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VELALAR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous)

Thindal, Erode -638012

DEPARTMENT OF INFORMATION TECHNOLOGY

(Accredited by NBA & NAAC with 'A' Grade)

DEPARTMENT NEWSLETTER- "VIRTUE"

Academic Year-2020 - 2021

Vision of the Institute

To provide a wide range of Academic and Research Programmes and strive to develop a Centre of Excellence for Learning

Mission of the Institute

M1: To impart essential knowledge to the students through quality education, training and research activities.
M2: To inculcate the students with Societal Awareness, Professional Ethics and Leadership Qualities.
M3:To mould the students as high quality Engineers, Technocrats, Scientists, Administrators and Entrepreneurs.

Vision of the Department

To provide technological excellence in learning in the field of Information Technology and promote academic and research activities.

Mission of the Department

M1:Attain technological excellence through quality education and well-designed curriculum adaptable to technological needs.
M2:Facilitate value added courses and interdisciplinary training to provide highly competent IT professionals and entrepreneurs.
M3:Produce socially aware and ethically responsible engineers through human value education.
M4:Impart collaborative research through academic projects and industry institute interactions.

MESSAGE FROM HOD

I am elated to present the 13th issue of the newsletter 'virtue'. It is important to keep our alumni, students and colleagues at other institutions to aware of various activities and achievements of the departments in the last 7 months. I am very happy with the progress of the department has been made by imbibing value based education synergises with modern teaching learning methods to produce a generation of well knowledgable and passionately sound. I am positive, that we will continue this journey with elevated enthusiasm and persistently provide a platform of holistic learning to the young generation of learners. I expect all my young technocrats to focus on their cherished goals and strive hard to accomplish them. As you read through the pages you will realize that the department had a very busy and fruitful semester which was full of various events and activities by the students and faculty members in the fields of academic, extra-curricular as well as research. I congratulate all faculty members, students and alumni for the achievements and contributions they have made towards the department and the institute and I look forward to your support in future also. Wish you a great semester ahead.

- Dr. V. K. Manavalasundaram

PEO's of the Department:

The Program Educational Objectives of the Information Technology Program is listed below:
PEO 1 – **Preparation:** Excel in post graduate studies and career.
PEO 2 - **Core Competence:** Solve problems using the engineering fundamentals.
PEO 3 - **Professional Environment** : Have engineering breadth to achieve solutions for the needs of society.
PEO 4 – **Multidisciplinary**: Develop professional and ethical values, effective communication, team work and managerial skills for societal and environmental contexts.
PEO 5 - **Learning Environment**: Attain professional competence through lifelong learning.

PROGRAMME OUTCOMES:

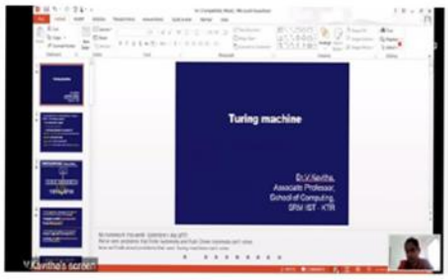
Engineering Graduates will be able to:

- PO 1 - **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- PO 2 - **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO 3 - **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- PO 4 - **Conduct investigations of complex problems:** Use research-based knowledge and research methods inclu ing design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid co clusions.
- PO 5 - **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limit tions.
- PO 6 - **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- PO 7 - **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- PO 8 - **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the eng neering practice.
- PO9 - **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO 10 - **Communication:** Communicate effectively on complex engineering activities with the engineering comm nity and with society at large, such as, being able to comprehend and write effective reports and design document tion, make effective presentations, and give and receive clear instructions.
- PO 11 - **Project management and finance**: Demonstrate knowledge and understanding of the engineering and ma agement principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisiplinary environments.
- PO 12 - **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAMME SPECIFIC OUTCOME:

- PSO 1 - Apply technical concepts and practices in information technology and effectively integrate IT-based sol tions into the user environment.
- PSO 2 - Practice as an ethical software engineer in the evolving discipline of Information Technology by employing management skills learnt through internships and multidisciplinary projects.

ASSOCIATION ACTIVITIES- INFOAUXANO



- A Guest Lecture on ‘Turing Machine’ was conducted on 09.11.2020 for the benefits of Third year students. The session was handled by Dr.V.Kavitha, Associate Professor/CSE, SRM Institute of Science and Technology, Chennai.

