MALLA REDDY ENGINEERING COLLEGE FOR WOMEN

Autonomous Institution – UGC, Govt. of India

Accredited by NBA & NAAC with 'A' Grade

NIRF Indian Ranking, Accepted by MHRD, Govt. of India | Band – Excellent, National Ranking by ARIIA

Maisammaguda, Dhulapally, Secunderabad – 500 010, Telangana

A.Y : 2022-23 **VOL.1**

Under

Student Chapter IEEE, IETE & Technical Association Electro Spikes

TECHNITRONIX

HALF YEARLY TECHNICAL MAGAZINE

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

E C E

www.mallareddyecw.com

DEPARTMENT VISION

- Our vision is to develop the department in to a full fledged Centre of learning in various fields of Electronics and Communication Engineering keeping in view the latest developments and to invoke enthusiasm among the Students to continually renew their education in rapidly developing technological scenario.

Vision

DEPARTMENT MISION

- Our mission is to inculcate a spirit of scientific temper and analytical thinking & train the students in contemporary technological trends in electronics and communication to meet the challenging needs of the industry by providing versatile sound knowledge in the field of engineering and technology

Mission

ABOUT THE DEPARTMENT

The Department of Electronics and Communication Engineering is accredited by NBA, with an intake of 240 in B.Tech Programme and also offers M.Tech Programme in Embedded Systems. The department has state of the art laboratories with latest softwares like MENTOR GRAPHICS, CADENCE, MATLAB, XILINX, CCSTUDIO, KEIL, RTOS, RT Linux, OSCAD, PSPICE and MULTISIM. The department consists of well equipped Robotics- Centre of Excellence to train the students in specific modules to design and develop innovative projects that extend the state of the art in Robotics. It has well qualified and experienced faculty members. The highly competent and professional faculties, many of them drawn from premise institutions and industry have extensive experience and contribute to the holistic development of academics, research and career building of students. 32faculty members attained patent rights. The department faculty published 82 papers in SCI/Scopus indexed journals, 156 papers in UGC indexed/International journals and presented 226 papers in various national & international conferences and published 28 textbooks with ISBN. The department established IEEE, IETE & ISTE student chapters under which it organizes Technical Symposiums and various co-curricular activities every Academic Year. The department organized National Conference on Signal Processing Communications and System Design (SPCOMSD) in 2014and is organizingInternational Conference on Signal Processing Communications and System Design (ICSPCOMSD) every year, from past 7 years. The department also organized Faculty Development Programmes on Analog & Digital Design using CADENCE Tools, Embedded System using 32 bit processor, Programmable System on Chip Mixed Signal Microcontroller, Refresher Courses on Analog and Digital Communications, Digital Signal Processing, VLSI Design using CADENCE Tools and One Week Refresher Course on “VLSI & Embedded Systems”. The department organized AICTE Sponsored Two Week Faculty Development Programme on “Speech, Image & Video Processing Techniques, Analysis & Applications”, AICTE Sponsored One Week Short Term Training Programme on “Optimization Techniques through Machine Learning for Wireless and IOT”, AICTE Sponsored One Week Short Term Training Programme on “Emerging Trends in Wireless Sensor Networks and Applications”, AICTE Sponsored One Week Short Term Training Programme on “Deep Learning Techniques for Electronic Health Record Analysis”, AICTE Sponsored One Week Short Term Training Programme on “Emerging Trends in Advanced Signal & Image Processing”, AICTE Sponsored One Week Short Term Training Programme on “Emerging Trends in VLSI Technology” and the department also received AICTE sanctioned MODROB’s on “Advanced VLSI Lab” and Advanced Microwave Engineering Lab”. The department also publishes the Registered Journal “International Journal of Research in Signal Processing, Computing and Communication-System Design (IJRSCSD)” with an ISSN: 2395-3187.

PO'S

PO1	Engineering knowledge	An ability to apply knowledge of mathematics (including probability, statistics and discrete mathematics), science, and engineering for solving Engineering problems and modeling
PO2	Problem analysis	An ability to design, simulate and conduct experiments, as well as to analyze and interpret data including hardware and software components
PO3	Design / development of solutions	An ability to design a complex electronic system or process to meet desired specifications and needs
PO4	Conduct investigations of complex problems	An ability to identify, formulate, comprehend, analyze, design synthesis of the information to solve complex engineering problems and provide valid conclusions.
PO5	Modern tool usage	An ability to use the techniques, skills and modern engineering tools necessary for engineering practice
PO6	The engineer and society	An understanding of professional, health, safety, legal, cultural and social responsibilities
PO7	Environment and sustainability	The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental and demonstrate the knowledge need for sustainable development.
PO8	Ethics	Apply ethical principles, responsibility and norms of the engineering practice
PO9	Individual and team work	An ability to function on multi-disciplinary teams.
PO10	Communication	An ability to communicate and present effectively
PO11	Project management and finance	An ability to use the modern engineering tools, techniques, skills and management principles to do work as a member and leader in a team, to manage projects in multi-disciplinary environments
PO12	Life-long learning	A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning

PSO'S

The graduates of the department will attain:

PSO1: The ability to analyze, design and implement application specific electronic system for complex engineering problems for analog, digital domain, communications and signal processing applications by applying the knowledge of basic sciences, engineering mathematics and engineering fundamentals.

PSO2: The ability to adapt for rapid changes in tools and technology with an understanding of societal and ecological issues relevant to professional engineering practice through life-long learning

PSO3: Excellent adaptability to function in multi-disciplinary work environment, good interpersonal skills as a leader in a team in appreciation of professional ethics and societal responsibilities.

PEO'S

PEO1-PROFESSIONAL DEVELOPMENT

To develop in the students the ability to acquire knowledge of Mathematics, Science & Engineering and apply it professionally within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability and sustainability with due ethical responsibility.

