Spiral Spectrum

2020-21

Volume-01

[AUG-NOV]

Department of Electronics and Communication Engineering

(Accredited By NAAC & NBA)

Acharya Institute of Technology,

Dr.Sarvepalli Radhakrishnan Road, Soladevanahalli, Bengaluru-560107, Karnataka, India.

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Vision and Mission

Institute

Motto

"Nurturing Aspirations Supporting Growth"

Vision

"Acharya Institute of Technology, committed to the cause of sustainable value-based education in all disciplines, envisions itself as a global fountainhead of innovative human enterprise, with inspirational initiatives for Academic Excellence".

Mission

"Acharya Institute of Technology strives to provide excellent academic ambiance to the students for achieving global standards of technical education, foster intellectual and personal development, meaningful research and ethical service to sustainable societal needs."

Department

Vision

"To be a premier engineering department with excellence in teaching, research and innovation to meet the global industrial standards and to have significant impact on the well being of the society".

Mission

- To provide student centric learning environment, inculcate profound knowledge in both fundamental and applied areas of science and technology.

- To train and mentor the students in developing leadership qualities and team building skills along with professional ethics.

The Acharya emblem with motto and mission

Admin Block

View of EC block

View of Central Library

PEO's and PSO's

Program Educational Objectives (PEO's)

PEO 1

Students shall have a successful professional career in industry, academia, R & D organization or entrepreneur in specialized field of Electronics & Communication engineering and allied disciplines.

PEO 2

Students shall be competent, creative and valued professional in the chosen field.

PEO 3

Engage in life-long learning and professional development.

PEO 4

Become effective global collaborators, leading or participating to address technical, business environmental and societal challenges

Program Specific Outcomes (PSO's)

PSO 1

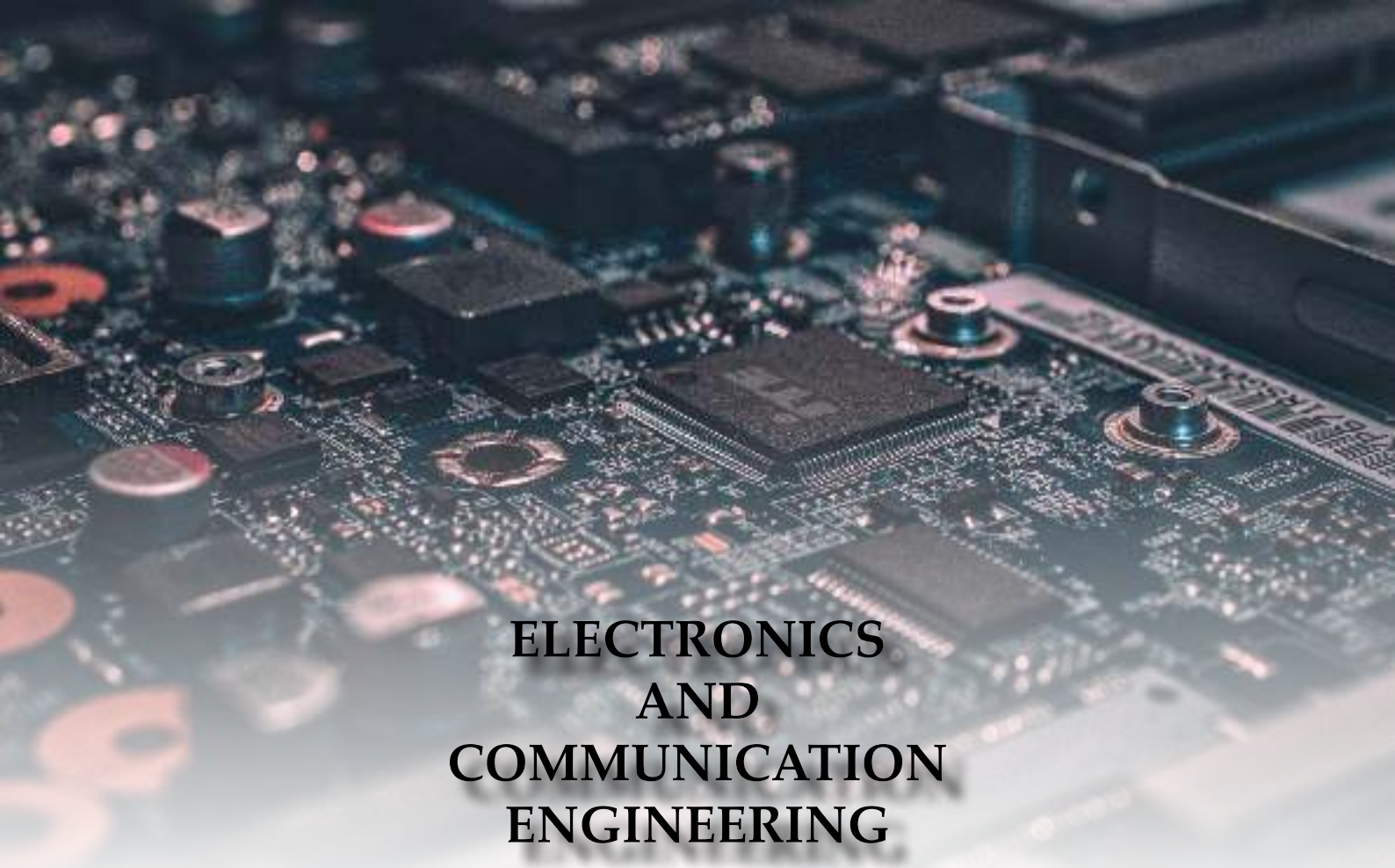
Analog / Digital Circuit Design: Apply the conceptual knowledge in the analysis and/or design; evaluate analog/digital circuits and systems

PSO 2

VLSI, Signal Processing and Embedded Systems: Demonstrate technical competency in the analysis,
Design and validation of components in VLSI, Signal Processing, and Embedded Systems.

PSO 3

Communication and Networking: Apply the domain knowledge In the implementation and performance analysis of Communication Systems and Computer Networks



ELECTRONICS AND COMMUNICATION ENGINEERING

The department of ECE, accredited by NBA was established in the year 2000 affiliated to Visvesvaraya Technological University (VTU), recognized by All Indian Council for Technical Education (AICTE), offers regular full time UG, PG & research program, has pioneered in carving the careers of its students and helping to acquire the necessary skills required for continuous growth with significant impact toward society.The department has qualified and experienced faculty members with specialization in Communication Engineering, Signal Processing, VLSI & Embedded Systems, the ongoing research activities include the areas of Signal Processing, VLSI, Smart Antenna System, Robotics, Artificial Intelligence, Machine Learning, Communication & Networking. The department facilitates well equipped laboratories strengthened by software like Cadence for VLSI Design, MATLAB. Development boards available are used by UG/ PG students for projects and research activities. The department facilitates skill development activities like workshops / summer-winter schools/ internships/contests in collaboration with industries like SASKEN Technologies, Schneider Electric, Moog India, GK Machineries and robotics, sandlogic, etc. The department has an MOU with institutes across the globe for student/ faculty exchange programmes. To enhance the knowledge on current trends, the department has conducted various Faculty Development Programmes, Workshops on DSP Algorithms and Architectures, VLSI, Sensors and Robotics sponsored by Indian Society for Technical Education (ISTE) and All India Council for Technical Education (AICTE) during the previous years. Department aims at holistic approach toward the development of students and society at large through building technical skill and managerial quality.

TAKING THE DEPARTMENT TO THE NEXT LEVEL

CHAIRMAN'S MESSAGE

At Acharya Institutes, we believe in **'Fueling the quest for knowledge'.**

In doing so, our commitments pave the way for the individual professional success which culminates in benefiting the society. Creating a vast state-of-the-art academic infrastructure, putting together best teaching talent, equipping with every required learning aid ensure that students at Acharya get the best in academics. Sporting, cultural and extra-curricular facilities are put in place so that the students enjoy their campus life. The wide range of Acharya academics encompasses Engineering, Management, Technology, Life Sciences, Pharmacy, Nursing, Teaching, Journalism, Communication, Fashion Design, etc. and has drawn aspiring youth from every part of India and across the globe. Acharya Institutes is truly emerging as the nurturing ground for leadership. It has become synonymous with practical and industry-focused education.

The fact that Acharyans, today, are a familiar face in the industry and the same is a demonstration of its total commitment to excellence in academics.

B Premnath Reddy
Founder Chairman

PRINCIPAL'S MESSAGE

I heartily congratulate the department of ECE, AIT for bringing the first issue of the prestigious half-yearly department News magazine "Spiral Spectrum -2020-21".

I am very much sure that it will provide a good platform for the students and faculty members to expand their technical knowledge and hidden literary talent which will strengthen the 360-degree development of students.

I take this opportunity to congratulate the editorial board for bringing out this magazine as per schedule, which in itself is an achievement considering the effort and time required. May all our students grow heights in uncharted skies and bring glory to the world.

Dr. Prakash M R
Principal, AIT

HOD'S MESSAGE

At the outset, I commend the efforts put in by the editorial team in bringing out the **"Spiral Spectrum Vol.1"**of the department news magazine.

As HOD of the department, I am proud of the commitment of the teaching and non teaching fraternity in the holistic development of the young minds by providing students centric learning environment, developing leadership qualities and team building skills along with professional ethics in them.

My best wishes with all the students and staff of ECE

Happy Reading !

Dr. Rajeswari
HOD,ECE

FROM THE EDITOR'S DESK

Greetings EChoes!

This semester has been an incredibly different semester with immense change. The year 2020 has posed unprecedented challenges to our lives and academics,nevertheless Technology has come to our rescue and online classes have become our new normal. Amidst all the challenges we still had a successful placement drive.

The new normal of attending classes from home ,it's not just a rescue measure but was a boon that has caused a change in our routines, and opened a way to discover some hidden talents and reflect on areas that were unnoticed.

The EChoes of Acharya have come together with some amazing productive outcomes of this quarantine which includes photography, art,poetry and many more activities waiting to be explored.

We bring forth to you **Spiral Spectrum.**

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Mrs. KALPAVI C Y
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Mr. SYED KASHIF ALI R
Mr. HRUTHIK REDDY A

Roll of Honor

2019 - 2020

SEM 1				
Sl. No.	U S N	NAME	%	TOPPERS
1	1AY19EC028	CHANDRASHEKAR N	91.5	I
2	1AY19EC008	AKARSH C J	87.13	II
3	1AY19EC059	OMKAR.S	86	III
4	1AY19EC060	PALLAVI S	86	III

SEM 2				
Sl. No.	U S N	NAME	%	TOPPERS
1	1AY19EC028	CHANDRASHEKAR N	91.13	I
2	1AY19EC046	KUMARI PRIYANKA	90.25	II
3	1AY19EC059	OMKAR.S	90.13	III

SEM 3				
Sl. No.	U S N	NAME	%	TOPPERS
1	1AY18EC107	SINDUSHREE.R	90.11	I
2	1AY18EC071	PAVAN P	87.33	II
3	1AY18EC114	SUSHMA	86.78	III

SEM 4				
Sl. No.	U S N	NAME	%	TOPPERS
1	1AY18EC107	SINDHUSHREE R	93.44	I
2	1AY18EC114	SUSHMA	90.33	II
3	1AY18EC071	PAVAN P	90.11	III

SEM 5				
Sl. No.	U S N	NAME	%	TOPPERS
1	1AY17EC030	JANANI	90	I
2	1AY17EC088	SYED ABDUL GAFFAR SHAKHADRI	88	II
3	1AY17EC086	PRAKRUTHI A M	86	III

SEM 6				
Sl. No.	U S N	NAME	%	TOPPERS
1	1AY17EC030	JANANI B	93.75	I
2	1AY17EC088	SYED ABDUL GAFFAR SHAKHADRI	91.88	II
3	1AY17EC060	PRAKRUTHI A M	89.88	III

SEM 7				
Sl. No.	U S N	NAME	%	TOPPERS
1	1AY16EC099	SPOORTHI	85	I
2	1AY16EC045	MANJUNATH GANAPATI HEGDE	82.5	II
3	1AY16EC100	SRIKANTH REDDY L	81.63	III

SEM 8				
Sl. No.	U S N	NAME	%	TOPPERS
1	1AY16EC105	SUMAN B C	89	I
2	1AY16EC088	RAHUL M	88	II
3	1AY16EC045	MANJUNATH GANAPTHI HEGDE	86	III

"Magic is believing in yourself, if you can do that, you can make anything happen"

- Johann Wolfgang von Goethe

ACHARYA

Faculty Details

FACULTY DETAILS (2020-21)
TEACHING STAFF

Dr. Rajeswari
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Dean For Circuit Branches
Professor
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Specialization: Image Processing

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Specialization: VLSI Design and Embedded systems

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Assistant Professor

Specialization: Antenna Engineering and Wireless Communication

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Specialization: Digital Electronics and Communication Systems

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Specialization: Digital Communication & Networking

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Specialization: Digital Electronics And Communication Systems

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Specialization: Electronics

Mr. Viswanatha V
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Specialization: Embedded Systems

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Mr. Guruprasad A G
AMIE,Dip. ECE

Mr. Vinod K R
Dip. ECE

Mr. Ravikumar K H
Dip. ECE

Mr. Suresh Kumar T G
Dip. ECE

Mrs. Kavitha H
B.Com,M.Com

" TEACHERS ARE THE BACKBONE OF ANY COUNTRY - PILLARS UPON WHOM ALL ASPIRATIONS OF THE COUNTRY ARE PLACED, AND THE ONES WHO CAN TURN THESE DREAMS INTO REALITIES. "

- A.P.J ABDUL KALAM

ACHARYA

ARTICLES FROM FACULTY

1. TOP 20 INNOVATION IN 2020
2. What makes Nanotechnology Special?
3. How will 5G Enrich Telecommunication Environment ?
4. CAN in Automobiles

TOP 20 INNOVATION IN 2020

1.Technology that can see

With the top existing computer vision SLAM systems (Simultaneous Localization and Mapping), a new technology has been developed at the University of Essex utilises deep learning neural networks to make easy for real-time localisation and simultaneous environment mapping, with the potential to disrupt robotics, healthcare and autonomous vehicles.

2. Biomimetic Wound Healing

Building on the discovery of a peptide secreted by Opisthorchis viverrini (the Southeast Asian liver fluke) that promotes tissue repair through a unique knotted structure, James Cook University researchers have used the peptide as the basis for a new treatment to enhance wound healing.

3. Recycling mixed-plastic products

With a view to improve the recyclability of multi-component, mixed plastic waste streams, researchers at the University of Minnesota have developed a compatibilizer that enables previously unusable plastic waste to be combined into new products.

4. Obliterating microbes

Researchers represented by the MU AIT ITC Knowledge Transfer Consortium in Ireland have developed a new biomaterial that exhibits broad-spectrum antimicrobial and biofilm disruptive activities, which has already shown

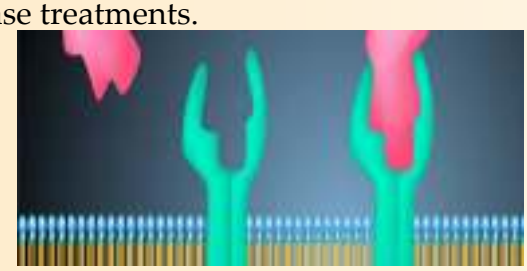
to be effective against mastitis, and could be utilised for additives/coatings as well as in industrial sterilisation processes.