- A Motivational Speech on ‘Be yourself and Start Flying’ was conducted on 20.02.2021 for the benefit of Second, Thirdand Final year students.

- A ‘Career Guidance Programme’ was conducted on 27.02.2021 for the benefit of Thirdyear and final year students.

- A webinar on ‘Skilling Yourself’ was conducted on 13.03.2021 for the benefit of Second, Third year and final year students

- A Seminar on ‘Introduction to Database Management System’ was conducted on 13.03.2021 for the benefit of second year students.

The number one benefit of information technology is that it empowers people to do what they want to do. It lets people be creative. It lets people be productive. It lets people learn things they didn't think they could learn before, and so in a sense it is all about potential.

Steve Ballmer

PLACEMENT ACTIVITIES

Placement-Training:

- Job Readiness program was conducted on the month from November to January and 68 students got benefitted.

Placement-Activities:

- R. Nandha,B. Praveen kumar, S. Rajavignesh, S. Ravikumar, G. SaranyaandK. Vishnu priya of Final year has got placed in Webbrax.
- 15 of Final year have got placed in Focus Edumatics.

STUDENT ACTIVITIES

NPTEL certification by students:

- 5 students have completed the NPTEL online certification course ‘Management Information System’. (2 st dents- Elite, 1 student- Elite+ Silver)
- 26 students have completed the NPTEL online certification course ‘Social Networks’. (12 students- Elite, 10 students- Elite+ Silver)
- 16 students have completed the NPTEL online certification course ‘Introduction to Internet of Things’. (7 stu dents- Elite)
- 1 student have completed the NPTEL online certification course ‘Programming in Java’ and awarded ‘Elite’.
- 45 students have completed the NPTEL online certification course ‘Introduction to Industry 4.0 and Industrial Internet of Things’. (23 students- Elite, 19 students- Elite+ Silver)

Courses attended:

- S. Deekshana, completed the course ‘Data Analytics with Python’ conducted by My Captain from 01.02.2021 to 28.02.2021.
- H. Renuka, J. P. Sabeela, K. Poovarshini Nanthithaa completed the course ‘Fundamentals of Communication’ conducted by Infosys on 18.03.2021
- H. Renuka, J. P. Sabeela, K. Poovarshini Nanthithaa completed the course ‘Effective Communication in the workspace’ conducted by Infosys on 23.03.2021
- 32 students attended and completed CPP test organized at Velalar College of Engineering and Technology with course material provided by the spoken tutorial project, IIT Bombay 22.04.2021
- 8 students attended a training program ‘Python 3.4.3 Training’ organized at Velalar College of Engineering and Technology on 28.04.2021
- 62 students completed the course ‘Python Block chain’ conducted by European Open University on 04.06.2021

Workshops attended:

- S. Deekshana, attended the workshop ‘Electric Vehicle Design’ conducted by Andhra Pradesh State Skill Development Corporation, Department of skills&training from19.02.2021 to 20.02.2021
- S. Deekshana, attended the workshop ‘Cyber Security’ conducted by Andhra Pradesh State Skill Develop ment Corporation, Department of skills&training from 26.02.2021 to 27.02.2021
- 4 students attended the workshop ‘Microsoft AI Classroom Series’ conducted by Microsoft on 12.03.2021
- 7 students attended the workshop ‘Master class on FGPA’ conducted by Pantech prolabs India pvt Ltd on 9.04.2021 to 12.04.2021
- S. Rizwana attended the workshop ‘Image Processing using Matlab workshops’ conducted by Pantech pro labs India pvt Ltd on 12.04.2021 to 16.04.2021
- S. Rizwana attended the workshop ‘Master class on Power Electronics using Matlab’ conducted by Pantech

Webinar:

- 3 students attended an Industrial Training Program on ‘Arduino Master Class’ conducted by Pantech Pro labs India Pvt ltd., Erode from 30.11.2020 To 14.12.2020
- 1 student attended an online webinar on ‘Blockchain, Innovation, Industry AI Solutions & Application Se curity to DevOps’ conducted by IIT, chennai on 07.12.2020 To 09.12.2020
- 10 students attended an online webinar on ‘AI Master Class using Python’conducted by Pantech Solutionss on 16.02.2021 to 17.03.2021
- 4 students attended a Quiz conducted by Microsoft on 21.04.2021.
- 1 student attended an online webinar on ‘Career Opportunities in SAP’ conducted by Sona College of Technology on 08.05.2021
- 2 student attended an online webinar on ‘Unfold the future and make the entry into the software industry’ conducted by Velalar College of Engineering and Technology on 23.05.2021
- 2 students attended an online webinar on ‘Green Wireless Communication’ conducted by Kumaraguru Co lege of Technology on 01.06.2021
- 3 students attended an online webinar on ‘MySQL with Python’ conducted by P.B Siddhartha College Of Arts And Science on 09.06.2021
- 1 student attended an online webinar on ‘Wireless charging for Electric Vehicle Application’ conducted b Pantech E-Learning on 03.06.2021
- 3 students attended an online webinar on ‘FPGA system’ conducted by Saveetha Engineering College on 10.06.2021
- 3 students attended an online webinar on ‘Web Design and Development and Foundation’ conducted by Digisnare Technologies on 12.06.2021

Paper Presented:

- S. P. Karunambiga presented a paper on ‘Immersive Technology’ conducted by CSI, Velalar College of Engineering and Technology on 24.03.2021.
- 48 students of final year attended an International conference on ‘Advanced Science and Engineering R search (ASER-2021)’, and presented the papers conducted by Al-Ameen Engineering College on 29.03.2021.

INTERNSHIP

- 12 students of final year attended Internship Training conducted by Pantech Prolabs India Private Ltd, for a period of one month.
- 7 students of final year are in Field work on various companies for a period of 170 days.
- 4 students of final year are in Field work on 'Web Based Online Document processing for Educational Institu tions' by Velalar College for Women for a period of 90 days.
- 2 students of final year are in Field work by DXC Technologies, Hyderabad for a period of 60 days.
- 4 students of final year are in Field work on Globus Ltd, Coimbatore for a period of 22 days.

FACULTY ACTIVITIES

Key note Address Delivered by Faculty members:

- Mr. C. Saravanan acted as a resource person for the session, conducted by K.S.R Polytechnic College, on 12.12.2020 and handled a topic 'Pitching Workshop & Linkage Innovation with Innovation Ambassadors'.

Training

- Ms. R. Menaka attended an online training on 'Leveraging Machine learning to drive innovation processes' conducted by Nandha Engineering College, on 26.12.2020.

Workshop

- Mr. A. Logeswaran attended an online workshop on 'Analytics and Data Management-Insights on Data Sc ence' conducted bySRM Institute of Science and Technology, Vadapalani on 20.10.2020 and 21.10.2020.
- Ms. D. Suganya attended an online workshop on 'Copyrights in India' conducted by Turnip Innovations Pvt. Ltd., on 20.11.2020

  Webinar

Webinar

- Ms. R. Maheshwari, Ms. S. Kiruba, Mr. A. Logeswaran, Ms. T. Kokilavaniattended a webinar on 'Teach with Cheers', conducted by Muthayammal Engineering College, Rasipuram on 14.10.2020.
- Mr. A. Logeswaran, attended a webinar on 'Recent Advances In AI For Data Science, Computer Vision and NLP', conducted by PSG Institute Of Technology And Applied Research on 29.10.2020
- Ms. V. Gomathi, Ms. P. Prema, Ms. D. Suganya attended a webinar on 'Stress management in Entrepreneu ship', conducted by Shakthi institute of Information and Management studies on 20.11.2020.

Conferences

- Ms. N.V. Keerthana attended an International conference on 'International virtual conference on Antenna inn vations, 5G communications and network technologies (ICA5NT 2020)', conducted by Velammal Institute of Technology, Chennai on 06.11.2020 and 07.11.2020.
- Dr. K. Ganeshkumar, Ms. N.V. Keerthanaattended an International conference on 'International online confe ence on current trends in healthcare informatics and technology', conducted by KSR college of engineering on 10.12.2020 and 11.12.2020.
- Ms. T. Premamala presented a paper, 'Multi-stage CNN Architecture for Face Mask Detection' in an Intern tional conference, 'Advanced Science and Engineering Research (ASER-2021)', conducted by Al-Ameen En gineering College on 29.03.2021.
- Ms. M. Shanthamani presented a paper, 'COVID 19 Future Forecasting using Deep Learning' in an Interna tional conference, 'Advanced Science and Engineering Research (ASER-2021)', conducted by Al-Ameen En gineering College on 29.03.2021.