PEO2-CORE PROFICIENCY

To provide ability to identify, formulate and solve engineering problems with hands on experience in various technologies using modern tools necessary for engineering practice to satisfy the needs of society and the industry.

PEO3- TECHNICAL ACCOMPLISHMENTS

To equip the students with the ability to design, experiment, analyze and interpret in their core applications through multi disciplinary concepts and contemporary learning to build them into industry ready graduates.

PEO4- PROFESSIONALISM

To provide training, exposure and awareness on importance of soft skills for better career and holistic personality development as well as professional attitude towards ethical issues, team work, multidisciplinary approach and capability to relate engineering issues to broader social context.

PEO5- LEARNING ENVIRONMENT

To provide students with an academic environment and make them aware of excellence, leadership, written ethical codes and guidelines and the life-long learning to become a successful professional in Electronics and Communication Engineering

MESSAGES

Founder Chairman's Message

Ch. Malla Reddy

Founder Chairman, MRGI
Hon'ble Minister, Govt. of Telangana State

MRECW has made tremendous progress in all areas and now crossing several milestones within a very short span of time and now I feel very happy to know that the students and faculty of the ECE department of MRECW are bringing out the volume-1 of the Technical magazine Technitronix in A.Y 2022-23. As I understand this magazine is intended to bring out the inherent literary talents in the students and the teachers and also to inculcate leadership skills among them. I am confident that this issue will send a positive signal to the staff, students and the persons who are interested in the educational and literary activities

Principal's Message

I congratulate the department of ECE, MRECW for bringing out the issue of the prestigious half yearly department technical Magazine Technitronix under A.Y: 2022-23, I am sure that the magazine will provide a platform to the students and faculty members to expand their technical knowledge and sharpen their hidden literary talent and will also strengthen the all round development of the students. I am hopeful that this small piece of literary work shall not only develop the taste for reading among students but also develop a sense of belonging to the institution as well. My congratulations to the editorial board who took the responsibility for the arduous task most effectively. I extend best wishes for the success of this endeavor.

Dr. Y. Madhavee Latha

Principal

HOD'S MESSAGE

It is an occasion of great pride and satisfaction for the department of ECE, MRECW to bring out the issue of the half yearly of the Technical magazine Technitronix under A.Y:2022-23, it gives me immense pleasure to note that the response to the magazine has been over whelming. The wide spectrum of articles gives us a sense of pride that our students and faculties possess creative potential and original thinking in ample measures. Each article is entertaining interesting and absorbing.

I applaud the contributors for their stimulated thoughts and varied hues in articles contributed by them.

Dr. N. Sreekanth

HOD

SCIENTIST OF THE HALF YEAR

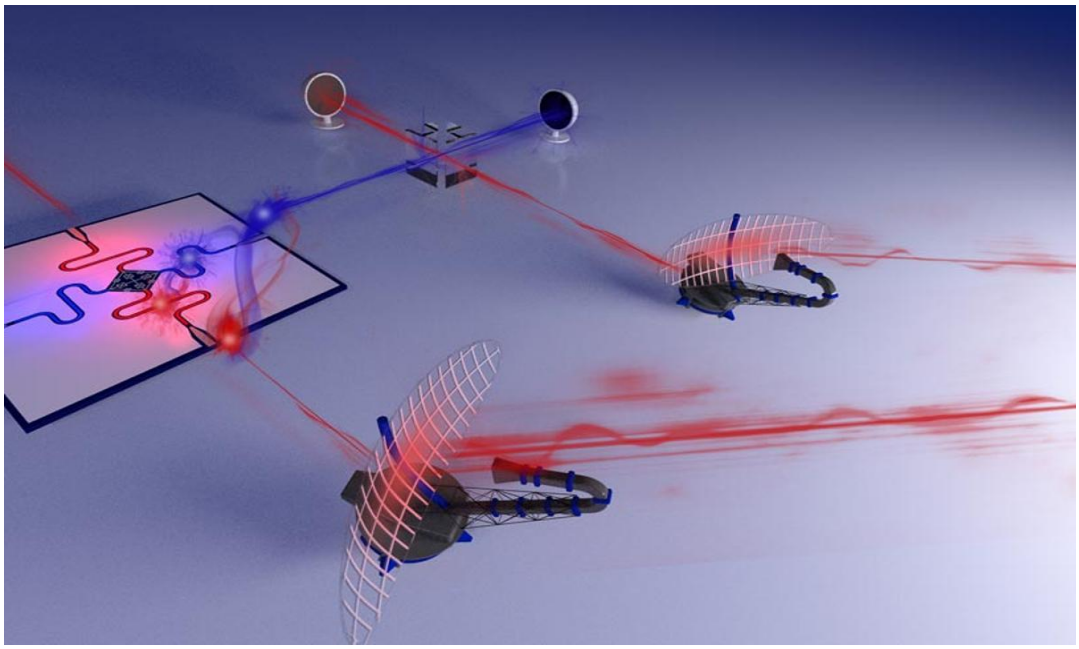
VIKRAM SARABHAI

Considered as the Father of India's space programme, Vikram Sarabhai was born on on 12 August, 1919 in the city of Ahmedabad in Gujarat. He was instrumental in the setting up of the Indian Space Research Organization (ISRO), when he successfully convinced the Indian government of the importance of a space programme for a developing nation after the launch of the Russian Sputnik, in this quote:

There are some who question the relevance of space activities in a developing nation. To us, there is no ambiguity of purpose. We do not have the fantasy of competing with the economically advanced nations in the exploration of the moon or the planets or manned space-flight. But we are convinced that if we are to play a meaningful role nationally, and in the community of nations, we must be second to none in the application of advanced technologies to the real problems of man and society.