5. Graphene balls

By wrapping electrochemically-active metal oxide nanoparticles in graphene, researchers at the Max Planck Society have created hybrid graphene nanoparticles and materials that exhibit remarkable properties with wide-ranging applications in energy storage, sensors, photovoltaics and optoelectronics.

P6. Bolstering treatments for auto immune disease

One of the triggers that results in the destruction and clearance of invading pathogens from the body, the complement split product C4d, has been shown by researchers at the Medical University of Vienna to trigger anti-inflammatory responses and decrease the production of pro-inflammatory factors, making it a potential new addition for autoimmune disease treatments.

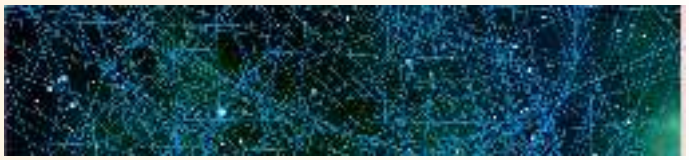


7. A circular economy for plastic

With 60% of all the plastics ever produced buried in landfill, new work by scientists at the University of Oxford is addressing the vital need for more effective recycling processes by converting waste polymers back into their constituent monomers, creating a circular economy for the plastic industry.

8. Optimizing product development

Researchers working at the UK's Science & Technology Facilities Council have designed bespoke software to accelerate the development of chemical formulations – such as coatings, paints, agrochemicals and personal care products – that augments chemical experimentation to accelerate the speed, scale and scope of R&D.



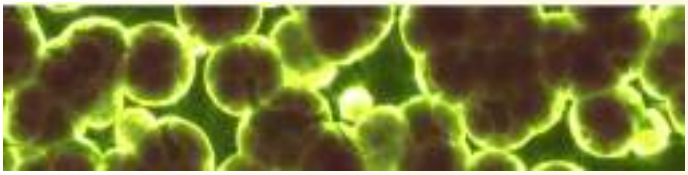
9. Ingredient transparency for household products

With a view to providing the consumer goods industry with viable options for natural ingredients, scientists at North Carolina State University have laid the foundation for a new green cleaning product that combines the antimicrobial properties of green tea with copper ions as an effective, safe, and fast-acting natural disinfectant.

10. Detecting microcolonies

Able to detect even the smallest numbers of pathogens – at 10 CFU (colony-forming units) per millimetre, with traditional methods unable to detect less than 1,000 CFU/mm – a new technology developed by a team of researchers at the Pacific Northwest National Laboratory promises to significantly cut down the time needed to detect microorganisms for food safety,

clinical diagnostics, homeland security.



11. Turning CO2 back into fuel

An efficient, zero-carbon, solar-induced carbon capture system is in development by researchers at The University of Adelaide to sustainably convert CO2, in combination with water, into useful fuels such as hydrogen and methane.

12. Multimodal wearable sensors

A team at Monash University have developed biometric sensors that can measure changes in pressure, strain, temperature and glucose levels with high accuracy, whilst even monitoring skin and muscle deformation, with wide-ranging applications in health, sport and behaviour monitoring.

13. Versatile motion sensing

By infusing elastic bands with graphene, Trinity College Dublin researchers have been able to create low-cost, highly-versatile strain sensors that exhibit unprecedented electrical and mechanical properties to accurately monitor position, velocity and acceleration changes across a range of biometric applications.

14. Detecting disease from a patient's breath

To detect the presence of diseases or infections, a team of researchers at Sandia National Laboratories have built upon decades of chemical analysis research to develop a point-of-care diagnostic that can pick-up on illnesses from signature volatile organic compounds in a patient's breath or biological fluids.

15. Shape-changing dynamic surfaces

A new technology from researchers at the Max Planck Society has unlocked the possibility of creating magnetically-programmable active surfaces that can change shape in seconds with high spatial and temporal resolution for future applications in robotics, engineering, material science and medicine.

16. Upgrading antibiotics

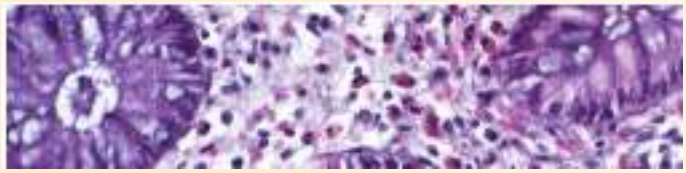
Scientists working at the University of Lincoln have developed a library of teixobactin analogues (a new, recently-discovered class of antibiotic) that show superior antimicrobial activity over their natural variant to push forward in the fight against multidrug-resistant bacteria.

17. Superomniphobic self-healing coatings

With the aim of creating a self-healing coating that repels both oil and water for the automotive, aerospace and electronics industries, a scientist at the University of Kansas has developed a new multi-layer material that restores its superomniphobicity even after mechanical damage.

18. A potential universal treatment for inflammatory bowel disease

Targeting the root cause of IBD – intestinal inflammation – researchers at the University of California, Irvine have developed a new treatment/management option that combines safe and readily available vitamins, shown in IBD mouse models to completely prevent intestinal inflammation.



19. A new type of paint

With the ambition of negating the negative environmental and health effects of traditional oil-based paints, researchers at Queen's University in Canada have developed a novel paint composition that has tailorable particle solubility, paving the way for a water-based paint that forms an insoluble coating when dry.

20. Biometric textiles

By integrating flexible sensor arrays within the fibres of textiles, researchers at North Carolina State University have developed a working prototype for a new biometric system that unlocks new parameters for wearable smart sensors, accurately measuring movement, heart/ respiratory rates and sweat levels.

For more information and related work visit:
https://in-part.com/blog/top-innovations-for-2020/

- Mrs. Kalpavi CY
Assistant Professor

Techno Facts

The man known as the Father of Information Theory,

Claude Shannon,

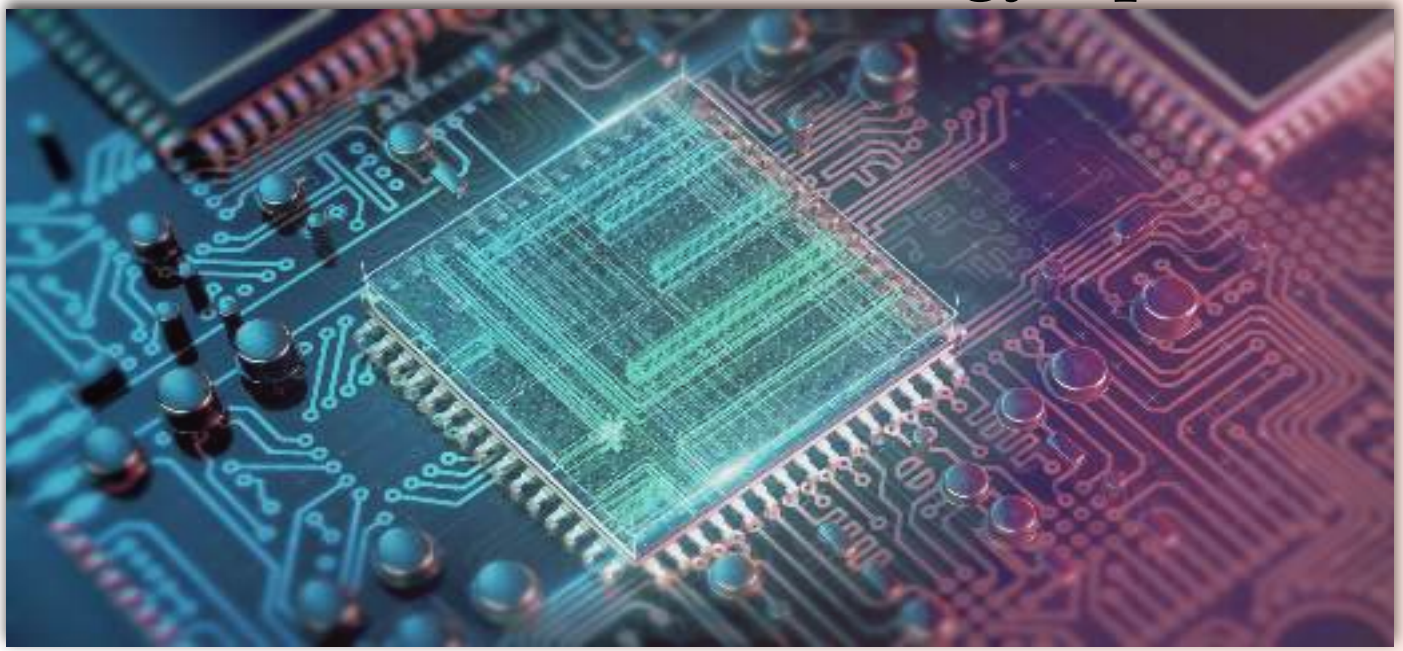
invented the digital circuit .

The foundation of the magic that provides us all access to the Internet to-day - during his master's degree program, when he was just 21 years old.

Vladimir Lukyanov

built a computer that ran on water in 1936 which solved partial dif-ference equations

What makes Nanotechnology Special?

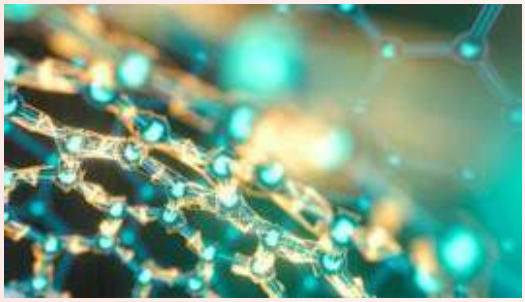


The first working transistor, built by Bell Labs' John Bardeen, Walter Brattain, and William Shockley in 1947, considered around 1 cm. At present, logic transistor density has 100 million transistors per square millimeter. That means that the same surface area of Bell Labs' original transistor can now contain more than 10 billion transistors.

Nanotechnology is to fabricate any type of material or product permissible under the laws of physics and chemistry. Nanotechnology has significantly contributed to foremost advances in computing and electronics, leading to faster, smaller, and more transferable systems that can deal with storage of larger amounts of data.

Nanotechnology can be usedW to fabricate smaller, faster computer chips for more efficient computers, mobile phones or navigation systems. It leads to new lasers like the quantum dot laser which enable faster communication and new powerful data storage systems. Nanotechnology has enhanced data storage capacity of memory devices like hard discs, memory chips due to use of magneto resistance heads by adopting science of magneto resistance. Metallic silver particles are

used to coat the surfaces for optical storage applications too. There are lots of biomedical applications of Nanomaterials. The technology helps in the fabrication of Stronger, lighter, biocompatible, multifunctional devices. In addition to this, nano particles are electrically so active that they inhibit the growth of harmful bacteria and fungus.



Nontechnology has developed Varity of products such as the nano silver seal refrigerator and washing machines that use nano-coating to create germ-free environment. Nanomaterials have also been incorporated in clothing world with wrinkle free and stain repellent threads and fabrics that can repel water too. These cloths can remain cool in summer and hot in winter. This is by attaching molecular structures to cotton fibers to prevent absorption.

Nanotechnology has wide application in the field of Cosmetics too. Many cosmetic materials contain nano particles which activate ingredients to go deep into skin layers. Now a days sun screen lotions are made up of nano dispersed Zinc Oxdies which provides broad spectral absorption range including ultraviolet.

- **Dr. Jayalaxmi H**
Associate Professor

Techno Fact

A Siemens SMT line can place a component as small as 01005 (0.4 mm x 0.2 mm) on a board. It is so tiny you would need a microscope to see it.

How will 5G Enrich Telecommunication Environment ?

In the new exciting era of 5G, new communication requirements pose challenges on existing networks in terms of technologies and business models. The next-generation mobile network must meet diversified demands. The International Telecommunication Union (ITU) has classified 5G mobile network services into three categories: Enhanced Mobile Broadband (eMBB), Ultra-reliable and Low-latency Communications (uRLLC), and Massive Machine Type Communications (mMTC). eMBB aims to meet the people's demand for an increasingly digital lifestyle, and focuses on services that have high requirements for bandwidth, such as high definition (HD) videos, virtual reality (VR), and augmented reality (AR). uRLLC aims to meet expectations for the demanding digital industry and focuses on latency-sensitive services, such as assisted and automated driving, and remote management. mMTC aims to meet demands for a further developed digital society and focuses on services that include high requirements for connection density, such as smart city and smart agriculture.

To meet this demand, eMBB introduces two significant improvements:

1) Shifting to cmWave and mmWave band of spectrum to achieve much higher bandwidth allocation and reachability.

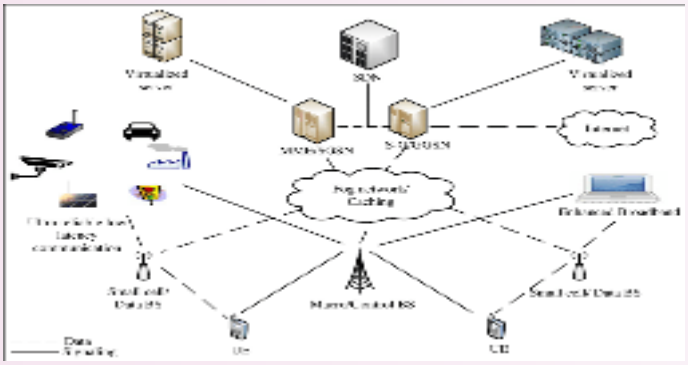
2) To enable massive MIMO and Beamforming, designing advanced antenna array that has hundreds of Tx/Rx antenna elements The initial deployment of 5G Non-Standalone (NSA) focuses on eMBB, this offers higher network capacity and modest latency enhancements for both 5G NR and 4G LTE. A multi-tier ranked network deployment (i.e., small cells underlying macro-cells) is intended to expand wireless network coverage.At the same time, in the wired core network, the availability of system routers, computationally efficient servers and physical links with high frequency transmission is surged to handle high traffic volumes and respond timely to demands for assistance.

Network Transformation

The existing mobile network architecture was designed to meet requirements for voice and conventional MBB services. However, this previous organization has proven to be insufficiently flexible to support diversified 5G services due to multiple 3GPP version upgrades, a large number of NEs, complex interfaces. The development is seen towards the user terminals as a focus of the 5G mobile networks. The terminals will have access to different wireless technologies at the same time and the terminal should be able to combine different flows from different technologies. The vertical handovers should be avoided, because they are not feasible in a case when there are many technologies and many operators and service providers. In 5G, each network will be responsible for handling user-mobility, while the terminal will make the final choice among different wireless/mobile access network providers for a given service. Such choice will be based on open intelligent middleware in the mobile phone.

Architecture of 5G

IP based model for wireless and mobile networks interoperability. The system consists of a user terminal (which has a crucial role in the new architecture) and a number of independent, autonomous radio access technologies. Within each of the terminals, each of the radio access technologies is seen as the IP link to the outside Internet world. However, there should be a different radio interface for each Radio Access Technology (RAT) in the mobile terminal. For example, if we want to have access to four different RATs, we need to have four different accesses - specific interfaces in the mobile terminal, and to have all of them active at the same time, with aim to have this architecture to be functional.



What 5g Technology Offers?

5G technology is going to be a new mobile revolution in the mobile market. Through 5G technology now you can use worldwide cellular phones and this technology also strikes the china mobile market and a user being proficient to get access to Germany phone as a local phone. With the coming out of cell phones alike to PDA now your whole office in your fingertips or in your phone. 5G technology has extraordinary data capabilities and has the ability to tie together unrestricted call volumes and infinite data broadcast within the latest mobile operating system. 5G technology has a bright future because it can handle best technologies and offer priceless handsets to their customers. Maybe in the coming days 5G technology takes over the world market. 5G Technologies have an extraordinary capability to support Software and Consultancy. The Router and switch technology used in 5G network providing high connectivity. The 5G technology distributes internet access to nodes within the building and can be deployed with union of wired or wireless network connections. The current trend of 5G technology has a glowing future.