- Ms. M. Shanthamani presented a paper ‘A Real-Time Approach for Abnormal Transaction Analysis’ in an I ternational conference ‘Advanced Science and Engineering Research (ASER-2021)’, conducted by Al-Ameen Engineering College on 29.03.2021.
- Ms. T. Nithya presented a paper ‘Secure Key Agreement and Key Protection for Mobile Device User A thentication’ in an International conference ‘Advanced Science and Engineering Research (ASER-2021)’, conducted by Al-Ameen Engineering College on 29.03.2021.
- Mr. C. Saravanan presented a paper ‘Information Security Detection Method based on Improved PCA and PBNeuralNetwork’ in an International conference ‘Advanced Science and Engineering Research (A ER-2021)’, conducted by Al-Ameen Engineering College on 29.03.2021.
- Mr. C. Saravanan presented a paper ‘Vehicle Instance Segmentation using CNN’ in an International confe ence ‘Advanced Science and Engineering Research (ASER-2021)’, conducted by Al-Ameen Engineering College on 29.03.2021.
- Ms. S. Kiruba presented a paper ‘Improving the efficiency of Health system using Machine learning’ in an International conference ‘Advanced Science and Engineering Research (ASER-2021)’, conducted by Al-Ameen Engineering College on 29.03.2021.
- Ms. S. Kiruba presented a paper ‘Social Distance Detection using Deep Learning model’ in an International conference ‘Advanced Science and Engineering Research (ASER-2021)’, conducted by Al-Ameen Engi neering College on 29.03.2021.
- Ms. T. Kokilavani presented a paper ‘Cloud storage security assessment through Equilibrium Analysis’ in an International conference ‘Advanced Science and Engineering Research (ASER-2021)’, conducted by Al-Ameen Engineering College on 29.03.2021
- Ms. T. Kokilavani presented a paper ‘Predicting Students GPA based on Self-Regulatory Learning Be haviour’ in an International conference ‘Advanced Science and Engineering Research (ASER-2021)’, con ducted by Al-Ameen Engineering College on 29.03.2021
- Ms. P. Prema presented a paper ‘Access control Framework for Cyber-Physical-Social Syatem Big Data using Blockchain’ in an International conference ‘Advanced Science and Engineering Research (A ER-2021)’, conducted by Al-Ameen Engineering College on 29.03.2021
- Ms. P. Prema presented a paper ‘Determination of Information Dissemination in Social Media using D namic Blockchain Algorithms’ in an International conference ‘Advanced Science and Engineering Research ASER-2021)’, conducted by Al-Ameen Engineering College on 16.04.2021

Faculty Development Programme

- Ms. T. Nithya, Mr. C. Saravanan, Ms. V. Leela,Ms. S. Kiruba, Mr. A. Logeswaran, Ms. T. Kokilavani at ended an online Faculty Development Programme on ‘Data Sciences’ conducted by University College of Engineering from 05.10.2020 to 09.10.2020
- Ms. V. Gomathi, Ms. P. Prema, Ms. D. Suganya, Ms. N.V. Keerthana attended an online Faculty Develo ment Programme on ‘Formal modeling, control & Real Time implementation of Cyber Physical Systems’ conducted by VSB engineering college, Karur from 19.10.2020 to 02.11.2020
- Ms. V. Gomathi, Ms. P. Prema, Ms. D. Suganya, Ms. N.V. Keerthanaattended an online Faculty Develop ment Programme on ‘Cloud Technology’ conducted by Government Engineering College, Gujarat from 02.11.2020 to 06.11.2020
- Ms. S. Viveka, Ms. T. Premamala,Ms.R. Maheshwari attended an online Faculty Development Programme on ‘Artificial Intelligence’ conducted by CSIR- Advanced Materials and Processes research Institute, Bhopal from 16.11.2020 to 20.11.2020
- Ms. P. Prema, Ms. D. Suganya, Ms. N.V. Keerthanaattended an online Faculty Development Programme on Data Science using Python’ conducted by Government Polytechnic College, Gandhinagar from 16.11.2020 to 27.11.2020
- Mr. K. Ganeshkumar, Ms. T. Premamala, Ms V. Gomathi, Ms. P. Prema, Ms. D. Suganya, Ms. N.V. Keertha na attended an online AICTE Faculty Development Programme on ‘Cutting Edge Trends in Deep Learning Approaches’ conducted by Kongu Engineering College from 07.12.2020 to 22.12.2020