He was awarded the Padma Bhushan in 1966 and the Padma Vubhushan after his death in 1972. While everyone knows of his primary role in the establishment of ISRO, perhaps many of us do not know that he was also the force behind the establishment of many other Indian institutes of repute, most notably the Indian Institute of Management, Ahmedabad (IIM-A) and the Nehru Foundation for Development.

QUANTUM RADAR



Quantum radar systems supported by quantum measurement can full-fill not only conventional target detection and recognition tasks but are also capable of detecting and identifying the RF stealth platform and weapons systems. The development of radar technology is of the utmost importance in many avenues of research. The concept of a quantum radar has been proposed which utilizes quantum states of photons to establish information on a target at a distance. A photon, or a little cluster of photons, is distributed towards the target. The photons are absorbed and reemitted from the target and into the receiver. The measurement process may be executed in two alternative ways. One can perform an interferometric measurement (or phase measurement) on the photon, or one can simply count the number of photons that return. the previous method is named Interferometric Quantum Radar, and therefore the latter method is termed Quantum Illumination. For either of those methods, one can use stationary quantum states of photons or use entangled states. Its been shown that entangled states provide the most effective possible boost in resolution, achieving within the ideal case. The benefit of using quantum states is that they exhibit extra degrees of correlation by which to get information compared to classical methods. These extra correlations (called quantum correlations) serve to boost the resolution and signal/noise (SNR) that may be achieved within the radar system.

Mr. K. Raghavendra
Department of ECE

FACULTY ARTICLES

GPT-3

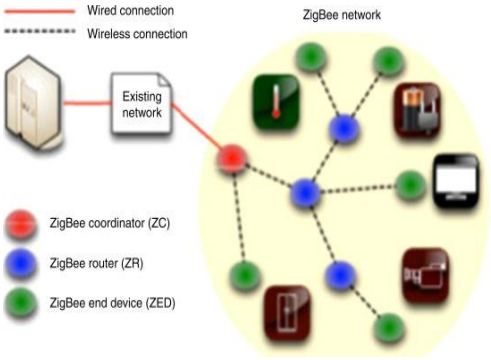
Generative Pre-trained Transformer 3 (GPT-3; stylized GPT·3) is an autoregressive language model that uses deep learning to produce human-like text. Given an initial text as prompt, it will produce text that continues the prompt. The architecture is a standard transformer network (with a few engineering tweaks) with the unprecedented size of 2048-token-long context and 175 billion parameters (requiring 800 GB of storage). The training method is "generative pretraining", meaning that it is trained to predict what the next token is. The model demonstrated strong few-shot learning on many text-based tasks.

It is the third-generation language prediction model in the GPT-n series (and the successor to GPT-2) created by Open AI, a San Francisco-based artificial intelligence research laboratory. GPT-3, which was introduced in May 2020, and was in beta testing as of July 2020, is part of a trend in natural language processing (NLP) systems of pre-trained language representations.

The quality of the text generated by GPT-3 is so high that it can be difficult to determine whether or not it was written by a human, which has both benefits and risks.[4] Thirty-one OpenAI researchers and engineers presented the original May 28, 2020 paper introducing GPT-3. In their paper, they warned of GPT-3's potential dangers and called for research to mitigate risk. David Chalmers, an Australian philosopher, described GPT-3 as "one of the most interesting and important AI systems ever produced." An April 2022 review in The New York Times described GPT-3's capabilities as being able to write original prose with fluency equivalent to that of a human. Microsoft announced on September 22, 2020, that it had licensed "exclusive" use of GPT-3; others can still use the public API to receive output, but only Microsoft has access to GPT-3's underlying model.

Mr. Ch. Venkateshwarlu
Department of ECE

DESIGN AND SIMULATION OF STATE-OF-ART ZIGBEE TRANSMITTER FOR IOT WIRELESS DEVICES



The rapid development in wireless networking has been witnessed in past several years, which aimed on high speed and long range applications. The increasing demand for low data and low power networking led to the development of ZigBee technology. This technology was developed for Wireless Personal Area Networks (WPAN), directed at control and military applications, where low cost, low data rate, and more battery life were main requirements. ZigBee is a standard, which defines set of communication protocols. ZigBee based devices operate in 868 MHz, 915 MHz and 2.4 GHz frequency bands. It has maximum data rate of 250K bits per second. This paper explores the architectural blocks of digital ZigBee transmitter.

The advancement in VLSI technology led to the development of more efficient, accurate, small, and fast design. ZigBee has potential application in Internet of Things (IoT), because of the fact that it is a low power and low data rate device. The main focus of the project is to design a ZigBee transmitter using Verilog for IoT applications. A basic digital ZigBee transmitter consists of cyclic redundancy check, Bit-to-Symbol block, Symbol-to-Chip block, and a Modulator. This paper presents digital design and Verilog-HDL simulation of the Cyclic Redundancy Check and Bit-to-Symbol block of the ZigBee transmitter.

Mr. B. Satish Kumar
Department of ECE

PHOTONICS USED FOR SPACE COMMUNICATION

The selection and evaluation procedures of COTS optoelectronic components for its use in space application need to be established because no qualified components exist and no standards are available that define the procedures to be applied for optoelectronic devices to be used in space qualifications. The following paragraphs propose a generic procedure for the selection and acceptance test criteria for optoelectronic devices and also include an analysis related to the Specification Performance Requirements and Environment Constraints related to space applications. Summary results of a large number of parts that have been tested by Alter Technology are also presented to demonstrate the current status of the most promising technologies. Finally, one case example is presented related to optical amplifiers. Photonic technologies have changed the world of communications in the form of fiber optics, integrated optics, electrooptical components, and micro-photonics.