Expanding the network footprint

5G networks will need a network of small cells with 5G antenna placed throughout the city, compared with the huge, geographically dispersed cell towers of the LTE technology. Infrastructure costs for the network footprint could be grouped under the following four areas:

- Upgrades to the traditional network
- Addition of new macro sites
- Creation of the new 5G layer
- Addition of small cells As emerging

technologies, such as 5G, IoT, and smart cities, will drive massive growth in data transactions, a robust infrastructure would be required to keep systems operational by providing uninterrupted power supply.

Most of this additional infrastructure will likely be built with small cells that use lamp posts, utility phones, or other similar-sized structures that can host smaller, less obtrusive radios required to build a densified network.

Tower and Infrastructure Providers Association (TAIPA) is also targeting to deploy diesel-free sites using efficient solutions, such as Li-ion batteries, advanced VRLA batteries, simple power panels, fuel cells, outdoor sites, free cooling units, and solar cooling units.

Coordination of multi-connectivity technologies

5G is expected to co-exist with LTE and Wi-Fi for an extended period of time incorporating multi-connectivity technologies and the new 5G air interface. Multi-connectivity technologies must be coordinated based on traffic and mobility requirements of user equipment to provide sufficient transmission throughput and mobile continuity

Shorter period of service deployment

Various services have expanded the mobile network ecosystem and increased network deployment complexity. Rapidly deploying new services requires an improved set of lifecycle management processes involving network design, service deployment, and O&M.

Sustainable environment

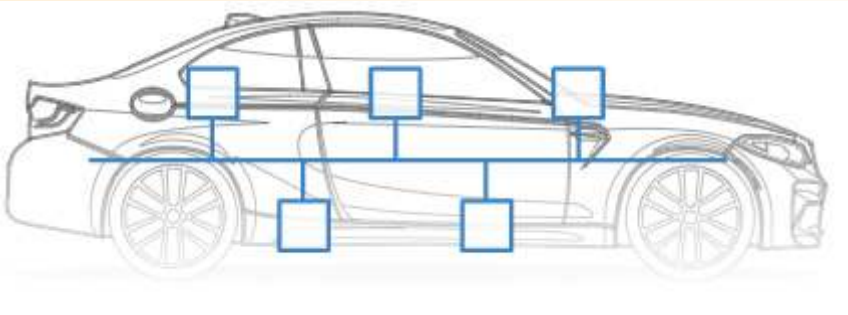
5G brings several capacity improving features, like spectral efficiency, new centimeter and millimeter frequency bands, massive MIMO and beam-formimg, and scalable lower radio latency. Introducing multi-connectivity improves reliability and capacity for end-to-end 5G. 5G also includes specific features that enable massive connectivity, and high throughput capabilities. Network Slicing and 5G together incorporate capabilities from technologies such as software-defined networking(SDN), NFV, orchestration, and analytics. These network slices will have a more important function, as they can be designed, deployed and customized although run on a common network framework. The sharing of this framework helps reduce its costs.

- **Mr. Devasis Pradhan**
Assistant Professor

Techno Fact

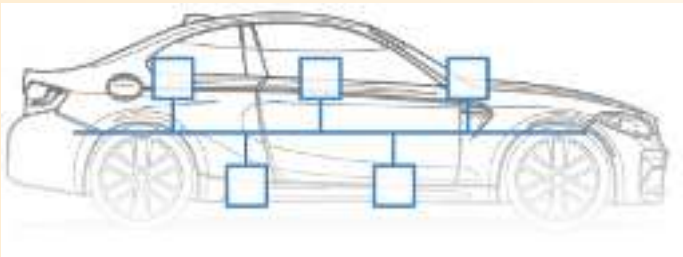
There are 6.8 billion people on the planet and 4 billion of them use a mobile phone.

CAN in Automobiles



Introduction

CAN is a robust serial communications bus which was designed by Bosch in the mid-1980 and has a maximum bitrate of one megabit per second .One of the main goals why CAN was invented is to reduce the wiring costs and complexity inside the vehicle. It is most suitable for systems where a small amount of information needs to be exchanged A modern car may have up to 70 ECUs - and each of them may have information that needs to be shared with other parts of the network.



Although it was originally intended for the automotive industry, it is also being used in other industries and control systems, such as medical devices, elevators, robotics, building automation and manufacturing. The CAN protocol was subsequently adopted as an ISO standard (11898) in 1993.

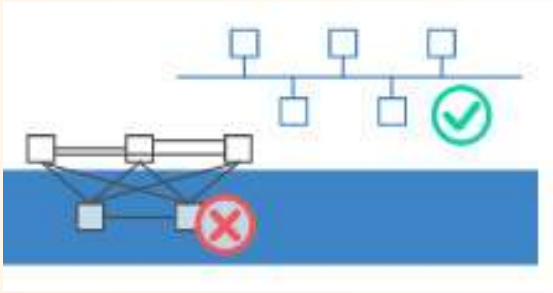
Top 4 benefits of CAN bus

The CAN bus standard is used in practically all vehicles and many machines due to below key benefits:

i) Simple & low cost

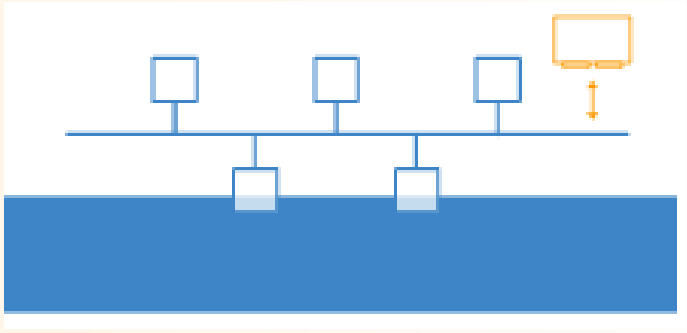
ECUs communicate via a single CAN system instead of via direct complex analogue signal lines - reducing errors, weight, wiring and costs.

ii) Fully centralized



The CAN bus provides 'one point-of-entry' to communicate with all network ECUs enabling central diagnostics, data logging and configuration.

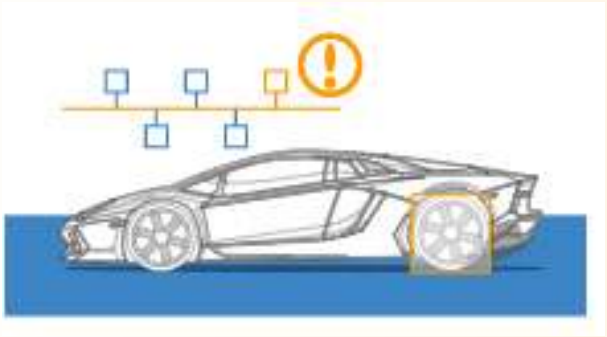
iii) Extremely robust



The system is robust towards electric disturbances and electromagnetic interference - ideal for safety critical applications (e.g. vehicles).

iv) Efficient

CAN frames are prioritized by ID so that top priority data gets immediate bus access, without causing interruption of other frames. **The**



CAN bus history in short

- Pre CAN: Car ECUs relied on complex point-to-point wiring.
- **1986**: Bosch developed the CAN protocol as a solution.
- **1991**: Bosch published CAN 2.0 (CAN 2.0A: 11 bit, 2.0B: 29 bit).
- **1993**: CAN is adopted as international standard (ISO 11898).
- **2003**: ISO 11898 becomes a standard series.
- **2012**: Bosch released the CAN FD 1.0 (flexible data rate).
- **2015**: The CAN FD protocol is standardized (ISO 11898-1).
- **2016**: The physical CAN layer for data-rates up to 5M bit/s standardized in ISO 11898-2.

The future of CAN bus

Looking ahead, the CAN bus protocol will stay relevant - though it will be impacted by major trends:

- The need for increasingly advanced vehicle functionality.
- The rise of cloud computing.
- The growth in Internet of Things (IoT) and connected vehicles.
- The impact of autonomous vehicles.

In particular, the rise in connected vehicles

and cloud will lead to a rapid growth in vehicle telematics and IoT CAN loggers. In turn, bringing the CAN bus 'online' also exposes vehicles to security risks - and may require a shift to new CAN protocols.

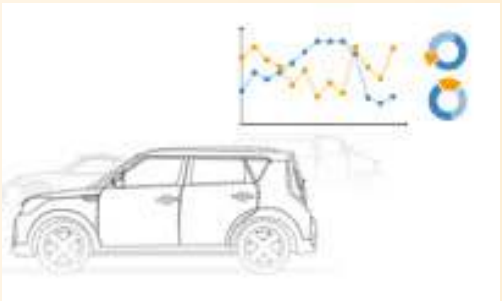
Logging CAN data

- example use cases

To record CAN data you need a CAN logger. This lets you log timestamped CAN data to an SD card. In some cases, you need a CAN interface to stream data to a PC - e.g. for car hacking. As mentioned, two CAN fields are important for CAN logging: The CAN ID and the Data.There are several common use cases for recording CAN bus data frames:

i) Logging/streaming data from cars

OBD2 data from cars can e.g. be used to

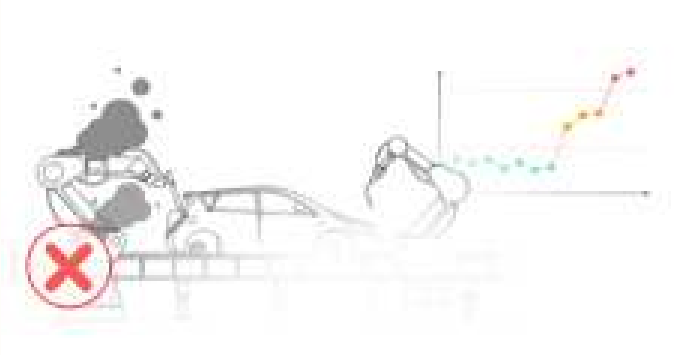


reduce fuel costs, improve driving, test prototype parts and insurance.

ii) Heavy duty fleet telematics

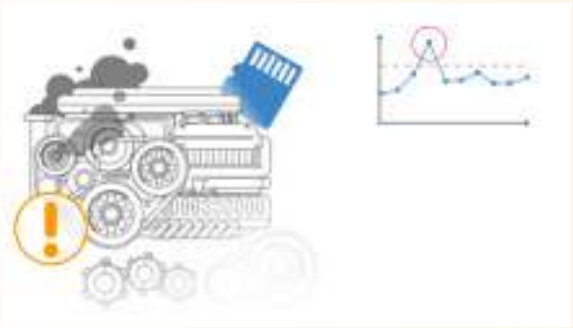
J1939 data from trucks, buses, tractors etc. can be used in fleet management to reduce costs or improve safety.

iii) Predictive maintenance



Vehicles and machinery can be monitored via IoT CAN loggers in the cloud to predict and avoid breakdowns.

iv) Vehicle/machine black box



A CAN logger can serve as a 'blackbox' for vehicles or equipment, providing data for e.g. disputes or diagnostics

- Viswanatha V
Assistant Professor

Techno Fact

Google handles an estimated 1 billion search queries each and every day, releasing almost 200 tons of CO2 per day.

The first email that was ever sent was by Ray Tomlinson to himself. Ray Tomlinson was the inventor of the email program on the ARPANET system. He received the email on a computer that was right next to him.

YOUTH CENTRAL

CONTENT

Students articles.

Photography ,drawing/painting.

Poetry.

Puzzles,quiz/riddles

THE BIG PICTURE

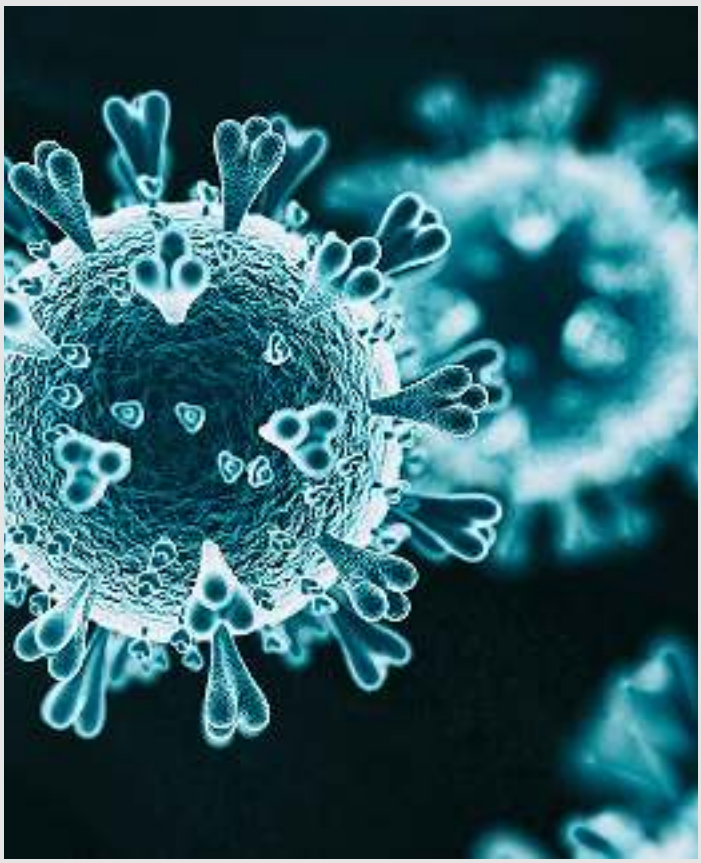
LESSONS LEARNT FOR LIFE DURING QUARANTINE

New Year 2020 was welcomed with many hopes and resolutions and just when people were coming out of the hangover; Corona happened. The first thing people learned about quarantine was its meaning; as this was a new word for most of us. COVID-19 has taught lessons worth remembering but people always forget good things and life lessons. This pandemic has amazed us with its terms like ‘quarantine’, ‘lockdown’, ‘social-distancing’ and ‘self-isolation’. It has either made people stay engaged or idle.

As quoted in ‘Saama Veda’, “One, who maintains cleanliness keeps away diseases”. The vital lesson learnt is to keep ourselves and our surroundings clean. Cleanliness defines the personality of people, it gives a sense of self-confidence and keeps us away from disease causing germs. One must be clean inside out and help in keeping the house, workplace and places they visit be clean. A clean mind and body is the key to good health. The Corona virus has brought awareness in people to maintain cleanliness and be safe and sound.

“A family is where life begins and love never ends.” The tough times during the pandemic has taught us how to stick with our family. Many people unfortunately, have no time or very less time to spend for their near and dear ones.

The lockdown gave us an opportunity to make beautiful memories and reminisce the old ones. It has made us understand the importance of little moments which we cherish. And there were people who were stuck in a place away from home; they realised the value of family, friends, importance of spending time with their people, supporting and loving them. So the virus successfully taught the importance of family and friends, what it means to be together, support and love each other.



Money gives us power, position, name, fame and what not! It is a friend to few and and an enemy to many. People who worked for daily wages, low wages, and worked as house keeps, drivers, watchman, waiters and delivery boys endured due to lack of money, no work to go to and found it very hard to balance their life.