- Ms. P. Prema, Ms. D. Suganya attended an Online Faculty Development Programme on, ‘Blockchain, Innova tion, Industry AI Solutions & Applications Security to DevSecOps’, conducted by PALS from 07.12.2020 to 09.12.2020.
- Dr. R.Mynavathi, Ms. T. Premamala, Ms. T. Nithya, Mr. C. Saravanan, Ms. V. Leela, Ms. S. Kiruba, Mr. A. Logeswaran, Ms. V. Gomathi, Ms. P. Prema, Ms. D. Suganya, Ms. T. Kokilavani attended an online ATAL Facul ty Development Programme on ‘Quantum Computing’ conducted by K.S.Rangasamy College of Technology from 04.01.2021 to 08.01.2021
- Dr. R.Mynavathi attended an online ATAL Faculty Development Programme on ‘Emotional Intelligence’con ducted by Motilal Nehru Institute of Technology Allahabadfrom18.01.2021 to 22.01.2021
- Mr. C. Saravanan, Mr. A. Logeswaran, attended an online Faculty Development Programme on ‘Design and Analysis of Algorithm’ conducted by SRM Institute of Science and Technologyfrom20.01.2021 to 24.01.2021
- Mr. C. Saravanan, Mr. A. Logeswaran, attended an online Faculty Development Programme on ‘H2O based AI in data driven analytics- Smart Application’ conducted by M.Kumarasamy College of Engineering from27.01.2021 to 09.02.2021
- Mr. C. Saravanan, Mr. A. Logeswaran, attended an online Faculty Development Programme on ‘Machine learning for Language and vision’ conducted by NIT, Andhra Pradeshfrom01.02.2021 to 05.02.2021
- Ms. T. Premamala attended an onlineFaculty Development Programme on ‘IOT Applications with Block chain Technologies’ conducted by K.S.Rangasamy College of Technologyfrom19.02.2021 to 04.03.2021
- Ms. V. Gomathi, Ms. P.Prema, Ms. D. Suganyaattended an online ATAL Faculty Development Programme on ‘Cyber Security’conducted by Indian Institute of Information Technology,Punefrom22.02.2021 to 26.02.2021
- Dr. R.Mynavathi, Ms. R. Menaka attended an onlineFaculty Development Programme on ‘Emotional Intelli gence’conducted by ICT Academy from 23.02.2021 to 27.02.2021
- Dr. K. Ganesh kumar attended an online Faculty Orientation Programme on ‘Integration of Pedagogical strate gies with ICT for transformation of Engineering Education’ conducted by PSG Institute of Technology and Applied Research from 25.02.2021 to 02.03.2021
- Ms. T. Nithya, attended an online Faculty Development Programme on ‘Data Sciences with R-Tool’ conducted by Nandha Engineering College from 01.03.2021 to 06.03.2021
- Ms. V. Gomathi, Ms. P.Prema attended an online Faculty Development Programme on ‘Android Development with Kotlin’conducted by ICT Academy from 01.03.2021 to 06.03.2021
- Mr. C. Saravanan, Mr. A. Logeswaran, attended an online Faculty Development Programme on ‘Setting Goals and Managing Time’ conducted by ICT Academyfrom09.03.2021 to 13.03.2021
- Ms. T. Nithya, Ms. D. Suganya attended an online Faculty Development Programme on ‘Stress Management’ conducted by ICT Academyfrom23.03.2021 to 27.03.2021
- Ms. V. Gomathi, Ms. P.Prema attended an online Faculty Orientation Programme on ‘Integration of Pedagog cal strategies with ICT for transformation of Engineering Education’ conducted by PSG Institute of Technol and Applied Research from 25.03.2021 to 31.03.2021
- Ms. R. Menaka attended an online Faculty Orientation Programme on ‘Cyber Security’ conducted by E&ICT Academy,IIT Kanpurfrom 12.04.2021 to 21.04.2021
- Mr. A. Logeswaran, Ms. P. Prema attended an online Faculty Orientation Programme on ‘Challenges and O portunities of Data Science in Smart Health Care: Turning Data into Clinical Intelligence’ conducted by K.S.Rangasamy College of Technology from 16.04.2021 to 29.04.2021

short lear training program:

- Ms. V. Gomathi, Ms. P. Prema, Ms. N. V. Keerthana attended a AICTE sponsored Short-Term Training Pr gramme on ‘Supervised and Unsupervised machine learning using Google Cloud’, conducted by RMK College of Engineering and Technology, Chennai from 12.10.2020 to 17.10.2020
- Dr. R. Mynavathi, Mr. C. Saravanan, Ms. S. Kiruba, Mr. A. Logeswaran, Ms. T. Kokilavani attended a AICTE sponsored Short-Term Training Programme on ‘Writing and Publishing High Impact Research Publications and Scientific Document’, conducted by Rajalakshmi Engineering college, Chennai from 19.10.2020 to 24.10.2020

- Ms. S. Kiruba attended a Short-Term Training Program on ‘Robotic Process Automation Tools & Techniques’, conducted by Rajalakshmi Engineering college, Chennai from 02.11.2020 to 07.11.2020
- Dr. K. Ganeshkumar, attended a Short-Term Training Programme on ‘Social Network Analysis - Emerging Trends and Challenges’, conducted by Knowledge Institute of Technology, Salem from 02.11.2020 to 07.11.2020
- Ms. P. Prema, Ms. N. V. Keerthana attended a Short-Term Training Programme on ‘IOT based WSN using COOJA network simulator’, conducted by IFET college of Engineering, Villupuram from 02.11.2020 to 11.11.2020
- Ms. R. Menakaattended a Short-Term Training Programme on ‘Incorporating the techniques of Block chain and Artificial Intelligence to face the security and privacy challenges of IT Infrastructure’, conducted by KCG College of Engineering, Chennai from 14.12.2020 to 19.12.2020
- Dr. R. Mynavathi, attended a Short-Term Training Programme on ‘Data Science with R-Tool’, conducted by Nandha Engineering College, from 01.03.2021 to 06.03.2021.

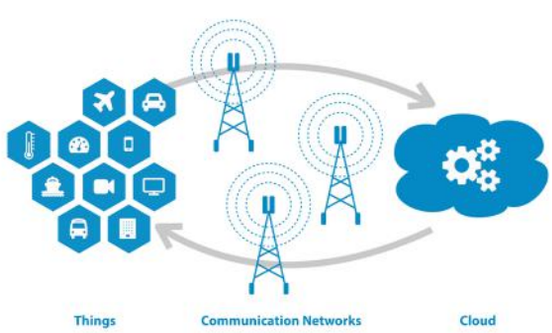
VIRTUE- STUDENT MAGAZINE

Edge Computing

Formerly a new technology trend to watch, cloud computing has become mainstream, with major players AWS (Amazon Web Services), Microsoft Azure and Google Cloud Platform dominating the market. The adoption of cloud computing is still growing, as more and more businesses migrate to a cloud solution. But it’s no longer the emerging technology trend. Edge is.

As the quantity of data organizations are dealing with continues to increase, they have realized the shortcomings of cloud computing in some situations. Edge computing is designed to help solve some of those problems as a way to bypass the latency caused by cloud computing and getting data to a datacenter for processing. It can exist “on the edge,” if you will, closer to where computing needs to happen. For this reason, edge computing can be used to process time-sensitive data in remote locations with limited or no connectivity to a centralized location. In those situations, edge computing can act like mini datacenters.

Edge computing will increase as use of the Internet of Things (IoT) devices increases. By 2022, the global edge computing market is expected to reach $6.72 billion. And this new technology trend is only meant to grow and nothing less, creating various jobs, primarily for software engineers.