They offer some compelling advantages compared with their traditional RF counterparts when considered for use in space applications. Therefore, research and development of photonics technologies for space applications in areas of communications, sensing, and signal processing has been a major theme for several years. The use of photonic technologies for space applications has risen the problem related to the ability of optoelectronic and optic components to withstand the space environment as all optoelectronic and optic components come from terrestrial applications. Thus, the development of photonic technologies for space applications has made the selection and acceptance test criteria of all optoelectronic and optic components that are part of the photonic system imperative. The paper presents a summary of the experience of Alter Technology Group on the mechanical, thermal, radiation, and endurance testing of several photonics technologies. In addition, the paper describes an assessment related to the reliability of th for associated environmental testing.

Mrs. Aruna Kumari
Department of ECE

STUDENT ARTICLES

AMBULANCE DRONE

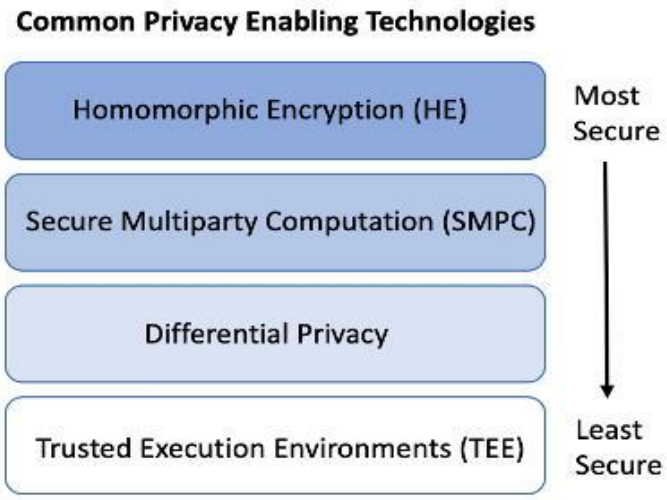
Ambulance Drone its transmitted to the Emergency spot earlier than ambulance and take into account multiple real time health parameters of the patient such ambulance purpose of this project is to develop a prototype of drone ambulance to assist the ambulance in saving

Humans life's. According to a study conducted by a centre of science and environment, traffic in its peak hours on an average doesnot exceed 30-40km/hr.In existing system a drone carries only the defibrillator to ht emergency spot.

This, It takes into account only a single parameter. This paper aims at developing a system that would be able to fly to the as temperature heart rate and heartbeat. The value of these essential parameters are then. This helps the doctor to evaluate the situation better to provide first-aid kit.

K. Sai Kirthana
20RH1A04B9
III ECE B

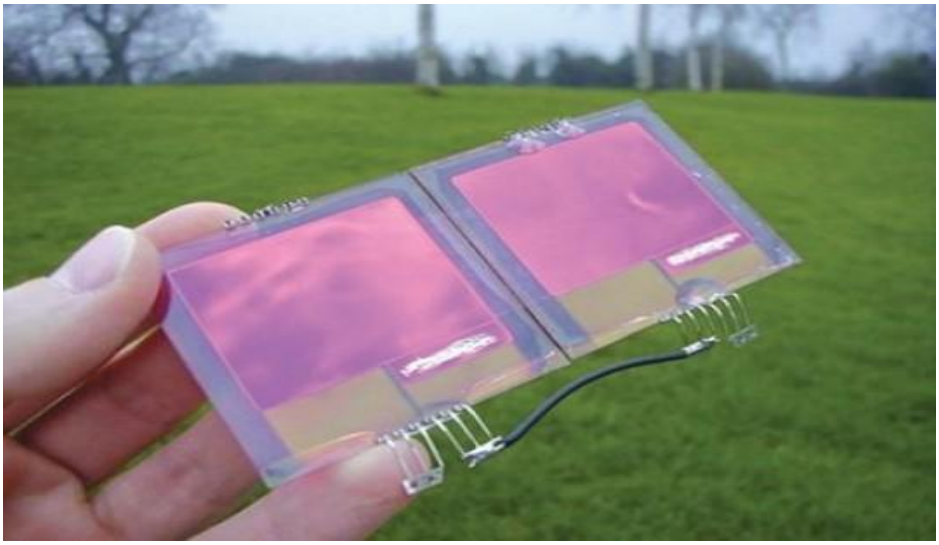
PRIVACY ENHANCING COMPUTATION



Your data is valuable, and you don't want to share it with just anyone. The solution? Privacy Enhancing Computation (PEC). It is a way for different parties to extract value from information without exposing themselves or their other datasets in return. They collaborate on an individual level using the actionable data without any shared sensitive information between the participants. Personal data, like your bank account number or social security number, are not available to the public. The way that privacy-enhancing computing creates private datasets for individuals is by using strong encryption methods in combination with other technologies. Several techniques combine to make up the privacy-enhancing computation.

K.Akshaya
20RH1A04A9
III ECE B

PLASTIC SOLAR CELLS



A new generation of solar cells is been developed by researchers in which plastic is used to protect the technology and serve as the photovoltaic material itself. Even though there have been multiple advances in the last few years, recent research and studies conducted have led to significant improvements in this technology.When it comes to generating renewable energy, solar cells have been used for decades. Plastics have always played a secondary role. For example, plastics are used to connect and protect the parts of solar panels. However, with the world's population increasing rapidly, there is a rising demand for a sustainable and cost-effective solution. An upgrade to the conventional solar cell design could be the answer.

Plastic solar cells consist of a plastic layer on glass or a flexible foil. In the lab, we use glass plates with a transparent electric contact [the positive (+) pole]. On top of this contact, we put the ink for the active layer which is the part of the solar cell that converts sunlight to electricity. This ink contains two polymers, a long green one and a shorter red one. The polymers form a mixed layer. On top of that layer, we put a metal layer, which functions as the negative (−) pole. We then turn the whole stack of layers upside down such that sunlight can shine through the glass into the active layer. To revolutionize the way we distribute and collect energy from the sun, plastic solar cells are now being designed and tested. They are becoming the major focus of the solar power industry because of their incredible properties such as cost-effectiveness, flexibility, and lightweight.