The virus managed to stop the most happening life of human beings in all means. It shattered the life of homeless, poor and deprived people. Many companies were merciless to suspend their employees while the others reduced their pay. Life couldn't get any better, many organisations lended a helping hand to the needy, many individuals volunteered to support and the government also did its part to help the people. The pandemic has taught a stupendous life lesson on to spend the funds for sheer requirements in a thoughtful way.

Nature is under continuous exploitation in the name of development, advancement and technology. Deforestation, water pollution, scarce in natural resources of energy, air pollution, soil erosion, noise pollution and ozone layer depletion are the ill-effects of human greed. We cut down trees to construct cities, dams, buildings causing soil erosion, floods, reduced water-levels in the ground and increased amount of green house gases in the atmosphere. Many animals end up losing their habitats because of deforestation. Industrial and vehicular effluents cause air, water and noise pollutions. The lockdown shut all possible ways to exploit mother nature and gave us a chance to correct the things which were being wrongly done.

" We don't inherit the earth from our ancestors, we borrow it from our children." - A native American proverb.

The most important life lesson taught by this COVID-19 is the value of human life. We humans don't realize how lucky and special we are to have a life like this. Being the most evolved and intelligent species we are supposed to lead our life in an unharmful way which we are failing effortlessly. All of us should be grateful for the air we breathe, water and food we intake and shelter we live in ; which is in one or the other way dependent on nature.

CONCLUSION:

This pandemic seemed fun in the very beginning, as things got worst and the lockdown was extended people learnt to value the time, the time they were faffing around. And to people staying away from home it gave a chance to realise the value of their loved ones, love them a little more, support and understand them. People should be grateful for the resources they've used and fell short of during the lockdown, and know the value of one's life and maintain a healthy lifestyle. This virus has disturbed the lives of everyone irrespective of class, creed, gender, religion and race. It laid a strong foundation on to help people, maintain a clean environment, and use resources in an effective way.

" THE WORLD HAS SLOWED DOWN SO THAT YOU CAN REDISCOVER YOURSELF."

- **DIMPLE V**

7th Sem (ECE)

THE SOLAR BACKPACK

This increase in people taking devices outdoors with them has lead to an increase in the number of people offering charging solutions. The four main areas these fall into are as follows: Solar panels and battery banks. The more experimental approaches such as Hydrogen Fuel Cells and the turbine-driven versions like Wind, Wave or Hand Crank powered charging systems.

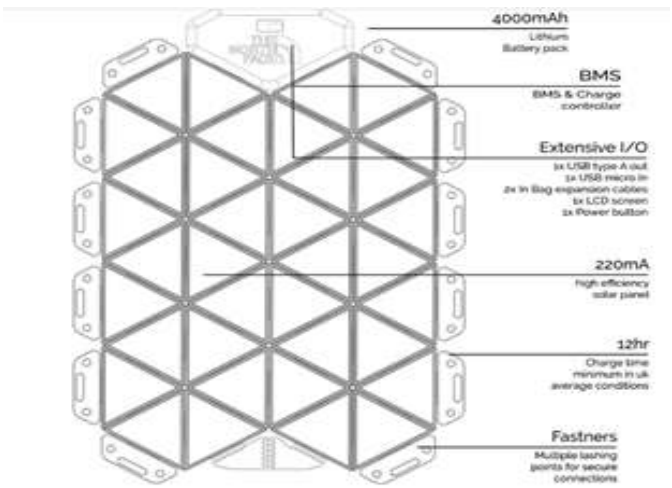
The predominant way in which people use solar panels is by draping them over the top of their pack. However solar panels are greatly affected by the angle they are placed in orientation to the sun. So any panels draped down the vertical length of the backpack is essentially wasted. The benefit of solar over the other options is it can be gathering electricity whilst out on the hike.

The battery banks consist of taking a large chemical storage medium big enough to last the entire trip. It prevents reliance on environmental factors to provide power.Any design proposals should integrate a form of battery storage redundancy for the situation that power is needed and the environmental factors are unable to provide appropriate power.

HINGE DESIGN ITERATIONS

The functionality of this project ironically hinged around one key mechanism working, the hinge. It had to provide consistent electrical conduction without dropping out.Whilst also being able to be removable and providing at least 45 degrees of motion to allow the panels to flex and move. Various concepts, sizes, and shapes were tried before eventually trialling the current design. the triangular shape allowed for the 3 required axis of rotation whilst providing a small number of sides to have connections.The main system comprises of 4 components. The Solar Panel/PCB, The Panel Cap, The Base Section and the battery. This is done in order to reduce the overall assembly time and reduce the number of components. The main issue with the design will be in the complicated nature of assembling that many modules.

The purpose of this prototype is to fully investigate areas for improvement in this area. The main way to reduce the complexity and assembly time would be the introduction of a PCB to wire up the solar panels and the batteries to the proposed connector blocks. This way no internal space is wasted on wiring and it becomes significantly quicker to assemble in the factory. It also removes one of the highlighted points of breakage which is the solder joints. Traditionally parts fail where the solder meets the main PCB if there is movement on the parts consistently. Along with a more critical viewpoint whilst the project has been a success the level of cost involved in this design would require a large scale of production to be reasonable. The panels would need to be manufactured specifically for the product again raising prices. However, if produced in large enough quantities the overall cost would fall into line with the higher end solar equipment on the market.Overall this project has successfully bridged the gap between low efficiency, highly flexible, thin film amorphous panels and the high efficiency, inflexible,Polycrystalline/Monocrystalline Panels. The final artefact demonstrates the principles behind an articulating solar array and acts as a proof of concept for the design.



The hinge mechanism provides a conductive joint with little to no loss of signal when articulating.

An unavoidable area of wasted space is the blank areas on the cells themselves. Each cell triangle is made up of lots of rectangular cells cut down to size. This means there is a large amount of wasted space in the gaps between each rectangle. One advantage of mass manufacturing this product would be the ability to create custom panels with prebuilt PCB traces on the reverse. This would eliminate a large efficiency drop the prototype has to suffer through. The final sizing of the shape yielded an 87% surface coverage of the modules meaning that each assembled triangle has an efficiency of 18.46% for the final product.

EACH OF US HAS TO DO HIS LITTLE BIT OF TRANSFORMING THIS SPIRIT OF THE TIMES.---- ALBERT EINSTEIN.

-BANDARU REVATHY

5ThSem

MY WINNING EXPERIENCE DURING LOCKDOWN

The whole world has come to a standstill, and the reason is the pandemic. It has turned our lives upside down. Even in our dreams, we could not have imagined ourselves confined to our homes, with no outings and unable to meet our friends and relatives. Reasonably, the situation has given us a chance to look at things differently. In the beginning, this lockdown was considered as holidays by many, like me. Once extended, it has made me realize the value of time.

Yes! in the beginning it was happy holiday for me, but as the time started to fly, I realized many things which I have not able to do in the past three years. A thought crossed my mind, many achieve something without the help of anyone, but even though I have a great mentor to guide I couldn't able to think what to do. I was in a big dilemma. Obtaining very good resources was difficult for me. But luckily, I got a way to make effective use of time, our college tied up with online educational platform which opened the actual door of knowledge for me. I had keen interest towards AI, ML, DL and IOT but it remained as an interest till lockdown. That interest changed into reality, I am a completely new person now.

Even though attending online classes and assessments were difficult at the start, I slowly adopted to that and it has become a routine. Under the guidance of my mentor, I took several online courses, completed specialization in my interested domain and most of all I felt happy that I am able to implement all those ideas which I have learnt. Prepared myself mentally to overcome any kind of challenges which I can face in the future. Learned to be professional and how the things go around in industrial level, I got so much exposure professionally, but the fruitful part is that all were open-source.

Let me tell you more technically, I have completed two specializations from coursera in the domain of AI and Deep Learning, that is 'Deep Learning Specialization' and 'Tensorflow Developer Specialization' and undergone couple of guided projects which gave me hands on knowledge about the implementation and the usage part. I made myself strong in couple of programming languages and data structures. Earlier I attended the summer and winter workshops conducted by our college which boosted my interest in this domain. Yeah!! It sounds like a lot of stuffs, but ones you get into it deeper, then it will be a part of life as well. I explored many open-source platforms like Github where I can store all my works as repository, Azure where I can practice deployment of my ML models and etc. There are lots and lots of open-source materials as well as blogs which helped me change my self professionally in my interested domain.

Lockdown has given me many lessons about life. I have learnt to handle difficulties with a positive mind, and I am very much sure that these lessons remain with me throughout my life. With all this said, I have kept a positive head, always looking towards the current challenge of lockdown as an adaptive learning experience that we are all faced with. As my motto goes "No regrets, always live to learn, to try and fail, but most of all keeping it real".

-SYED ABDUL GAFFAR SHAKHADR

7th sem

Different AI platforms

Artificial Intelligence Platforms

These are the platforms that involve the use of machines to perform the tasks that are performed by human beings. These platforms work similarly like human minds perform such as problem-solving, learning, reasoning, social intelligence as well as general intelligence. AI application also involves the use of expert systems such as speech recognition, and machine vision. AI platform can be classified as either weak AI/ narrow AI which is generally meant for a particular task or strong AI also known as artificial general intelligence which can find solutions for unfamiliar tasks.

Different AI platforms:

Google AI Platform

AI platforms make data engineers take their ML projects from ideation to production and through the deployment, quickly, and cost-effectively.AI supports Kubeflow, Google's open-source platforms, which lets you build portable ML pipelines which you can run on-premises or on a cloud without significant code changes. You'll have access to many technologies like TensorFlow, TPUs, and TFX tools as you deploy your AI applications to production. Prediction API can integrate with Google App Engine, and the RESTful API is available through libraries for many popular languages, such as Python, JavaScript,and. NET.

Best and benefits of Google's AI Platform-

1.Cloud-based Machine Learning.
2.Customer Sentiment Analysis.
3.Spam detection.
4.State-of-the-art security system.
5.Convenient pricing scheme.
6. Long-term use is guaranteed.

Tensor flow

It is an open-source software library for numerical computation using data flow graphs. Nodes in the graph represent mathematical operations, while the graph edges represent the multidimensional data arrays(tensors) communicate between them.

The flexible architecture allows users to deploy computation to one or more CPUs or GPUs in a desktop, server, or mobile devices

with a single API. TensorFlow was originally developed by researchers and

engineers working on the Google Brain Team within Google's Machine Intelligence research organization to conduct machine learning and deep neural network research, but the system is general enough to be applicable in a wide variety of other domains as well. Users construct the graph, write the inner loop that drives computation. It comes with an easy Python interface and a nononsense C++ interface to build and execute computational graphs. Write stand-alone TensorFlow Python or C++ programs, or try things out in an interactive Tensor flow ipython notebook where users can keep notes, code, and visualizations logically grouped.

Best and benefits of TensorFlow's AI Platform.

1. Deep flexibility.
2. true portability
3. Connect research and production.
4. You can share the benefits of Machine Learning.
5. It's fast
6. Cloud TPUs are built to train and run ML models.

Microsoft Azure

It offers cloud-based advanced analytics designed to simplify machine learning for business. Business users can model their way, with best-in-class algorithms from Xbox, Bing, R or Python packages, or by dropping in custom R or Python code. The finished model can then be deployed in minutes as a web service, which can connect to any data, anywhere. It can also be published out to the community in the product Gallery or into the Machine Learning Marketplace. In Machine Learning Marketplace the application programming interfaces (APIs) and finished services are available. By connecting data on Azure, advanced analytics developers, and data scientists can seek insights not available through traditional business intelligence. Microsoft Azure Machine Learning Studio is a collaborative visual development environment

that enables us to build, test, and deploy predictive analytics solutions that operate on data. Azure supports any operating system, language, tool, and framework- from Windows to Linux, SQL Server to Oracle, C# to Java. Azure is both infrastructure-as-a-service (IaaS) and platform-as-a-service (PaaS).

Best and benefits of Microsoft Azure's AI Platform

1. Digital Marketing.
2. Mobile.
3. E-commerce
4. Cloud-based.
5. Supports any operating system, language, tool, and frameworks

Rainbird

Rainbird is an award-winning Artificial Intelligence platform that makes business operations smarter. It enables enterprises to build systems with human-like decision-making abilities resulting in greater efficiency and increased quality. It enables users to take existing, human, business knowledge and combine it with the company's data to automate knowledge work and deliver consultative systems that can transform the way the company's staff and customers interact with each other. Rainbird is at forefront of knowledge work automation technology. It is a powerful ecosystem for re-engineering knowledge work enabling companies to automate and augment the work their staff's performance.

Best and benefits of Rainbird's AI platform

1. Visual User Interface
2. RBLang - An Intuitive Language
3. Controlled Learning Algorithms.
4. Turns insights into action
5. Offers efficiency
6. Promotes innovation.

- Akash L P
7th sem

EXPERIENCE DURING LOCKDOWN

During the pandemic, I was not anxious. Instead, I wanted it to prolong so that we would have more holidays. I did not realize how the pandemic would put the world on pause and the holidays would not be nearly as fun as I expected.

Usually, I spend my free time on my phone or laptop sitting by myself and playing games.

I realized how I can upskill myself to have a successful career in engineering. With the support of my mentor Dr. Rajeswari (HOD of ECE Department) and my friends (Akash LP and Naveen Kumar K),I was guided towards the Current Trending Technologies like artificial intelligence,machine learning,deep learning and it helped me improve my Learning Curve drastically thus indirectly helping me in cracking some of the Interviews.

As result, I got opportunity to work as an intern in Natural language processing (NLP) at Sandlogic Technologies which concentrates towards Machine Learning for providing best solution to the business with Automation.

Working as an intern at Sandlogic is an enlightening experienceand I wanted to share my honest experience.

Presently we are undergoing training where I have been asked to explore the fundamentals required for NLP and the current Machine Learning and Deep Learning Models which are creating high hopes in the development of the NLP.

As for now I have got hold onto the topics such as

- Foundation course for NLP (Promises of Deep Learning towards the Natural Language Processing)
- Sentimental Analysis of the Text (Given input text, Model could predict whether it is a positive or a negative statement)
- Word Embeddings (Representing the words in multi-dimensional space with vector representation where words with same semantic meaning tends to have same vector representation and points approximately in same direction)
- Text Classification (With CNN [Convolution Neural Network], we could achieve some good results for text classification)
- Language models (it has been helping us since many years which is, when given any word, the model would be able to predict the next most relevant words. For example, our Google Search Engine)
- Image Caption Generation (It has been my favorite amongst all because the model must depict the features of the given image and try to predict the textual description for a given photograph)
- Neural Machine Translation (Here the model is trying to translate the given words/statement in one language into another language with the help of Encoder-Decoder architecture with Attention Models)
- I am currently working with the RNN, it's different types and some latest models of NLP like BERT, Microsoft CoddBERT, ELMo, XLNET and ULMfit.

Tools and Framework I am familiar with are

- Tensorflow (Framework)
- NLTK (Tool for NLP)
- Keras(python Library)
- OpenCV
- And required Python Libraries for data handling and pre-processing.

-Arvind

7th Sem

PHOTOGRAPHY

photography is the story I fail to put in words.

-Syed kashif ALI.R | 5th Sem

-Syed kashif ALI.R | 5th Sem

-Suhas TM| 5th Sem

-Anwaydeep Nath| 5th Sem

-Syed kashif ALI.R | 5th Sem

-Vaibhav kR| 5th Sem

-Anwaydeep Nath| 5th Sem

Art Lab

. . . . . sketch|Paintings|Drawing . . . . . .

