

Keywords: MANET, AOMDV, QoS Parameters.

Brain Tumor Detection using Deep Learningand Convolution Neural Network Algorithm

V. Lokesh Raju, P. Vishnu Vardhan, B. Bhavishya, V. Vasudev, N. Ajesh Kumar

Abstract

Now a day's tumor is second leading cause of cancer. Due to cancer large no of patients are in danger. The medical field needs fast, automated, efficient, and reliable technique to detect tumor like brain tumor. Detection plays a very important role in treatment. If proper detection of tumor is possible then doctors keep a patient out of danger. Various image processing techniques are used in this application. Using this application doctors provide proper treatment and save a number of tumor patients. A tumor is nothing but excess cells growing in an uncontrolled manner. Brain tumor cells grow in a way that they eventually take up all the nutrients meant for the healthy cells and tissues, which results in brain failure. Currently, doctors locate the position and the area of brain tumor by looking at the MRI Images of the brain of the patient manually. This results in inaccurate detection of the tumor and is considered very time consuming. A tumor is a mass of tissue it grows out of control. We can use a Deep Learning architectures CNN (Convolution Neural Network) generally known as NN (Neural Network) and VGG 16(visual geometry group) Transfer learning for detecting the brain tumor. The performance of the model is predict image tumor is present or not in image. If the tumor is present, it returns YES otherwise return NO.

Keywords: CNN, Deep learning, Brain tumor.

Adaptive Genetic Modification of FIR LPF for Rich Audio Environment

G. Vidya, S. Hemelatha, Y. Mounika, A. Charankumar, Sanapala Umamaheshwarrao.

Abstract

This abstract offers a digital filter design for use with digital hearing aids. The technique used in this instance is to create a filter to eliminate background noise. The filter's construction is made up of several parallel FIR (Finite Impulse Response) Low Pass Filters. This study demonstrates how FIR filters can provide good results in digital hearing aids with low levels of complexity, resulting in low hardware resource requirements and low power consumption for VLSI design. The optimization process using a genetic algorithm (GA) will yield the filter coefficients for these FIR filters. GA will reduce the discrepancy between the desired magnitude response and the actual magnitude response. Now, an adaptive algorithm is applied to the filter, making it dynamic and responsive to changes in the noise in the speech stream.

Disease Prediction Using Machine Learning

M.JayamanmadhaRao, P.Deexit Kumar,P.AkhilKumarPatnaik,V.Suraj,G.SaiManohar.

Abstract

In modern times, individuals encounter a range of illnesses as a result of environmental factors and their lifestyle choices, underscoring the significance of earlydisease detection.. So our project mainly

deals with this major problem. which involves, when any person is having any health problem or effected with somedisease or some abnormal things in their body, they used to visit adoctor. The problem is that many people cannot understand the kind of problems that they arehavingbasedonthesymptoms.Thediseaseswhicharepredictedinthisresearchareheartdisease,lungdisease,liverdiseaseandmonkeypoxdisease.Ourproposedwork implements a system that predicts different diseases based on the symptoms byusing machine learning algorithms like Random Forest (RF), Decision Tree(DT), K-Nearest Neighbour (KNN), Support Vector Machine (SVM). The predicted output suggests specialized doctor to the patient.

Keywords: CNN, Random Forest (RF), Decision Tree (DT), K-Nearest Neighbour (KNN), Support Vector Machine (SVM)

CataractDetectionUsingDeepLearningAlgorithms

V.Ujwala, B. Sridhar, Ch.Rashmitha, Y.Divakar, D.Harihara Santosh.

Abstract

Cataractisa leading eye disease crossthe world. Visual impairment caused by cataracts is a commonly observed issue and blindness worldwide. There is around 50% of overall blindness. Cataract is a medical condition characterized by the clouding of the eye's lens. Therefore, a nearly detection and prevention of cataract may reduce the visual impairment and the blindness. For early prediction of cataract we use deep learning algorithms like CNN, MobileNet and VGG-16. Deep learning isasubse to Machine learning, which is essentially aneural network. CNN play a major role in diverse functions like image processing, computervisiontasks like segmentation and localization, they are very popular in Deep learning. MobileNet is a stream lined architecture that uses depth wise separable convolutional neural network. VGG-16 is object detection and classification algorithm, it is oneof thepopular algorithms for image classification. We use thesethree algorithms to predict which algorithm is more efficient in cataract detection.