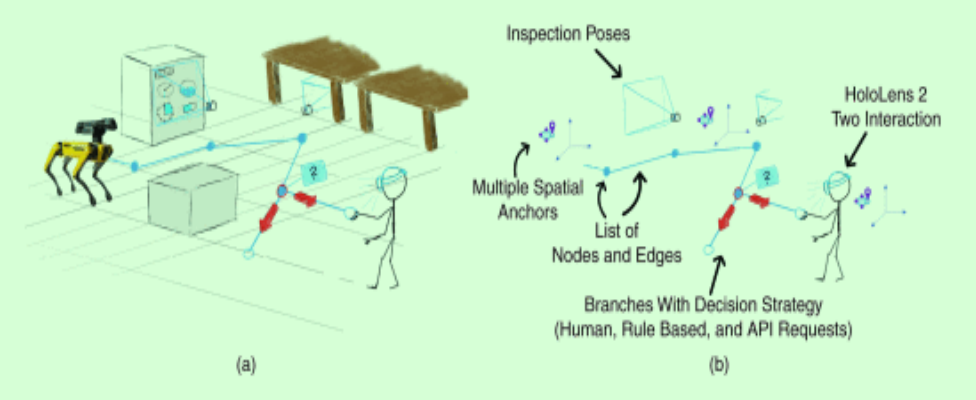
B. Devi Sree
20RH1A0428
III ECE A

SAILENT SOUND TECHNOLOGY

SST is a technology for devices that helps for communication purpose in the nasty environment. The uses of this technology are immense for people who are vocally challenged or have been rendered mute due to some accidents or others. Lip detection is a complex problem because of high variability range of lip shapes & colour . Lip-reading is an inference and inspired guesswork because of fast speech, poor pronunciation, bad lighting, faces turning away, hands over mouths, moustaches and beards etc. Lip Tracking is one of the biometric systems based on which a genuine system can be developed. With multiple levels of video processing, it's possible to obtain lip category of techniques referred to as model based, build a model of the lips and its configurations are described by a set of model parameters . Most of these techniques include tracking of the lip in sound speech may be with different accent & other facial parts consideration. Our effort is to work on silent speech which means no sound is incurred; a device oriented package to design and implement for the purpose of lip reading that can recognize mandarin words, single sentence or even continuous sentences of the people of different regions in China country considering their non-speech accent and pronunciation by observing their every movement of the lip and facial expression

M. Meghana
20RH1A04D8
III ECE C

SPATIAL COMPUTING AND INTUITIVE INTERACTION: BRINGING MIXED REALITY AND ROBOTICS TOGETHER



Spatial computing—the ability of devices to be aware of their surroundings and to represent this digitally—offers novel capabilities in human–robot interaction. In particular, the combination of spatial computing and egocentric sensing on mixed reality (MR) devices enables robots to capture and understand human behaviors and translate them to actions with spatial meaning, which offers exciting possibilities for collaboration between people and machines. This article presents several human–robot systems that utilize these capabilities to enable novel use cases: mission planning for inspection, gesture-based control, and immersive teleoperation. These works demonstrate the power of MR as a tool for human–robot interaction and the potential of spatial computing and MR to drive future developments.

This article presented several prototype systems that utilize robots and MR devices to provide novel solutions to compelling real-world applications through human–robot interaction. The two key technologies that enable these solutions are the spatial computing and egocentric sensing capabilities of MR devices. All three systems make use of one or both of these to provide

Arshanaz
20RH1A0415
III ECE A

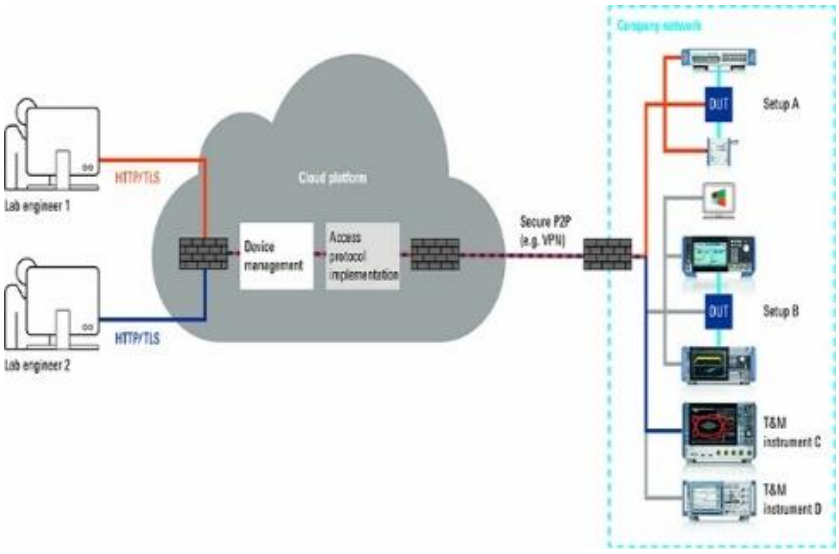
DIGITAL AERONAUTICAL RADIO

Aeronautical radio communications between the cockpit and the tower is one of the few radio domains that still uses analog modulation. Since 1948, aeronautical radio based on double sideband amplitude modulation (DSB AM) has continued to be used due to its proven robustness and reliability as well as its low implementation costs. However, supplementary narrowband radio data communications methods, such as VDL mode 2 with its low transmission rate of only a few kilobits per second, have long since reached their limits. Which is why research and development on a modern ATC radio data communications system began several years ago.