-Alka kumari| 5th Sem

"All you need to paint is a few tools,A little instruction and a vision in your mind"

-Alka kumari| 5th Sem

-Ashmitha| 3rd Sem

-Ashmitha| 3rd Sem

-Keerthana| 7th Sem

.....Poems.....

Thats how she lived after she became a mother!

The sky turned from black to blue,
The birds chirped and flies flew.
It was an early morning
Early morning of a beautiful day of a beautiful girl
The mirror knew she would come
As always look at it and hum
That's the first thing she would do,
Smile at her body and her soul too.
She was the most precious to her,
She loved her eyes,
She loved her teeth which smiled nice.
She loved her brown colored hair,
It was not a love she would share.
She was pretty and kind too
And she loved herself more and more as she grew,

As time passed she lived
different phases of life
Through it she played the roles of daughter and wife
Soon she turned into a mother
The moment she took her daughter in her hand,
Her world changed with a spell of some wand.
She was no longer the most beautiful
No longer the most precious,
She no longer mattered,
She put her beauty and her heart into her daughter.
Her daughter she loved more than her
First daughter then was her
That's how she lived after she became a Mother!

-Bushra sultana
5th sem

Poetry is ordinary language raised to N'th power

DEATH - It's better to move on

One cannot get through life without pain,

To take it in our stride ourselves, we have to train.

A positive attitude is what we need,

From darkness to light we have to heed.

When someone leaves us,

Think of him as the same, I say, For he is not dead, just a little away.

Death is not extinguishing the light,

It is just putting out the lamp at dawn awaiting the new light's might.

there is a larger world out there after death.

Instead of the light of the lamp, the sun's light is what we get.

To bear sticks and stones, I know it's easy.

Than to hear from our beloved one that- "they are gone."

Get up, wipe your tears, and drain out your ugly days.

Take a new step forward with the lamp's light afresh.

With your hard work, the difficulties you warn.

And all you need to do is just MOVE ON!

-Arjun mangal

5th Sem

ಕವಿತೆ

ಕನಸಿನ ಅಂಗಡಿ ಹೊತ್ತು ಸಾಗುವುದೇ...ಜೀವನ?

ದಿನ ದಿನ ಹೊಸದಿನ ಎನ್ನುವುದೇ....ಜೀವನ?

ಹಸುಗೂಸಿನ ನಗುವಲ್ಲಿರುವುದೇ... ಜೀವನ?

ಕ್ಷಣ ಕ್ಷಣ ಪ್ರತಿಕ್ಷಣ ಉಸಿರಾಡುವುದೇ...ಜೀವನ?

ಉತ್ಸಾಹದ ಮಾತನ್ನಾಡುವುದೇ...ಜೀವನ?

ಬೇವು ಬೆಲ್ಲ ಸ್ವೀಕರಿಸಿದ ಹಾಗೆ ಎಲ್ಲವನ್ನೂ ಸ್ವೀಕರಿಸುವುದೇ...ಜೀವನ?

ಎಲ್ಲಾ ಅವನಿಚ್ಛೆ;

ಅವನೇ ಕರ್ತೃ,ಕರ್ಮ,ಕ್ರಿಯೆ ಎನ್ನುವುದೇ...ಜೀವನ?

ಪ್ರಕೃತಿಯ ಸೌಂದರ್ಯ ಸವಿಯುವುದೇ...ಜೀವನ?

ತಾನು ನಿದ್ರಿಸಿದಾಗ ದೊರಕುವುದೇ...ಜೀವನ?

-Manoj m
7th sem

कविता

उस नदी में भी समुन्दर,
बनने की जान हे।
उस नदी में भी समुन्दर,
बनने की जान हे।
क्यों समझते हो बोज उस नन्ही परी को जिसकी मुस्कुराहट भी नादान है।

-Bushra sultana
5th Sem

शक से भी अक्सर खत्म हो जाते है कुछ रिश्ते ,कसुर हर बार गल्तियों का नही होता !!

सीढ़ियां उन्हें मुबारक हो , जिन्हे छत जाना होता है !मेरी मंजिल तो आसमान है , रास्ता मुझे खुद बनाना है !!

जिस समय हम किसी का अप्मान कर रहे होते है,दरअसल , उस समय हम अपना सम्मान खो रहे होते है....!

दोस्ति करो हमेशा मुस्कुराके !! किसि को धोका ना दो अपना बना के !!करलो याद जब तक हम जिंदा है !! फिर ना केहना चले गये दिल मे याद बसा के !!

जीत और हार्यह आपकी सोच पे निर्भर है , मान लो तो हार हैठान लो तो जीत है...!!

एक अच्छा अध्यापक मोमबत्ति की तरह होता है,जो खुद को जला के दुसरों के लिये प्रकाश करता है..!!!

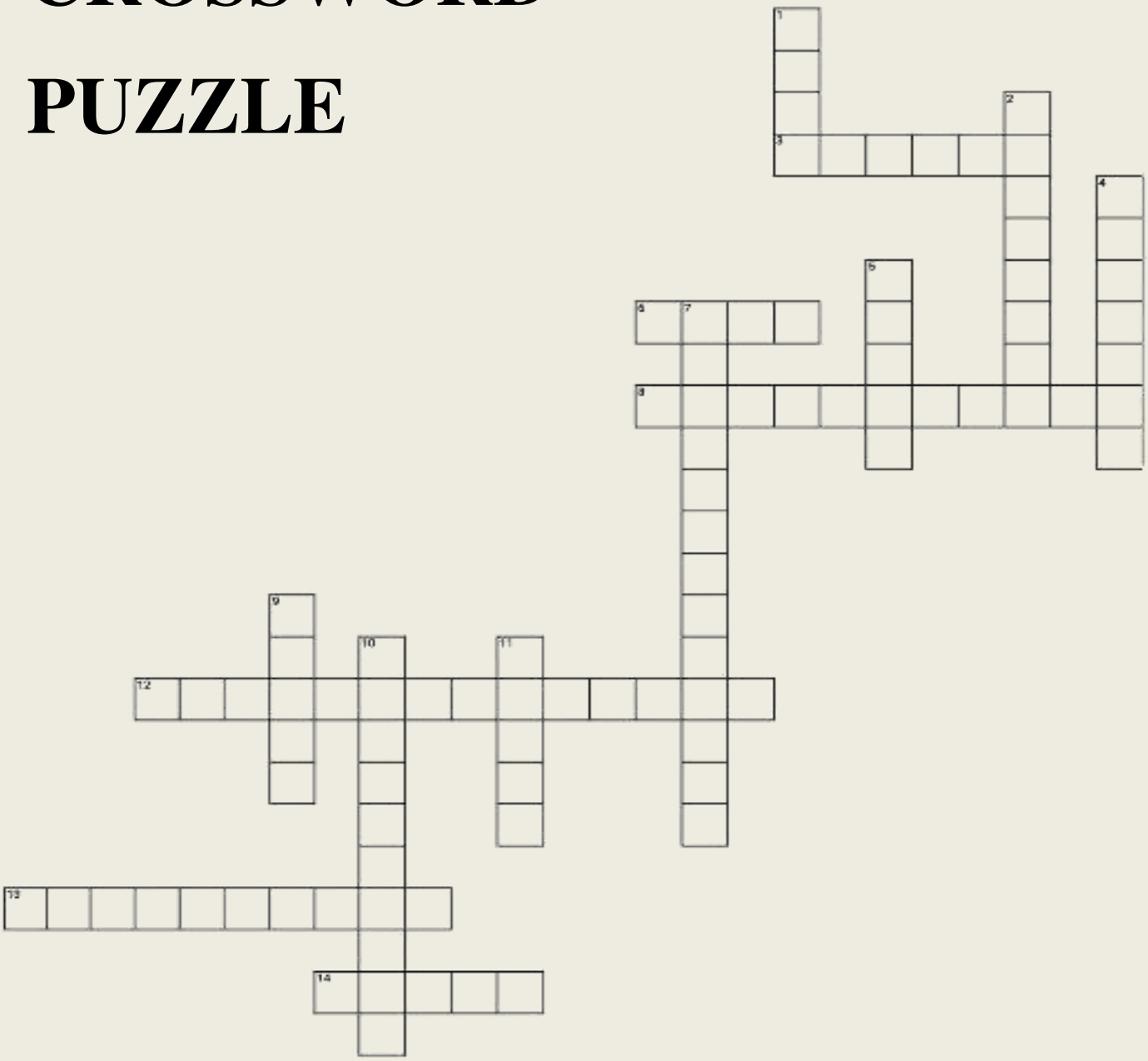
दुश्मन बनाने के लिये,जरुरी नहीं कि लढा जाये !आप थोडे से कामयाब हो जावो,वे खैरात मे मिलेगें !

मुसीबत सब पे आती है,कोई बिखर जाता है ,औरकोई निखर जाता है !!

ज़िन्दगि मे कभी अपने किसी हुनर पे घमंड मत करना,क्योंकि पत्थर जब पानी मे गिरता है तो अपने ही वजन की वजह से डूब जाता है !!

-देवाशिष प्रधान
सहेयक प्रोफेसर

CROSSWORD PUZZLE



Across

03.Search engine
06.Operating systems is produced by IBM
08.Micromax Informatics
12.Pretty Good Privacy(Bureaucrat)
13.INI' extension
14.Early mainframe computer

Down

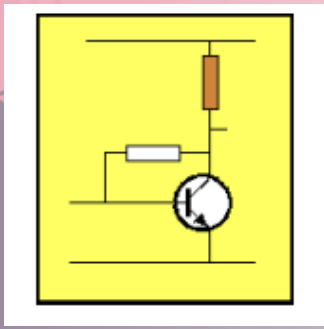
1. Online multiplayer battle royale game.
2. A passive electrical component which reduce the flow of current.
4. Marvel (2008)
5. Type of Electrically-Erasable Programmable Read-Only Memory.
7. Mobile Processor.
9. Network.
10. Upcoming Technology for image stabilization in mobile.
11. Elon musk.

By-

Syed Kashif ALI.R|5th sem

Quiz

1. The purpose of the capacitor in the given figure is :



» To pass AC on the input to the base.
» To allow the transistor to self-bias.
» Block DC from the input line.
» To allow the stage to operate.

2.Considering the BCS theory of superconductors,which one of the following statements is NOT CORRECT?('h' is the Planck's constant and 'e' is the electronic charge).

» Presence of energy gap at temperatures below the critical temperature.
» Different critical temperatures for isotopes.
» Presence of Meissner effect.
» Quantization of magnetic flux in superconducting ring in the unit of (h/e).

3. In the most general case, which one of the following quantities is NOT a second order tensor?

» Stress
» Strain
» Moment of Inertia
» Pressure

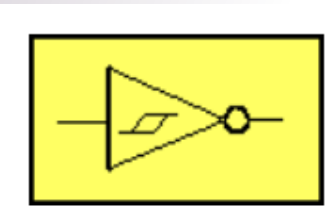
4. When testing an n-channel D-MOSFET, resistance G to D =, resistance G to S= , resistance D to SS = and 500, depending on the polarity of the ohmmeter, and resistance D to S = 500. What is wrong ?

» Short D to S
» Open G to D
» Open D to SS
» Nothing

5. With a 30-volt VDD, and an 8-kil ohm drain resistor, what is the E-MOSFET Q point voltage, with ID=3mA?

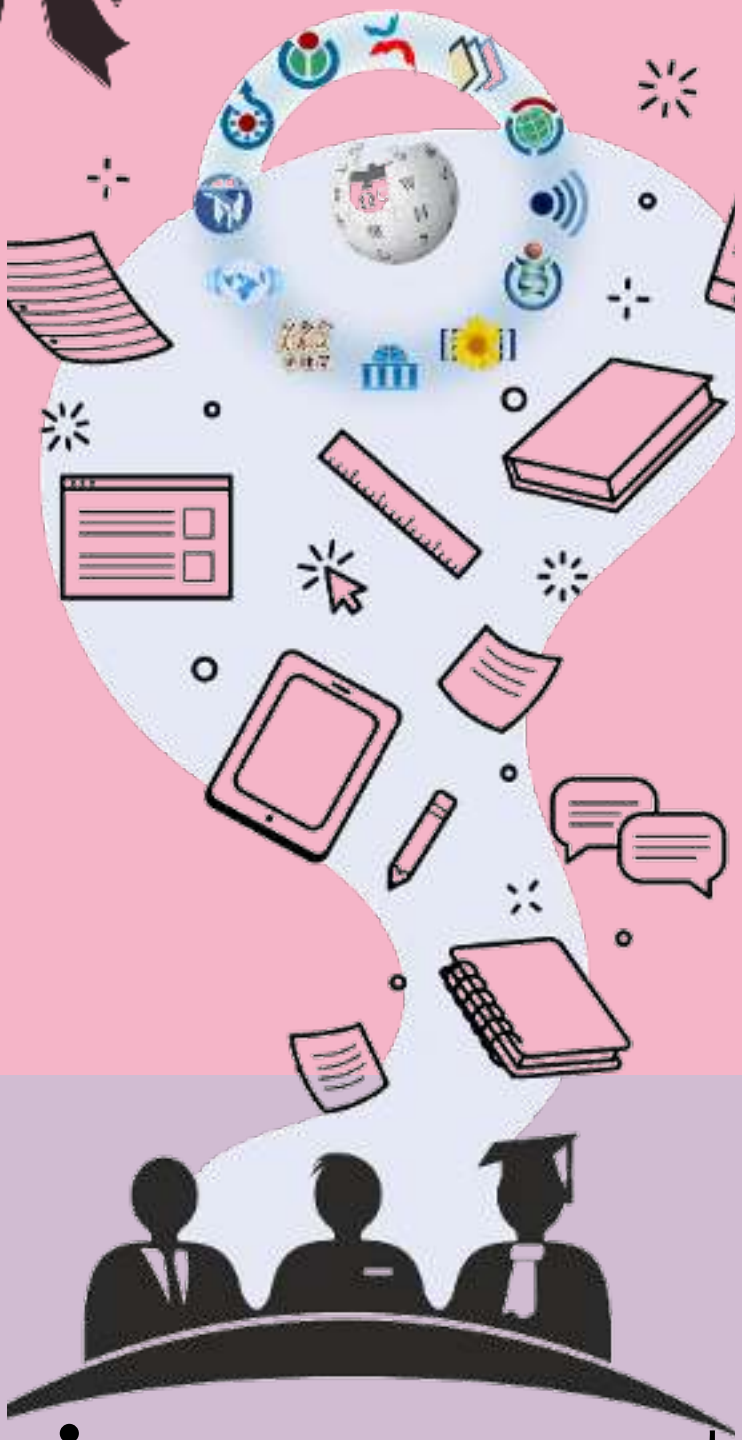
» 6
» 10
» 24
» 30

6. Name this symbol :



» Buffer
» NOR gate
» NAND gate
» Schmitt Tigger

Scan the QR code
To answer Echoview - 2020



Achievements

Awards|Journal|Publications|Courses|Webinars

Faculty Achievements/Award/Journal Publications

1.