Keeping in line with cloud computing (including new-age edge and quantum computing) will help you grab amazing jobs like:

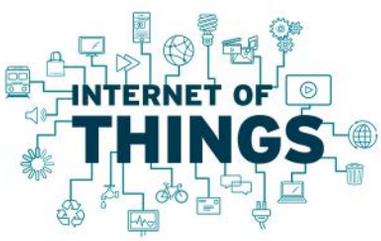
1. Cloud Reliability Engineer
2. Cloud Infrastructure Engineer
3. Cloud Architect and Security Architect
4. DevOps Cloud Engineer

-SANJAY (IT-2nd Yr)

Internet of Things (IoT)

Another promising new technology trend is IoT. Many “things” are now being built with WiFi connectivity, meaning they can be connected to the Internet—and to each other. Hence, the Internet of Things, or IoT. The Internet of Things is the future, and has already enabled devices, home appliances, cars and much more to be connected to and exchange data over the Internet.

As consumers, we’re already using and benefitting from IoT. We can lock our doors remotely if we forget to when we leave for work and preheat our ovens on our way home from work, all while tracking our fitness on our Fitbits. However, businesses also have much to gain now and in the near future. The IoT can enable better safety, efficiency and decision-making for businesses as data is collected and analyzed. It can enable predictive maintenance, speed up medical care, improve customer service, and offer benefits we haven’t even imagined yet.



And we’re only in the beginning stages of this new technology trend: Forecasts suggest that by 2030 around 50 billion of these IoT devices will be in use around the world, creating a massive web of interconnected devices spanning everything from smartphones to kitchen appliances. The global spending on the Internet of Things (IoT) is forecast to reach 1.1 trillion U.S. dollars in 2022. New technologies such as 5G is expected to drive market growth in the coming years.

And if you wish to step foot in this trending technology, you will have to learn about Information security, AI and machine learning fundamentals, networking, hardware interfacing, data analytics, automation, understanding of embedded systems, and must have device and design knowledge.

The internet of things offers several benefits to organizations. Some benefits are industry-specific, and some are applicable across multiple industries. Some of the common benefits of IoT enable businesses to:

1. monitor their overall business processes;
2. improve the customer experience (CX);
3. save time and money;
4. enhance employee productivity;
5. integrate and adapt business models;
6. make better business decisions and generate more revenue.

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Additionally, connected devices often ask users to input their personal information, including names, ages, addresses, phone numbers and even social media accounts -- information that's invaluable to hackers.

Hackers aren't the only threat to the internet of things; privacy is another major concern for IoT users. For instance, companies that make and distribute consumer IoT devices could use those devices to obtain and sell users' personal data.

AHILESH.J (IT-2nd Yr)

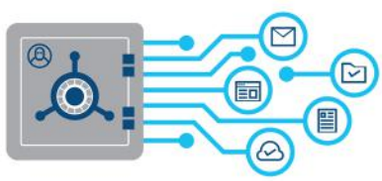
CyberSecurity

Cybersecurity is the protection of internet-connected systems such as hardware, software and data from cyber-threats. The practice is used by individuals and enterprises to protect against unauthorized access to data centers and other computerized systems.

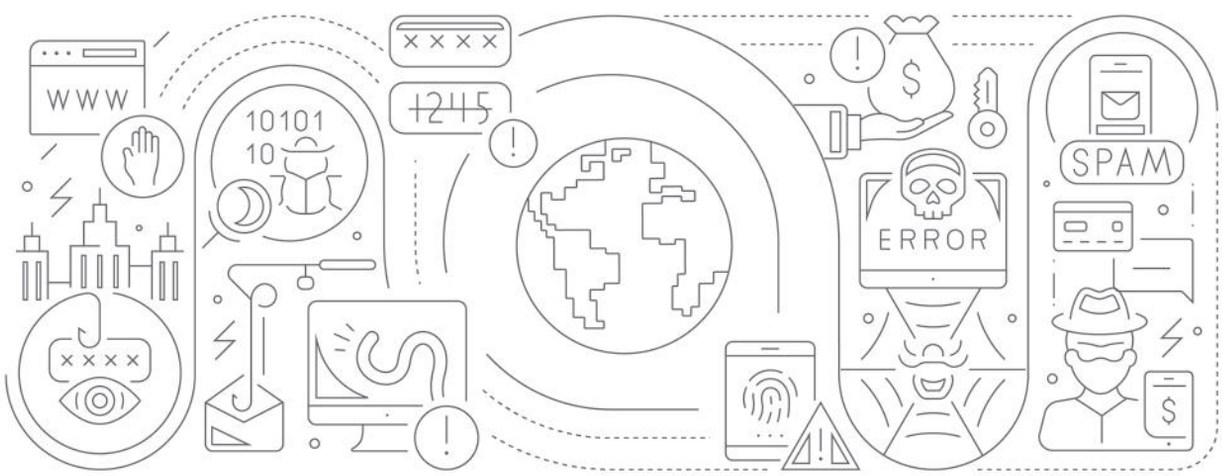
A strong cybersecurity strategy can provide a good security posture against malicious attacks designed to access, alter, delete, destroy or extort an organization's or user's systems and sensitive data. Cybersecurity is also instrumental in preventing attacks that aim to disable or disrupt a system's or device's operations.