As part of the ICONAV and MICONAV programs funded by the Federal Ministry for Economic Affairs and Energy, a German consortium led by Rohde&Schwarz has now developed a demonstrator for the new method and verified its functionality and capability in flight tests. Dubbed the “L-band digital aeronautical communications system” (LDACS), the new technology is up to 200 times faster than VDL mode 2. It transmits voice and data, enables message -prioritization, has low latency and an ensured -quality of service, and uses strong encryption for protection against cyberattacks. It can also be used to obtain navigation data to back up satellite navigation and ground based landing approach systems. LDACS avoids interference by using the gaps in the frequency bands reserved for aeronautical radio, so existing radio infrastructures do not need to be changed. The system can be deployed in stages as a supplementary service, for example starting with major airlines hubs.

K. Shravani
20RH1A04A8
III ECE B

COLLABORATIVE MEASUREMENT VIA CLOUD

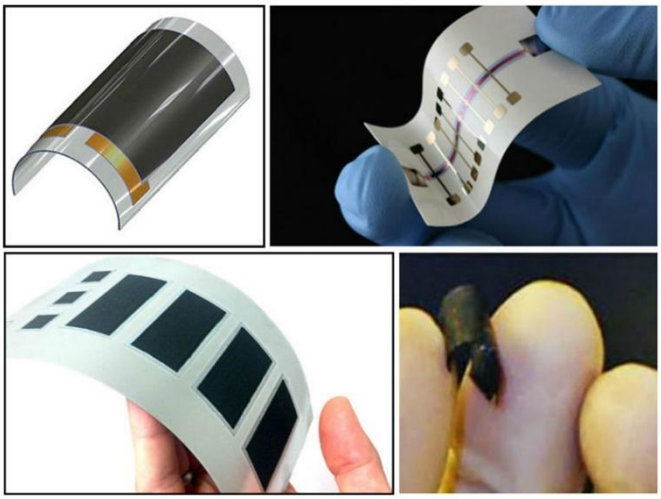


Everything as a service (EaaS) is the latest trend, and it is becoming more and more popular. Users of such services, most of which are based on cloud technology, save on capital expenditures because they do not have to maintain the underlying infrastructure and only pay for the services © vander / Shutterstock.com GENERAL PURPOSE Cloud platform Company network Lab engineer 1 Secure P2P (e.g. VPN) Lab engineer 2 HTTP/TLS HTTP/TLS Access protocol implementation Device management T&M instrument C Setup B Setup A T&M instrument D DUT DUT they actually use. In addition, these services are usually highly scalable, so users can count on the required capacity being available.

A prerequisite for moving a service to the cloud is that it can be virtualized. At a virtual sales counter, the user simply books a service based on type, time, scope and quality. The cloud management system allocates the necessary resources. Such systems, which are typically offered by large cloud operators for various tasks, can also be set up on a smaller scale for test and measurement services. These differ from typical software as a service (SaaS) solutions with regard to the type of service and the resources. A company that wants to virtually pool all or a part of its T&M equipment to make it accessible companywide from any location only has a limited number of each type of T&M instrument in its portfolio, and unlike a server, each instrument can only be used for one measurement task at a time. Scalability is not the main consideration here.

K. Shirisha
20RH1A04A4
III ECE B

PAPER BATTERY



A paper battery is an electric battery which was engineered to use a spacer formed largely of cellulose -the major constituent of paper. This helps incorporates nano-scale structures to act as high surface-area electrodes to perk up conductivity.

In addition to being unusually thin, paper batteries are more flexible and environmentally-friendly compared to other batteries. These batteries allow integration into a wide range of products; and their functioning is similar to conventional chemical batteries with a significant difference that they are non-corrosive and do not require widespread housing.

This battery produces electricity in the same way as the conventional lithium-ion batteries, but all the components that have been incorporated into are lightweight, flexible sheet of paper.These devices are formed by combining cellulose with an infusion of aligned carbon nanotubes.The electrolyte and the ions that carry the charge can be varied depending the use of the battery.A conventional Li-ion battery can be incorporated in cellulose-nanotube composite as shown in the blow image.The creation of the Paper Battery drew from a diverse pool of disciplines, and these batteries require expertise in materials science, energy storage, and chemistry. However, in August 2007, a research team at Rensselear Polytechnic Institute Led by Drs. Robert Linhardt, John H. Broadbent, Pulickel M. Ajayan, Omkaram Nalamasu with a joint meeting in Material Science and engineering developed the Paper Battery, which is also known as Nano Composite Paper. In December 2009,Yi Cui and his team at Stanford University successfully made an actual prototype .

K. Ruchitha
20RH1A04B3
III ECE B

THE BLUE BRAIN

"BLUE BRAIN"- The name of the world's first virtual brain. That means a machine that can function as human brain.

"Blue Brain"; offer a better understanding of human consciousness. It's an actual "computer brain' that may eventually have the ability to think for itself. When it was first fed electrical impulses, strange patterns began to appear with lightning-like flashes produced by "cells' that the scientists recognized from living human and animal processes. "It happened entirely on its own“

Advantages

- •Cracking the Neural Code.
- •Understanding Neocortical Information Processing.
- •A Novel Tool for Drug Discovery for Brain Disorders
- •Foundation for Whole Brain Simulations.

K. Rishitha
20RH1A04B5
III ECE B

CAMFECTING ATTACK

Most of us have in-built cameras on our phones, tablet, laptop, desktop or use webcam for work. On browsing, you will find certain hacked wireless home security cameras list. Anyone can hack your webcam if they know the commands and programming. Hackers can take selfies from your webcam without letting you know. In normal cases, when we open our webcam we can see a light near the webcam it means your webcam is on. But when your webcam gets hacked then you won't see any light near the webcam.More over won't open any kind of links which you get in your whatsapp or anywhere else. Because there are some tools from which the hackers will take the selfie of you and they will post in social media or in other sites.