Mr.Viswanatha V
Assistant Professor
Department of ECE
AIT Bengaluru

Dr. Rajeswari
Dean Academics
Professor,HOD
Department of ECE
AIT Bengaluru

Paper Title	Closed Loop Control of Bidirectional Buck-Boost Converter for Battery Management in Automotive Systems.
Journal Name	International Journal of Advance Science and TechnologyVol. 29, No.10S, (2020), pp.8568-8580 (Scopus Index).
ISSN No	ISSN: 2005-4238 IJAST
Link	http://sersc.org/journals/index.php/IJAST/article/view/26151

Paper Title	Characterization of analog & digital control loop for bidirectional buck-boost converter.
Journal Name	Journal of Electrical systems and Information Technology, Springer April 2020.
ISSN No	ISSN 2415-6272 (Print) |ISSN 2415-6264
DOI	10.36348/sjet.2020.v05i04.007
Link	https://www.saudijournals.com/journal-details/sjeat/Volume-5;/Issue-04

Paper Title	Research on State Space modelling, stability analysis and PIN + PIDN control of DC-DC converter for digital implementation.
Journal Name	Advance in Electrical and Computer Technologies, Pg No. 1255-1272, Springer.
ISSN No	doi.org/10.1007/978-981-15-5558-9_106
Link	https://link.springer.com/chapter/10.1007/978-981-15-5558-9_106

2.

Mr.Devasis Pradhan
Assistant Professor
Department of ECE
AIT Bengaluru

Dr. Rajeswari
Dean Academics
Professor,HOD
AIT Bengaluru

Paper Title	Chapter Title :- 5G-Green Wireless Network for Communication with Efficient Utilization of Power and Cognitiveness.
Journal Name	Springer Nature Switzerland AG 2021 J. S. Raj (ed.)
ISBN	978-93-90307-44-9
Link	https://doi.org/10.1007/978-3-030-49795-8_32

3.

Mr.Devasis Pradhan
Assistant Professor
Department of ECE
AIT Bengaluru

Ms.Priyanka K C
Assistant Professor
Department of ECE
AIT Bengaluru

Paper Title	RF- Energy Harvesting (RF-EH) for Sustainable Ultra Dense Green Network (SUDGN) in 5G Green Communication.
Journal Name	Saudi J Eng Technol, June, 2020; 5(6): 258-264 (Web of Science Indexed).
DOI	10.36348/sjet.2020.v05i06.001
Link	https://www.saudijournals.com/journal-details/sjeat/Volume-5;/Issue-06

Paper Title	A comparative study of renewal energy management for 5G green communication: energy saving techniques and its optimisation.
Journal Name	Journal of SEYBOLD –Report, Vol. 25 Issue -10, 2020 Pg No. 270-284
ISSN No	ISSN : 1533-9211
Link :	https://www.researchgate.net/publication/344516939_A_Comprehensive_Study_of_Renewable_Energy_Management_for_5G_Green_Communications_Energy_Saving_Techniques_and_Its_Optimization

4.

Mr.Devasis Pradhan

Assistant Professor
Department of ECE
AIT Bengaluru

Mr.Devasis Pradhan along with Final Year students.

Paper Title	Enhanced spectrum sensing based on Cyclo-stationary Feature Detection (CFD) in cognitive radio network using Fixed & Dynamic Thresholds Levels.
Journal Name	Saudi J Eng Technol, June., 2020; 5(6): 271-277- Web of Science Indexed
DOI	10.36348/sjet.2020.v05i06.003
Link	https://www.saudijournals.com/journal-details/sjeat/Volume-5;/Issue-06

Paper Title	IoT based Human Guided Smart Shopping Cart System for Shopping Center-
Journal Name	Saudi J Eng Technol, June., 2020; 5(6): 278-284- Web of Science
DOI	10.36348/sjet.2020.v05i06.004
Link	https://www.saudijournals.com/journal-details/sjeat/Volume-5;/Issue-06

5.

Mr.Nataraju A B

Assistant Professor
Department of ECE
AIT Bengaluru

Paper Title	SPB: Scalable Polynomial Backoff Algorith For IEEE802.11s Networks.
Journal Name	IJSRT, Scopus, April, 2020, SCOPUS
ISSN No	ISSN 2277-8616
Link	https://www.ijstr.org/final-print/apr2020/Spb-Scalable-Polynomial-Back-off-Algorithm-For-Ieee-80211s-Networks.pdf

6.

Mr.Viswanatha V

Assistant Professor
Department of ECE
AIT Bengaluru

Mr.Vishwanath V along with final year students.

Paper Title	Intelligent Line follower Robot using MSP430G2ET for industrial application.
Journal Name	Helix Scientific Explorer, WOS, 30-04-2020
ISSN No	doi.org/10.29042/2020-10-2-232-237
Link	https://helixscientific.pub/index.php/home/article/view/136

7.

Ms. Nagapushpa K P

Assistant Professor
Department of ECE
AIT Bengaluru

Paper Title	Performance Enhancement of Futuristic (5G) Communication System by Generating (Downlink) Wave
Journal Name	International Journal of Advanced Research in Engineering and Technology (IJARET) Volume 11, Issue 11, November 2020, pp. 491-501,
Article ID	JARET_11_11_044
ISSN No	ISSN Print: 0976-6480 and ISSN Online: 0976-6499
Link	http://www.iaeme.com/IJARET/issues.asp?JType=IJARET&VType=11&IType=11

8.

Mrs. Kalpavi C Y

Assistant Professor
Department of ECE
AIT Bengaluru

Paper Title	A Novel approach: Design Issues and Challenges in Hierarchical Routing Protocols for Wireless Sensor Networks.
Journal Name	UGC IOSR: Jornal of Conputer Engineering.
ISSN No	2278-066 , 5, Article
DOI	10.9790/0661-2205032734
Link	https://www.iosrjournals.org/iosr-jce/papers/Vol22-issue5/Series-3/E2205032734.pdf

9.

Mr. Devasis Pradhan
One book Published – "Understanding Fiber Optics & Networks"
ISBN -978-93-90307-44-9
Educreation Publishing House

10.

Mr.Devasis Pradhan

Assistant Professor
Department of ECE
AIT Bengaluru

Mr.Devasis Pradhan along with Final Year students.

Paper Title	Performance Analysis of Energy Detection Method in Spectrum Sensing UsingStatic & Variable Threshold Level for 3G/4G/VoLTE.
Journal Name	Saudi Journal of Engineering and Technology.
ISSN No	ISSN 2415-6272 (Print) |ISSN 2415-6264 (Online).
DOI	10.36348/sjet.2020.v05i04.007
Link	https://www.researchgate.net/publication/341025752_Performance_Analysis_of_Energy_Detection_Method_in_Spectrum_Sensing_Using_Static_Variable_Threshold_Level_for_3G4GVoLTE

Paper Title	Comparative Analysis between Energy Detection Method and Matched Filter Detection for Spectrum Sensing in Intelligent Network Intended towards3G/4G/VOLTE.
Journal Name	Studies in Indian Place Names
ISSN No	2394-3114.
DOI	10.36348/sjet.2020.v05i06.004
Link	https://www.researchgate.net/publication/341232743_Comparative_Analysis_between_Energy_Detection_Method_and_Matched_Filter_Detection_for_Spectrum_Sensing_in_Intelligent_Network_Intended_towards_3G4GVOLTE

11.

Mrs. Kruthika

Assistant Professor
Research Scholar
AIT Bengaluru

Dr. Rajeswari

Dean Academics
Department of ECE
Professor,HOD

Paper Title	Class Imbalance Applied to Medical Neuroimaging for Classification of Alzheimer's Disease.
Journal Name	Indian Journal of Public Health Research & Development.
DOI	https://doi.org/10.37506/ijphrd.v11i7.10119

FDP/Workshop/Seminars/Webinars/Training attended by Faculty from August to November 2020

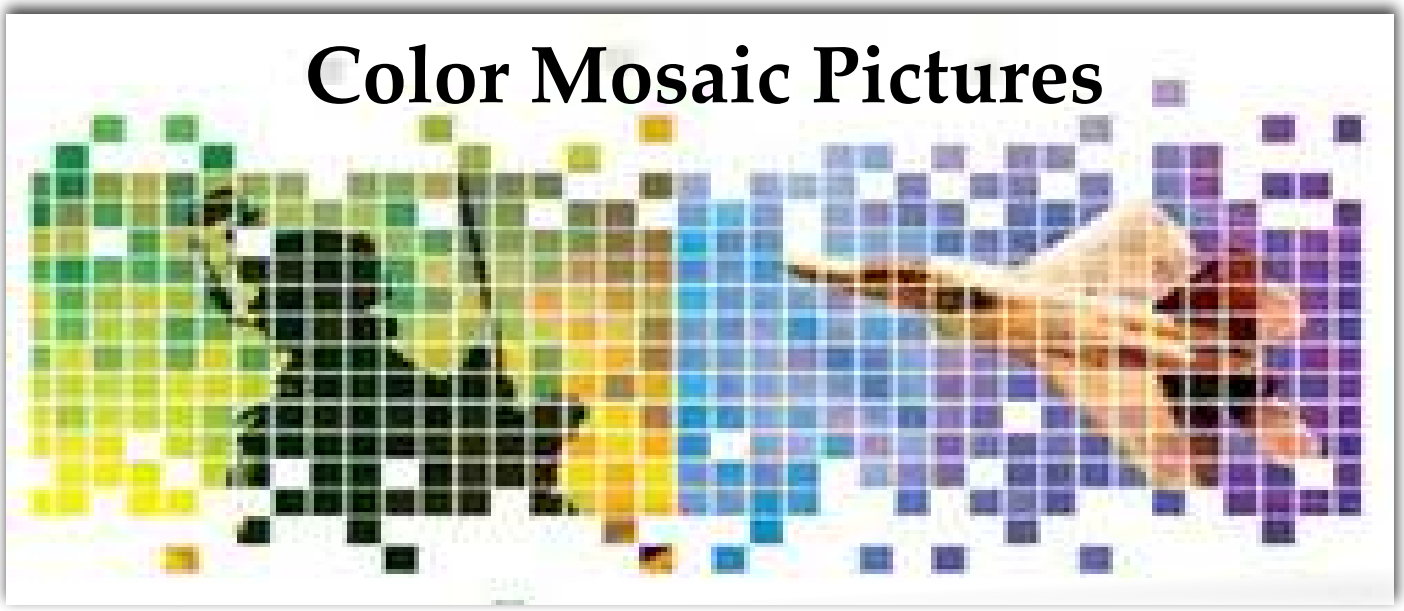
SI No	Faculty Name	Name of the FDP/ Training	Date	Place
1	Dr. Jayalaxmi H	FDP On Trends In IoT, Medical Image and Speech Processing	04-08-2020 to 09-08-2020	SIT, Tumkur
2	Mr.Mohan .N	FPGA Implementation of Digital Design using Verilog HDL	05-08-2020 to 07-08-2020	Vidyavardhaka College of Engineering,Mysore
3	Mr.Mohan .N	ICT tools to Impact Knowledge	13-08-2020	Vidyavardhaka College of Engineering,Mysore
4	Mrs.Kalpavi C.Y	Recent Trends in Wireless Communication Technologies	03-08-2020 to 05-08-2020	BIT ,Bangalore
5	Mr.Nataraju A.B	Recent Trends in Wireless Communication Technologies	03-08-2020 to 05-08-2020	BIT ,Bangalore
6	Mr.Nataraju A.B	IoT protocols and WSN-Theory and Practice	17-8-2020 to 21-08-2020	BIT, Bangalore
7	Dr. Jayalaxmi H	Short term Training Program on BLOCKCHAIN FUNDAMNETALS	24-08-2020 to 29-08-2020	Saintgits College of Engineering ,Kottayam
8	Ms.Priyanka K.C	Emerging trends in Automotive Embedded Systems	12-8-2020 to 14-08-2020	BIT,Bangalore
9	Ms.Priyanka K.C	IoT protocols and WSN-Theory and Practice	17-8-2020 to 21-08-2020	BIT, Bangalore
10	Ms.Priyanka K.C	Webinar Series on Current and Future trends in VLSI	10-8-2020 to 13-08-2020	IEEE CAS Bangalore Chapter, Bangalore
11	Mr. Devasis Pradhan	Advancements & Research oppurtunities in Electronics & telecommunication engineering	04-08-2020 to 8-8-2020	S.B.Patil College of Engineering,Indapur

12	Mr. Devasis Pradhan	"Outcome based Education	14-09-2020 to 16-09-2020	Dr. Akhilesh Das Gupta Institute of Technology & Management, New Delhi
13	Mr. Devasis Pradhan	RF Devices for 5G Communication & measuring Instruments	12-10-2020 to 16-10-2020	K. Ramakrishnan college of Technology, Samayapuram, Tiruchirappalli, Tamil Nadu
14	Mr. Devasis Pradhan	Attended an International Conference - ICSET	26-10-2020	Rome, Italy (Online Mode)
15	Mr. Devasis Pradhan	Short Term CEP course on Futuristic Wireless Communication and IoT – 5G and Beyond	07-11-2020	CEP course
16	Dr. Jayalaxmi H	AICTE Sponsored STTP on Blockchain Applications	05-10-2020 to 10-10-2020	AICTEsponsered
17	Dr. Jayalaxmi H	Information Security: Issues and Challenges (ISIC 2020)	17-11-2020 to 21-11-2020	Motilal Neharu Institute of Technology, Uttar Pradesh.
18	Dr. Jayalaxmi H	Webinar on Role of Front end Design in VLSI	12-11-2020	Dr.AIT, Bangalore
19	Dr. Jayalaxmi H	Webinar on Stabilty through Niquist Criterion	11-11-2020	Online webinar Session
20	Mrs.Kalpavi C.Y	AICTE sponcered STTP on "Machine Learning with Python in Data Science and its Research Perspectives	19-10-2020 to 24-10-2020	SRM institute of science and Technology, Tamil Nadu.
21	Mrs.Kalpavi C.Y	"Attended and presented a technicle paper in online Conference: (ICRT-DARIP-2020) Paper Title: Performance Analysis of LEACH Protocol for Cluster Based Hierarchical Routing Protocol in WSN Design."	20-11-2020 to 21-11-2020	Amity University, Kolkata Campus, in colaboration with IFERP developing research.
22	Ms.Nagapushpa	STTP Program on "Intellectual Property for Engineers and Scientists"	19-11-2020 to 24-11-2020	AICTEsponsered, CMRIT ,Bangalore

23	Mrs. Sumalatha L	"Attended webinars on 1) "Role of Front End Design in VLSI" 2) "Stability through Nyquist Criterion" conducted in Dr.AIT"	12-11-2020	Dr.AIT, Bangalore
24	Mrs.Veena Sanath Kumar	Online webinar sessions on "VLSI and Embedded System design ".	03-09-2020 to 23-10-2020	Onlie Webinar.
25	Mrs.Veena Sanath Kumar	Online webinar sessions on "Role of front end design in VLSI "	12-11-2020	Dr.AIT, Bangalore

" Teaching is the one profession that creates all other professions "

Color Mosaic Pictures



Dr. Jayalaxmi H currently working as Associate Professor in the department of ECE, Acharya Institute of Technology, Bangalore. She has been awarded the PhD degree with Thesis titled **"Design of VLSI Architectures for Color Mosaic Pictures"**, in Electronics and Communication Engineering from **JNTU** Hyderabad, in the month of June 2020. w this research work, to reduce the computational complexity and achieve high-performance image processing in hardware, optimized hardware architecture has been designed and developed. The complete hardware architecture is designed for Image/ Video sequences. The system is accomplished meting out high-resolution images of sizes 1600x1200 pixels at a real-time rate of 30 Frames/Sec. on **FPGA** Platform.

Her current research interests include Image/Video processing, VLSI and published papers in IEEE, Elsevier Science Direct, Scopus Indexed and ACEEE.