Keywords:CNN,MobileNet,VGG-16,Deeplearning,Imageprocessing

A Multimodal Biometric Verification System using Traits

V.Dharani,T.Sushmitha,B.Ganesh,K.VenkataLalitha Bhavani

Abstract

Generally Password, pin and signature are used as single source for identification of persons. There is a chance to lost or stolen. In Bio metric system a person can be identified through traits. They may be physical or biological. The setraits are fingerprint, Voice, Face, Irisand soon. Biometric system is more robust . The main advantageis whena person is identified with trait cannot be forgotten or guessed easily. Main aim of thi spaperis to develop anew biometric authentication system with different modalities like face, voice and fingerprint.

Keywords:Traits,Multimodalbiometric.

Helmet Wear Detection for ATM Security

K.KasiRao,K.JeevanKumar,P.Gowtham,K.Aditya,Ch.RajaShekaraRao

Abstract

The Cash Machine (ATM) is a convenient way to withdraw cash and access other banking services; however because of the significant danger in volved, security is recommended. The ATM Center's video surveillance system typically records every customer action; however fraudsters frequently used is guises to avoid beingseen. Due to the occulted face caused by helmets, it is difficult to examine and locate them.

As a result, our technology will automatically identify helmets insurveillance footage and send out SMS messages. In this article, we presented a system for detecting occulted faces caused byhelmets in surveillance footage. Todetect the person and helmet, we used the object detection weight of the yolo model. Initially, background subtraction was employed to remove unwanted video content. The skin-color ratio and LBP characteristic will then be extracted.After detection of person then the sms message is send to respective bank manager.

KeyWords:MachineLearning,CNN,ImageProcessing.Objectdetectionmodel,CNNalgorithm,YOLO

EEG signal analysis based on Cascaded Optimized Adaptive filter

JayaLaxmi.Anem[1],S.Roshini[2],P.SaiPooja[2],K.Akhila[2],M.Chandrasehkar[2]

Abstract:
Electro encephalogram (EEG) plays an important role in identifying brain activity and behaviour. It isused to detect rhythm during sleep. Polysomno graphic (PSG) is a test conducted to study sleep and to diagnose a variety of sleep disorders. It is a technique for sleep study. PSG records brain waves, oxygen levelsin blood, heart rate (Electrocardiogram), breathing aswell as eye movements (Electrooculargram) and muscle (Electromyogram) during the study. However, the recorded electrical activity always be contaminated with artifacts like Baseline, ECG, EOG, EMG and power line, and then affect the analysis of EEG signals. For this purpose, the cascade of Adaptive filters with LMS and Genetic algorithm are used to remove artifacts and extract the clean EEG signal, finding best coefficients of Adaptive LMS filter which minimizes them eansquare error (MSE). We also measures the metrics like Signal to noiseratio (SNR), Mean Average Error (MAE), Least Mean Square Error (LSE) of proposed technique and compared with conventional techniques.

Adaptive Genetic Modification of FIR LPF for Rich Audio Environment

G.Vidya,S.Hemelatha,Y.Mounika,A.Charankumar,SanapalaUmamaheshwarrao.

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Identification of Paddy Leaf Diseases Using Machine Learning Approaches

P.Prasanth,D. Saraswathi,K. Rajesh,G. SaiPavan Kumar,Dr. Harihara Santosh Dadi.

Abstract

In India, 70% of the Economy depends upon agriculture. Out of 70%, rice contributes more than 40% of the country's total food grain production. The weather conditions and leaf disease will affect the yield of the paddy crop. In the early stage leaf disease identification system improves the quality and yield of the paddy. Machine Learning approaches are used to identify the leaf disease in the early stage. The proposed machine learning approach includes image augmentation techniques and is followed by Machine Learning algorithms.