With those tools the hacker will generate the link and will send it to the victim. When the victim clicks on that link then automatically the selfie camera will capture the picture of you and it will send it to the hacker. Until he stops, your camera will capture your selfie. By using those pictures he will post on dating sites and other sites where he can attract other people by posting your pics in those apps.

If you have any antivirus which is a paid one, not a trial once then you will get the alerts whenever you are connected to the internet. When some exploits try to enter into your system then the antivirus will stop those exploits from entering into your device. I'm not saying that Anti-Virus will stop you but it will alert you when any website is trying to access your webcam. Sometimes no antivirus will alert you while it is accessing the webcam because some malware or virus can't be detectable to the antiviruses also.

N. Supriya
20RH1A04G0
III ECE C

BIG DATA: A QUALITY FRAMEWORK

Big Data is an essential research area for governments, institutions, and private agencies to support their analytics decisions. Big Data refers to all about data, how it is collected, processed, and analyzed to generate value-added data-driven insights and decisions. Degradation in Data Quality may result in unpredictable consequences. In this case, confidence and worthiness in the data and its source are lost. In the Big Data context, data characteristics, such as volume, multi- heterogeneous data sources, and fast data generation, increase the risk of quality degradation and require efficient mechanisms to check data worthiness. However, ensuring Big Data Quality (BDQ) is a very costly and time-consuming process, since excessive computing resources are required. Maintaining Quality through the Big Data lifecycle requires quality profiling and verification before its processing decision. A BDQ Management Framework for enhancing the pre-processing activities while strengthening data control is proposed. The proposed framework uses a new concept called Big Data Quality Profile. This concept captures quality outline, requirements, attributes, dimensions, scores, and rules. Using Big Data profiling and sampling components of the framework, a faster and efficient data quality estimation is initiated before and after an intermediate pre-processing phase. The exploratory profiling component of the framework plays an initial role in quality profiling; it uses a set of predefined quality metrics to evaluate important data quality dimensions. It generates quality rules by applying various pre- processing activities and their related functions. These rules mainly aim at the Data Quality Profile and result in quality scores for the selected quality attributes. The framework implementation and dataflow management across various quality management processes have been discussed, further some ongoing work on framework evaluation and deployment to support quality evaluation decisions conclude the paper.

P. Kanishka Sai
20RH1A04H0
III ECE C

ELECTRIC CARS

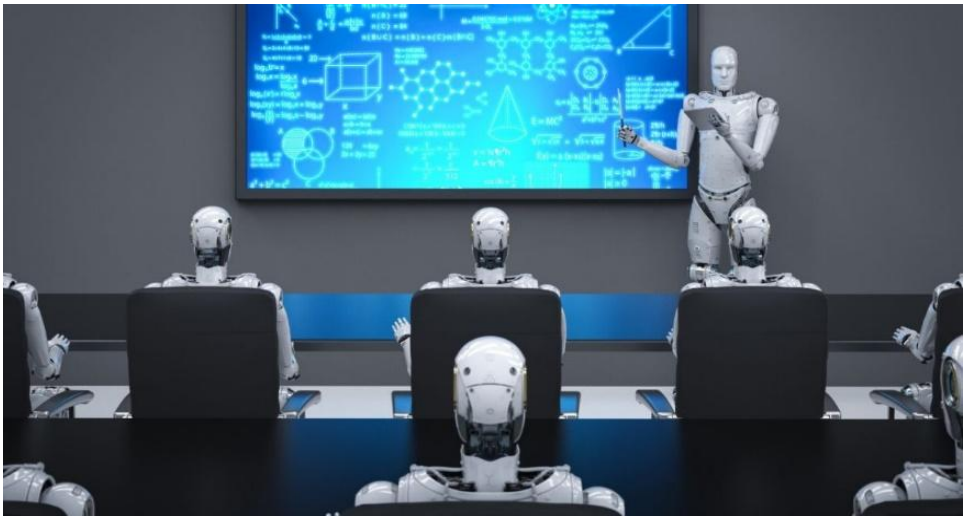
An electric cars is a car that is propelled by one or more electric motors, using energy stored rechargeable batteries. Compared to internal combustion engine(ICE)vehicles electric cars are quitter, have no exhaust emissions, and lower emission overall.There are few different types of electric cars .some run purely on electricity, these are called pure electric vehicles. and some can also be run on petrol or diesel, these are called hybrid electric vehicles.

The advantages are :

- These are better to the environment, electricity can be renewable, gasoline can't
- These requires less expensive and less frequent maintenance.