(PhD Awardee 2020)

- Dr. Jayalaxmi H
Associate Professor

SDP/WORKSHOP/WEBINARS/ONLINE COURCES attended by students from August to November 2020

SL. NO	STUDENTS DETAILS	AWARDS/COURSES/WEBINARS	UNIVERSITIES/ORGANISATIONS/ INSTITUTION	LINKS
1.	Janani.B Aayushi Sharma Mohammed Parvez .R .S (7th semester)	Business plan presentation on the topic : Recruitment of RO reject for manufacturing Nanosilver water	Awarded with the consolation prize in the event organised by Federation of Karnataka chamber of Commerce and Industry	https://drive.google.com/drive/folders/1RZQ3kYjSyjwWbjGtG_ppQp2XDTBPx0MH?usp=sharing
2.	Mayukh chatterjee (5th semester)	The Prerequisites required in the field of Datascience. The Code India Challenge organised by Codenation. The text editing skills using Java.	John Hopkins University	https://drive.google.com/drive/folders/1TNCSNgurgHDL91UYQNM8tuVKDNey59Da?usp=sharing
3.	Mohammed Neeha Afsana (5th semester)	Python for everybody	University of Michigan	https://drive.google.com/drive/folders/1T-5bmPmm06YFbhBjHptNW9K9IE4ttDud?usp=sharing
4.	Usha Rani (5th semester)	Neural Networks and Deep Learning	deeplearning.ai and offered through coursera	https://drive.google.com/drive/folders/1biU_rUjcFUzS4Ar5lWKcdO7ey8QBQq3t?usp=sharing
5.	Sushma (5th semester)	Neural Networks and Deep Learning Programming for everybody (Getting started with Python) Python Data Structures Using Python to Access Web Data Using Databases with Python Capstone :Retrieving, Processing, and Visualising Data with Python	deeplearning.ai and offered through coursera University of Michigan	https://drive.google.com/drive/folders/1WbbjqX6EzSJne5HAZvbbwShTwi4wryCG?usp=sharing
6.	Pavan P (5th semester)	Programming for everybody (Getting Started with Python) Introduction to the Internet of Things and Embedded Systems AI for Everyone	University of Michigan University of California, Irvine deeplearnimg.ai and offered through coursera	https://drive.google.com/drive/folders/1HRpGoeqxe2ToiamqUjeNB0fMhoP5y4vp?usp=sharing
7.	Prajwal TS (5th semester)	Programming for everybody (Getting Started with Python) Introduction to the Internet of Things and Embedded Systems AI for Everyone	University of Michigan University of California, Irvine deeplearnimg.ai and offered through coursera	https://drive.google.com/drive/folders/1GJpMdBOKDPo86ZLwChnE8QzNQ2UsNfDM?usp=sharing
8.	Srujan S (5th semester)	Programming for everybody (Getting started with Python) Python Data Structures Using Python to Access Web Data Using Databases with Python Capstone :Retrieving, Processing, and Visualising Data with Python Introduction to the Internet of Things and Embedded Systems The Aurdino Platform and C-Programming	University of Michigan University of California, Irvine	https://drive.google.com/drive/folders/1I86sWRdSsGj1VDc__xVcx1zMe6wS4-Jb?usp=sharing

9.	Saiteja Reddy G (5th semester)	Python for everybody Technical Support Fundamentals	University of Michigan Authorized by Google	https://drive.google.com/drive/folders/1cA2naT201Ik-Aiup3yBiLTkryYiMT5MC?usp=sharing
10.	Nischitha K (5th semester)	Programming for everybody (Getting started with Python) Introduction to the Internet of Things and Embedded Systems Neural Networks and Deep Learning AI for Everyone Introduction to Electronics	University of Michigan University of California, Irvine deeplearning.ai and offered by coursera Georgia Institute of Technology	https://drive.google.com/drive/folders/1y9JYGoaUOvNLI-vfn3t2_XbLQMEA5k6_?usp=sharing
11.	Suhas T M (5th semester)	Introduction to the Internet of Things and Embedded Systems Build a Simple App in Android Studio Introduction to Data Science	University of California, Irvine Rhyme offered through coursera cognitiveclass.ai by IBM Developer Skills Network	https://drive.google.com/drive/folders/1LgUNWI7hcV86v-RpMQVktyTisu1E84wR?usp=sharing
12.	Sanketh C (5th semester)	Introduction to the Internet of Things and Embedded Systems AI for Everyone Programming for everybody (Getting started with Python) Cloud Computing Basics (cloud 101) A Crash Course in Data Science	University of California, Irvine deeplearnimg.ai and offered through coursera University of Michigan LearnQuest Johns Hopkins University	https://drive.google.com/drive/folders/1uvPeWDFufSi8XS0lra-rWaRtLZRP0Cvp?usp=sharing
13.	Pooja A (5th semester)	Programming for everybody (Getting started with Python) Python Data Structures	University of Michigan	https://drive.google.com/drive/folders/1VYysZmGH4oUM-Q0fnIGH3mIa4hwZy2Ic?usp=sharing
14.	Vaibhav K R (5th semester)	Programming for everybody (Getting started with Python) Introduction to Data Science	University of Michigan cognitiveclass.ai by IBM Developer Skills Network	https://drive.google.com/drive/folders/1rvivB9okYA67wTEnY9ImCXXNn_SOPhNt?usp=sharing
15.	Mujeeb Ahmed (3rd semester)	Programming for everybody (Getting started with Python) Introduction to the Internet of Things and Embedded System AI for Everyone (from University of California, Irvine) Google Cloud Platform Fundamentals :Core Infrastructure Intellectual Property Rights Design of TI Embedded System using MSP430™ MCU MOOC	University of Michigan University of California, Irvine deeplearnimg.ai and offered through coursera Google Cloud offered through coursera National level e-quiz organised by the Institution's Innovation Council ,VVCE , Mysuru Texas Instruments.	https://drive.google.com/drive/folders/1MQ-2jy1N5h0l6EBbA27RyH61gTRXkbFj?usp=sharing
16.	Himanshu Kumar Sinha (3rd semester)	Programming for everybody (Getting started with Python) Using Python to Access Web Data Capstone :Retrieving, Processing, and Visualising Data with Python Essential Google Cloud	University of Michigan Google Cloud offered through	https://drive.google.com/drive/folders/175_R-CRGrkjMM-ETNQt5aWPJWluvi4Km?usp=sharing

		Infrastructure: Foundation AI for Everyone Introduction to Cybersecurity Tools and Cyber Attacks Cybersecurity Compilance Framework and System Administration	coursera deeplearning.ai and offered by courser IBM and offered through coursera	
17.	Malathi M (5th semester)	IEEE Projects on emerging technologies Advancing women through engagement in technical activities during corona crisis Webinar on " How to crack gate in first attempt" Scientific Analysis using Python	GSSS Institute Of Engineering Technologu for Women,Mysuru [Dated on :29th June 2020] GSSS Institute Of Engineering Technologu for Women,Mysuru[Dated on:17th July 2020] ACE Engineering Academy,Hyderabad[Dated on:28th June 2020] SDM college of Engineering and Technology,Dharwad [Dated on:22nd July 2020]	https://drive.google.com/drive/folders/1V_Bw06EvXO5nbTIkNLeRvLzspmk1GVG_?usp=sharing

''All our dreams can come true if we have courage to pursue them."

Technical Talk

Career Building Challenges in VLSI Front End

The department of ECE has organized online technical talk on 21/11/2020 @ 7.00.8.30 pm through Acharya Live platform for final and pre final year students of Acharya Institute of Technology, Bangalore. This program aided the students to get awareness on recent trends in VLSI and to build their career in semiconductor industry. The talk was helped the students to choose their career growth in different domains of VLSI industry.

Objectives:

- To provide depth knowledge in Application Specific Integrated Circuits.
- Technological advancements and innovations in VLSI Design

Resource Person :

Mr. Jayesh Tanwani,
SoC Engineer, Intel Corporation, Bangalore.
jktanwani@gmail.com, 80507 03435

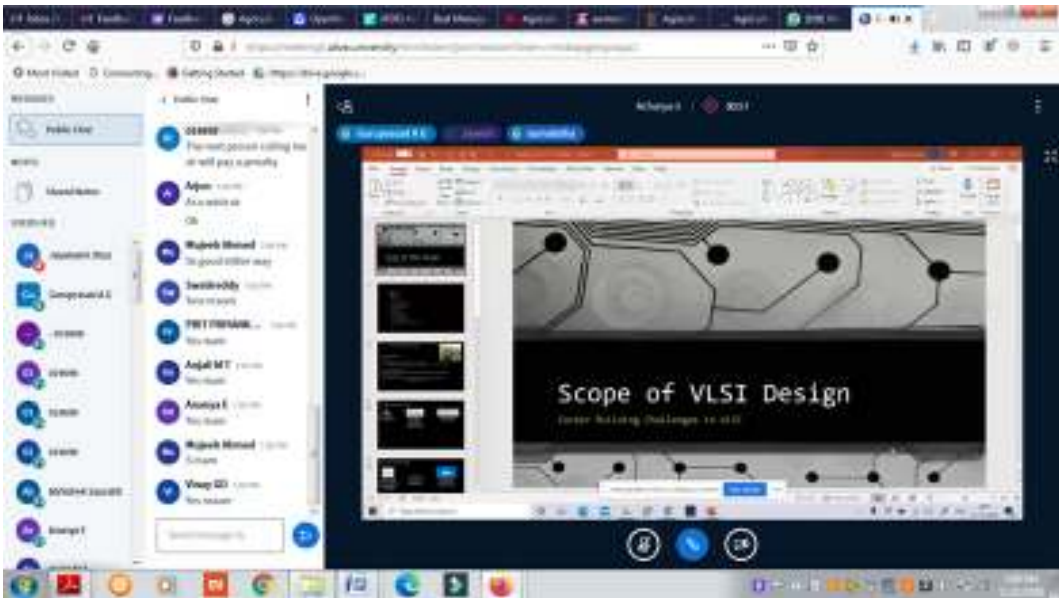
Outcomes :

- Efforts have contributed to student learning and curricular development.
- Explain the basic concepts and logic circuits
- Apply and Design combinational and sequential circuits for given specifications.

Event Coordinators :

- Sumalatha S, Asst. Professor, Dept. of ECE
- Dr. Jayalaxhmi H, Associate Professor, Dept. of ECE

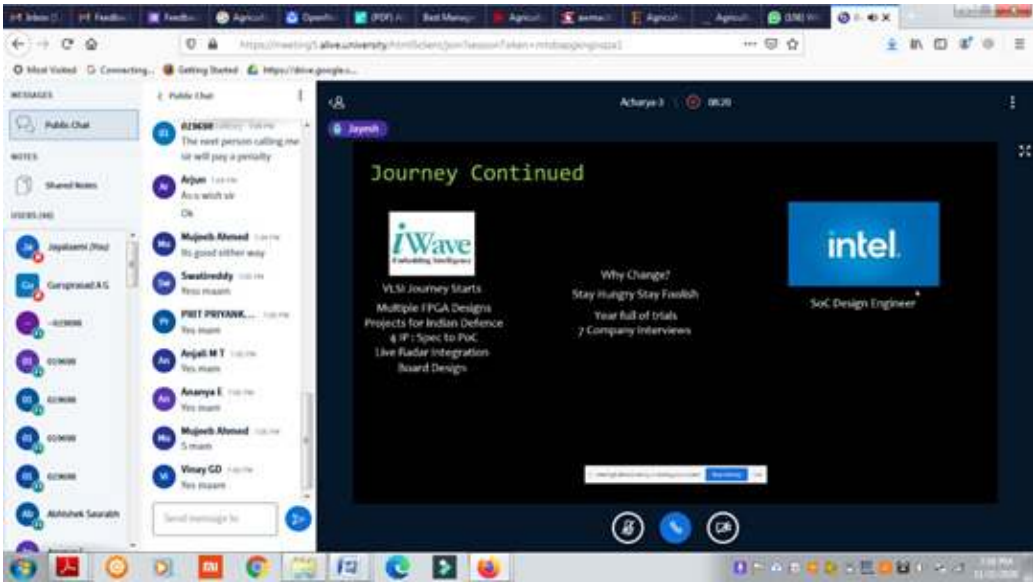
Photos taken during online Technical Session

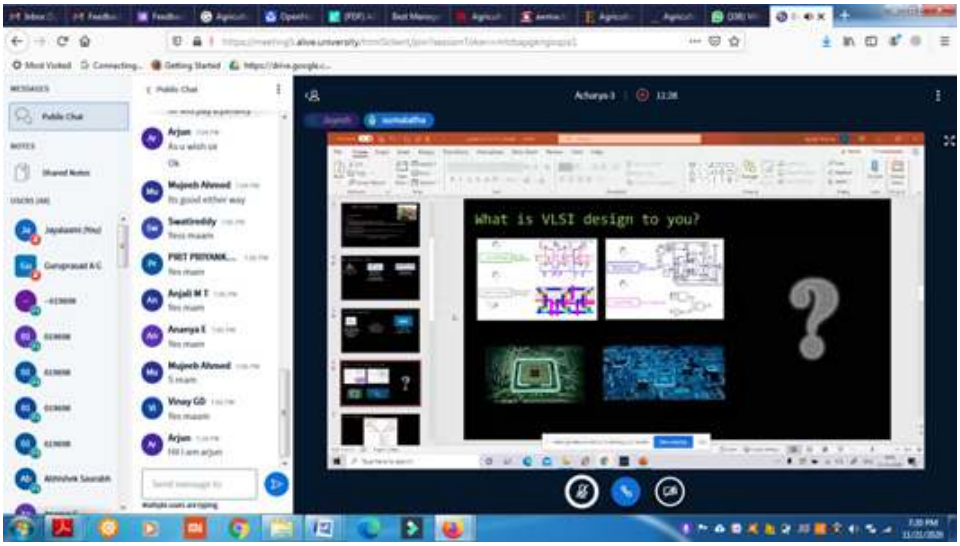


TECHNO FACT

" Verilog was not invented as a design language. It was a verification/ simulation language "

Session was delivered by -- Mr. Jayesh Tanwani





Session is on Progress

TECHNO FACT

" Robert Noyce invented the first monolithic integrated circuit chip at Fairchild Semiconductor in 1959 "

Crack Coding Problems in Placement Seasons

The department of ECE has organized online technical talk on 5/11/2020 @ 7.00.8.30 pm through Google Meet platform for final and pre final year students of various branches of Acharya Institute of Technology, Bangalore. This program aided the students to crack coding problems and to build their career in software industry. The talk was very informative, interactive and Expectation of Software Development Company with respect to Programming languages. The talk was helped the students to choose their career growth in different domains of software industry.

Objectives:

- To crack the coding problems in the programming.
- To create a learning environment wherein the candidate can analyze and comprehend their perceptions with the real world situations.
- Regarding software development & Insight in to Software Development as career.