P.Sreeja
20RH1A04H5
III ECE C

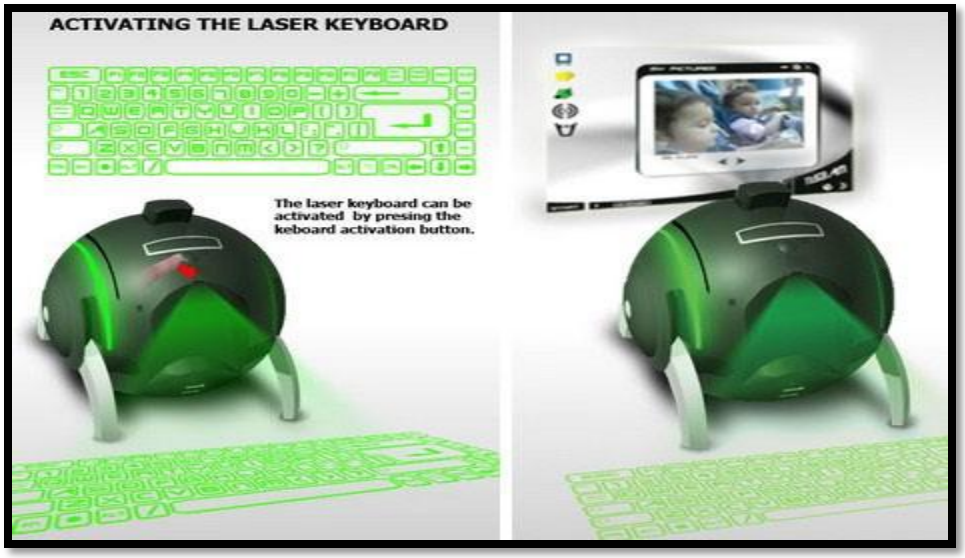
ROBOTS IN BOARD ROOM



Artificial intelligence and corporate law promises to be dynamic Due to its rapid technological development, artificial intelligence will enter corporate boardrooms in the very near future. This paper explores the interplay between artificial intelligence and corporate law, and analyzes how the two fit together. Do current corporate law rules match the challenges posed by artificial intelligence, or do they need to be adapted? More specifically, the paper focuses on the directors of corporations. We consider the extent to which human directors should be allowed – or required – to rely on artificial intelligence. Moreover, technology will probably soon offer the possibility of artificial intelligence not only supporting directors, but even replacing them. Another question is therefore whether or not such a replacement is legally admissible. At any rate, the legal strategies currently adopted by corporate law are tailored to human directors. The paper tests whether those strategies would still be suitable for boardrooms filled with robo-directors. It concludes that corporate law is highly relevant for the use of artificial intelligence in corporations, but that it will also need to be adapted to the challenges posed by this technology. In that sense, the interplay between in both directions.

D.Suddepthi
20RH1A0459
III ECE A

AI-BASED ON E-BALL TECHNOLOGY



The E-ball is a sphere shaped computer concept which is the smallest design among all the laptops & desktops have ever made. The PC concept features all traditional elements like mouse, keyboard, large screen display etc. All in an innovative manner. The E-Ball is a sphere shaped computer concept which is the smallest design among all the laptops and desktops have ever made. This PC concept features all the traditional elements like mouse, keyboard, large screen display, DVD recorder, etc, all in an innovative manner. E- Ball is designed to be placed on two stands, opens by simultaneously pressing and holding the two buttons located on each side. After opening the stand and turning ON the PC, pressing the detaching mouse button will allow you to detach the optical mouse from the PC body. This concept features a laser keyboard that can be activated by pressing the particular button. There is no external display unit, a projector will pop up by pressing and holding the button and focus the computer screen on the wall which can be adjusted with navigation buttons. If there is no wall around, the paper sheet holder, divides into three pieces like an umbrella just after popping up, will help to focus the desktop on a paper sheet.

M. Rishitha
20RH1A04E7
III ECE C

BLOCK CHAIN TECHNOLOGY

A block chain is a system of recording information in such a way that makes it difficult or impossible to change, hack or cheat the system. A block chain is essential a digital ledger of transaction that is duplicated or distributed across the entire network of computer systems on block chain. Block chain is a type of DLT in which transactions are recorded with an immutable cryptographic signature called a hash. The goal of block chain is to allow digital information to be recorded and distributed, but not edited, in this way block chain is the foundation for immutable ledgers, or records of transactions that cannot be altered, deleted or destroyed. It is expected that block chain will expand the scope of usability in many more sectors including finance data analysis, and the Internet of things with the advent of 5G.Usage of block chain system in different sectors a part from crypto currencies and NFTs can easily save time, money and can solve many problems. Although the block chain technology is older than Bit coin, it is a core underlying component of most crypto currency networks, acting as a decentralized, distributed and public digital ledger that is responsible for keeping a permanent record (chain of blocks) of all previously confirmed transactions. As a distributed ledger technology (DLT) the block chain is intentionally designed to be highly resistant to modification and frauds (such as double-spending).

K. Keerthana
20RH1A04M7
III ECE D

MEMORABLE EVENTS

ORIENTATION DAY – 2K22

AWARENESS PROGRAMME ON HIGHER EDUCATION-ABROAD

MEDHA – 2K22






BATHUKAMMA CELEBRATIONS



INDEPENDENCE DAY CELEBRATIONS

GO GREEN – 2K22

ALUMNI TALK

Placement Experience : From 3-2 semesters students become eligible for campus placements and many companies like TCS, Infosys, Wipro, cognizant, Accenture, and Capgemini visit our college every year and many of the students get selected by these companies there is a 100% track of placements in Mrecw

E. Sanjana Sai
B.Tech 2020 Passedout

Placement Experience :
From the 3-2 semesters the students are eligible for the placements. Many number of companies visit our college for placement like TCS,Wipro, Accenture, Capgemini, Cisco,Epam, Cognizant, etc. The highest package is 15 lakhs p.a

J. Nikhitha
B.Tech -2021 Passed Out

"MRECW- my place of learning, loving and living with a lots of happiness"

Positive are many I'm very glad that I came to this college i have to bad affect. after coming here I even changed some of my attitude and even managed my anger it was all because of my HOD and teachers. they helped me allot in all factors.

B. Purna Chandrika
17RH1A0435

IMPORTANT WEBSITES

www.ieee.org/india

www.engineering.careers360

www.technologyreview.com

www.mathworks.in/products/matlab/

www.microwaves101.com/

www.ece.utoronto.ca/student-life-links

https://www.ece.org/

Science Commons.org

MathGV.com:

http://www.engineeringchallenges.org/

http://engineering.stanford.edu/announcement/stanford-announces-16-online-courses-fall-quart

http://www.tryengineering.org/

http://www.engineergirl.org/

http://www.discoverengineering.org/

http://www.eng-tips.com/

http://efymag.com

http://efymagonline.com/

http://electronicsforu.com

www.dspguide.com

www.howstuffworks.com

http://nptel.iitm.ac.in

http://www.opencircuitdesign.com/

http://www.futuresinengineering.com/

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