Resource Person :

Mr. Vikram Shastry,
Director, Uttara Info Solutions, Bangalore.
vikram.shastry@uttarainfo.com, 9980403997

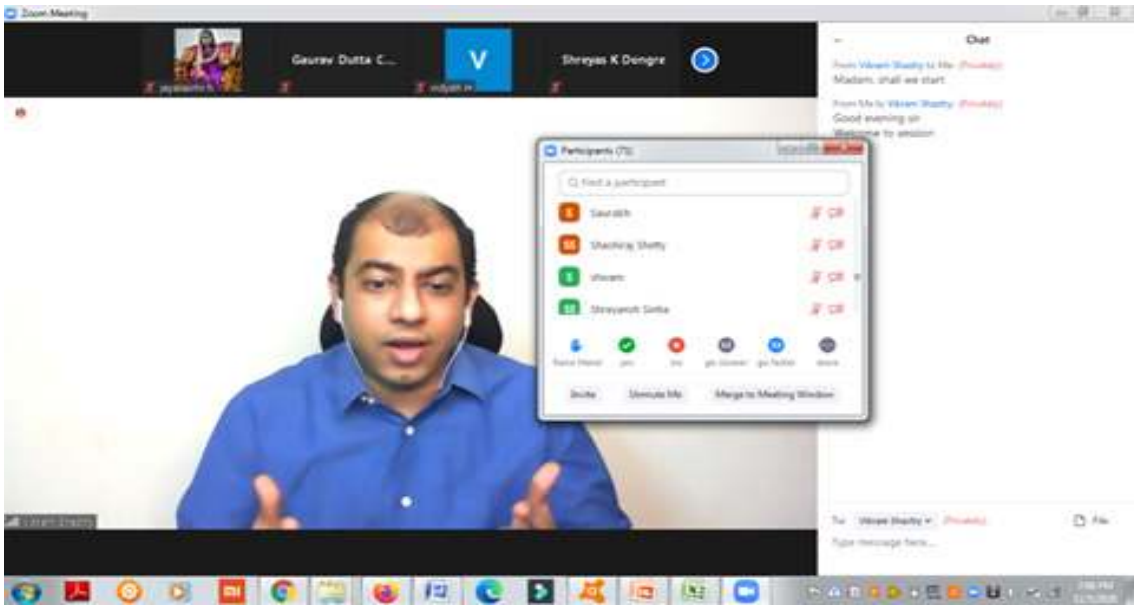
Outcomes :

- Choose career in different domain in Software Development Company.
- Apply programming skill set for debugging the examples.

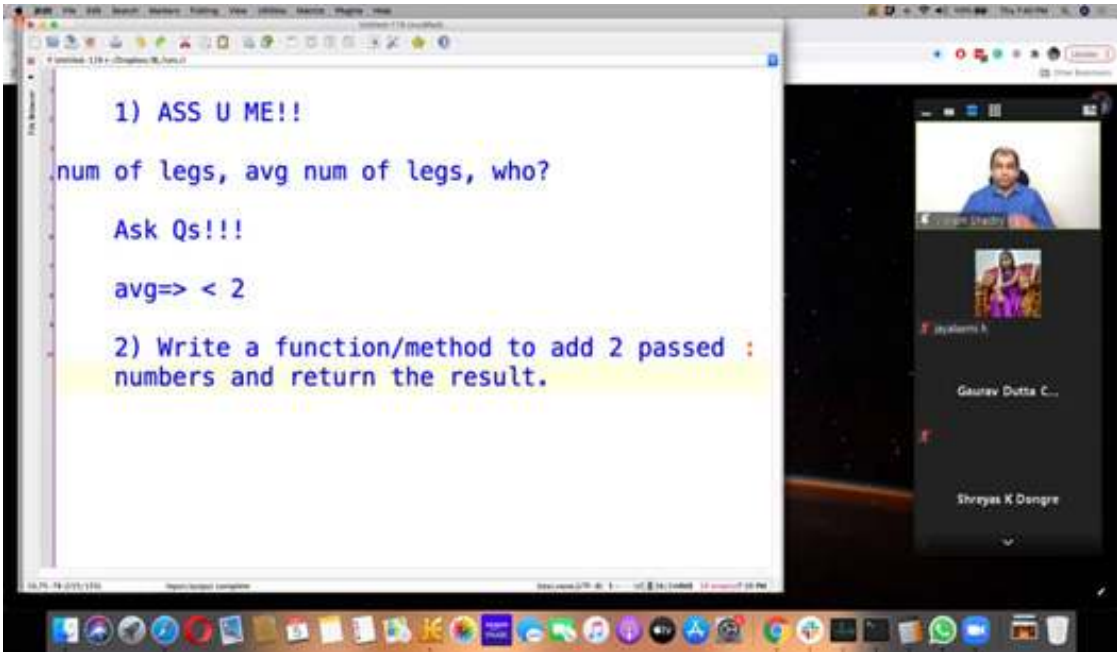
Event Coordinators:

- Dr. Jayalaxhmi H, Associate Professor, Dept. of ECE
- Dr. Sapna kumari.C, Asst. Professor, Dept. of ECE

Photos taken during online Technical Session



Session was delivered by Mr. Vikram Shastry



Session is on Progress

TECHNO FACT

How to Crack Codes ?

- Understand the requirements of the problem statement.
- Build the test cases.
- Build Pseudocodes.
- Implement the program.
- Test and Debug.

TRAINING & PLACEMENT

CO-ORDINATOR

NATARAJU A B
Assistant Professor
ECE Department
AIT Bangalore
natarajuab@acharya.ac.in

PLACEMENT AT ACHARYA

The Placements at Acharya campus is a dynamic, real-time process which is inclusive, proactive, ambitious and wholesome. Acharya has successfully placed 100% of its students from the professional programmes and the placement process is constantly tuned based on Industry need and feedback.
Our Placement Cell monitors the employment opportunities and arranges campus recruitment process interviews for the final year students and provides internship opportunities for pre-final year students. We start placement process for pre-final semester in the month of June. Students are prepared for all kind of interviews well in advance.

Encompassing every dimension of the Placement Process

- Understanding the dynamically changing needs of the corporate through formal structured interactions
- Detailed Profiling of the students to identify their aspirations, strengths, weaknesses and potentials
- Embarking upon a Full Enablement Format which will address every issue from competency to Career
- Students' exposure to Corporate expectations by enabling direct contact in every stage
- A 365-Day commitment to the cause that underlines Significance and Preparedness
- Unique single-window 'Pooled-Placement-Process' in campus to help large recruiters
- Focused Competency Enhancement of students in both Technical and Softskill areas for 'Day-One' Employability

Placement and Training programs organized for the duration of Aug-Nov 2020.

- Infosys specific training
- AMCAT
- Cocubes specific training

STUDENTS PLACED IN THE YEAR 2019-2020

NAME	COMPANY
SRISTI BASU	INFOSYS
AASTHA MISHRA	Lido learning
ABHAY PATEL	TCS, NTT
AKASH KUMAR	TCS, BuziBrains
AKSHAY C RAIKAR	INFOSYS
ANKIT KUMAR	Byju's
ASHWIN RAIKAR	CTS
BESTHA LAHIRIMAHASAYA	INFOSYS
BHARATH K S	Amazon
BHUVANESHWARI PARAGI	NTT
DARSHAN C GANJI	ACCORD
G SOUMYA RANI	RDA Labs
GURRAM ANIRUDH VENKATA SATYA SAI	TCS
K. B. JHANSI RANI LAKSHMI BAI	INFOSYS
KIRAN C	CTS
KUSHAL SAI R	NTT, CTS
LAVANYA D A	INFOSYS
MAHESH S TARANAL	Ernst & Young
MANJUNATH GANAPATI HEGDE	EvryVed Pvt Limited
MANJUSHREE.M	INFOSYS
POOJA	NTT
PRABHAT KUMAR	TCS
RAHUL M	INFOSYS
RAMESH H B	INFOSYS
SAGAR GANGADHAR PALLED	INFOSYS
SALONI KUMARI	Terralogic software solutions
SHAIK WASIM S A	ProdApt
SHIPPU BHUSHAN	INFOSYS
SHIVIKA SRIVASTAVA	Apptus S/W
SONAL AGARWAL	INFOSYS
SPOORTI	NTT, BuziBrains
SRIKANTH REDDY L	CTS
SUDHANVA B D	CTS
SUHAS A	INFOSYS
SUHAS SV	EMBTECH
SUMAN B C	TCS
UDAY BASAVARAJ DUGGANI	INFOSYS
GOWTHAM KN	CTS
K B HARISH SHETTY	Test & Verification Solutions

STUDENTS PLACED THIS YEAR
2020-2021

PLACED AT	USN	NAME
JARO	1AY17EC001	AAYUSHI SHARAN
CTS	1AY17EC005	AKASH L P
CTS, TCS	1AY17EC010	ARAVINDA Y T
CTS, CLIMBER	1AY17EC014	BAIBHAV CHOWDHURY
CLIMBER	1AY17EC018	CHINTADU GAUTHAMI
INFOSYS	1AY17EC022	DIMPLE V
CTS, INFOSYS, TCS	1AY17EC030	JANANI B
CLIMBER	1AY17EC036	KEERTHANA M
XORIANT	1AY17EC038	KUSHAGRA TANDON
CTS, INFOSYS	1AY17EC042	MANISH B
CTS	1AY17EC050	NAVEEN KUMAR K
TCS	1AY17EC063	PRATHVIRAJ H.K.
42Gears	1AY17EC064	PRATYUSH
CTS	1AY17EC067	R.ABHISHEK
Qspiders	1AY17EC070	RAKESH S G
CTS	1AY17EC088	SYED ABDUL GAFFAR SHAKHADRI
MahaMela	1AY17EC089	TANAY TAPANSHU
CTS	1AY17EC096	VENKATA PRAJWAL M
INFOSYS	1AY17EC097	VENU G SOGANADGI
CTS, Evertz	1AY17EC101	VEDA VYAS
INFOSYS	1AY17EC102	VIVEK RAJ
CTS, INFOSYS	1AY17EC103	VIVEKANAND
INFOSYS	1AY17EC116	MEHAVARSHNI P
Qspiders	1AY18EC406	BALACHANDRA V JOSHI

SOME OF OUR TOP RECRUITERS

TCS
Infosys
Capgemini
accenture
Mphasis
The Next Applied
wipro
Mindtree
A Larsen & Toubro Group Company
Cognizant
SPECTRUM
Consultants
SUBEX
LTI
Let's Solve
VOLTAS

INTERNSHIP

The students are taken an internship at different companies as mentioned below. They have experienced industrial training professionally related to different domains like: Machine Learning, Deep Learning, AI, VLSI and Embedded design etc. As technology evolves day after day and there are several issues to be solved using these technologies. The students are exploring and keeping themselves updated.

Students are completed their internship in following domains:

- Machine learning
- Deep learning
- Biomedical Application (Product Development)
- Embedded Systems
- VLSI design
- Artificial Intelligent
- Quantum Computing
- Networking for IOT
- Python with Machine Learning, etc.

Internship Attended By The Students

List Of Students Who Completed The Internship

https://drive.google.com/file/d/1COgFJbKYKsF22IobYHrL7H4BV5eP6w1n/view?usp=sharing

ACHARYA

Alumni Podcast

Mr. Supradeep C M

To Listen the Podcast
Scan the QR code

Presently working at Siemens AI lab, Munich. He recently assumed a position as a business development manager. Prior to that, he was in different roles as a sales manager, project analytics manager, artificial intelligence manager in a high potential program called the Siemens Graduate Program. He does business development in South East Asia and develop applications in the realm of AI.

Q&A

Q How would you describe your four years of engineering life? And how did the college help you to achieve your desired goal?

A In the first year a lot of networking took place where we got to talk to students from different branches. This actually helped us to develop friendships across the whole campus. The second and the third year, I basically had an idea about where I wanted to be placed and what were my interests. The second year is quite important because of the concepts that you get to learn and by the end of fourth year we had completed our projects which were very important for our placements. The college helped me to get into a corporate company which was the first step in the journey of AI and that's how I achieved my goal.

Q What was a significant factor that led you to your current position?

A While I was doing my Masters in Science, I also got an opportunity to do my MBA in technology management which actually pushed me into management well, and that's how it was a significant factor.

Q What would you look for in a student, if you were in the position to hire new graduates from AIT?

A Firstly, I would say 'clear communication'. I would see whether the student is able to communicate what he or she is thinking. Secondly, I would say 'technical skills'. I would see if the student is good enough in programming like Python, in the view of a software company. Even if you aren't expert at programming, I would be expecting the basics of all the algorithms and data structures.

Q What advice would you like to give to your juniors?

A I would like to give an advice that, if you are aiming for an opportunity of your interests, and if there is a company that is willing to offer you an internship, then you can ask them to look through your profile. But while making these requests, make sure to highlight your work or project which must be stated clearly. One must be prepared for their goals in order to execute them.

https://www.linkedin.com/in/supradeep-c-m-a38a4657/

To Listen the Podcast
Scan the QR code

Mr. Sujan Suresh

An engineer by profession, who is more inclined towards the business end of things - interacting with customers, understanding the requirement and solution designing to meet the critical requirements. Being a thorough professional, a good team worker as well as portraying appreciable leadership qualities have been my thumb rules of professional career.

In the long run, i see myself working predominantly with product and service delivery management/project management/customer management which eventually serves my interest to understand and work with business and customers.

Q&A

communication and pursue in it?

A I was quite fascinated with the subject Science right from the beginning and I chose physics as the main subject in 11th and 12th and coming to engineering, the first year had Physics and Basic Electronics which gave me a deeper knowledge of what I have jumped into and that's how it drove me into choosing this branch.

Q What would you look for if you were in a position to hire new graduates from AIT?

A Firstly I would be looking for students who are willing to give their hundred percent to the job I offer. It not only depends on soft skills but also on other technical skills. But soft skills play a major role when you need to present yourself. And the next thing is, I would look for how good they are at technical skills and how good they are at communicating their views provided that they are trainable and employable.

Q Would you like to give any advices to your juniors?

A From my experience, I personally didn't do any internships but my final year project was pretty good enough to get me placed at a decently good company. It all depends on how skilled you are and how much knowledge you have got. But doing an internship also has its own advantages like you get a better understanding of the structure and you are basically prepared to face the world. I would recommend all juniors to learn programming languages, the most acceptable language globally is Python or u can learn Java, C++ too, it would be definitely beneficiary.

Q What was the most significant factor that led you to your current position?

A After completing four years in IT sector I felt an urge to move on to a company that really interests me, today I am in a company which is into semiconductor industry called as Semiconductor Equipment Manufacturing Industry. So, if I hadn't decided or chosen to move out of IT sector, I wouldn't have been what I am today and that's how it made a huge difference since then.

Q What made you choose electronics and

https://www.linkedin.com/in/sujan-suresh-a990623a

PARENTS REVIEW

1. The facilities provided by the department are adequate including labs, there are sufficient computers and electronic equipment available which the student can access thus providing a better understanding towards the subject. Concerning sports and extracurricular activities, adequate facilities are provided, thus allowing the student to participate in other activities apart from studies. The college atmosphere creates a positive vibe for the students.

2. The department has conducted webinars, workshops, and various online courses providing the student additional knowledge apart from the syllabus. Furthermore, the students could explore and discover innovative ideas by using the library and spending their free time based on their interests. Since the certificates are provided, it would improve the resume of the student.

3. Since the students can interact their point of view and feel comfortable in

clarifying their doubts, it is evident that the faculties are putting efforts to ensure that the students are able to understand a certain topic.

4. The most important aspect is, the department has provided every student a proctor which is a silver lining, since each student can interact personally, and are taken care by the faculty. We are also in contact with the faculties which ensures us that the student is safe and secure under their guidance.

5. I would suggest the department to arrange some counselling classes to create awareness and keep the students updated from time to time. I would like to extend my gratitude towards the department for their time and efforts into the student's future.

FROM

Mrs. Neha Srivastava
Government High School
Teacher
Siwan , Bihar

Audio edited by

CREATORS

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RAHUL J GOWDA

"Teamwork is the ability to work together towards a common vision"