With an increasing number of users, devices and programs in the modern enterprise, combined with the increased deluge of data -- much of which is sensitive or confidential -- the importance of cybersecurity continues to grow. The growing volume and sophistication of cyber attackers and attack techniques compound the problem even further.

Maintaining cybersecurity in a constantly evolving threat landscape is a challenge for all organizations. Traditional reactive approaches, in which resources were put toward protecting systems against the biggest known threats, while lesser known threats were undefended, is no longer a sufficient tactic. To keep up with changing security risks, a more proactive and adaptive approach is necessary. Several key cybersecurity advisory organizations offer guidance. For example, the National Institute of Standards and Technology (NIST) recommends adopting continuous monitoring and real-time assessments as part of a risk assessment framework to defend against known and unknown threats.



Cybersecurity is continually challenged by hackers, data loss, privacy, risk management and changing cybersecurity strategies. The number of cyberattacks is not expected to decrease in the near future. Moreover, increased entry points for attacks, such as with the arrival of the internet of things (IoT), increase the need to secure networks and devices.

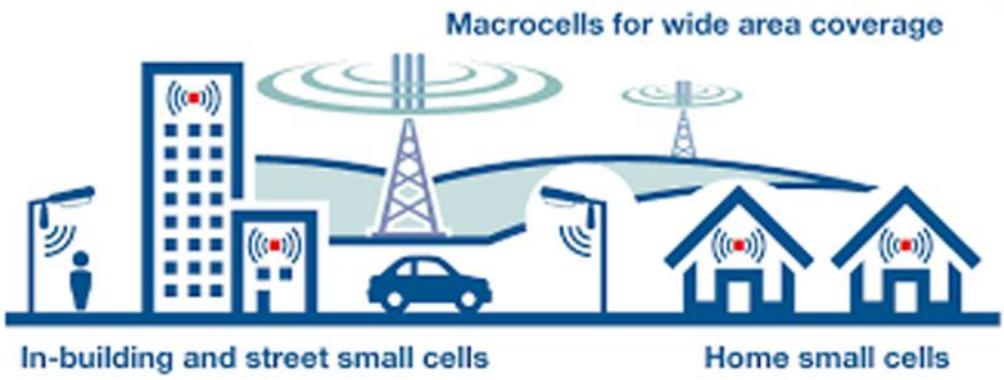


SriSudhan (IT-Ist Yr)

5G and Enhanced Connectivity

5G is the 5th generation mobile network. It is a new global wireless standard after 1G, 2G, 3G, and 4G networks. 5G enables a new kind of network that is designed to connect virtually everyone and everything together including machines, objects, and devices. 5G wireless technology is meant to deliver higher multi-Gbps peak data speeds, ultra low latency, more reliability, massive network capacity, increased availability, and a more uniform user experience to more users. Higher performance and improved efficiency empower new user experiences and connects new industries.

Faster and more stable internet means more than only loading webpages faster and spending less time waiting for YouTube videos to load. From 3G onwards, each advancement of mobile connectivity has opened up new internet use cases. As bandwidths expanded, 3G enabled online access and data-driven services on mobile devices; 4G enabled the increase of streaming video and music platforms; and 5G, likewise, would expand what is possible



Broadly speaking, 5G is used across three main types of connected services, including enhanced mobile broadband, mission-critical communications, and the massive IoT. A defining capability of 5G is that it is designed for forward compatibility—the ability to flexibly support future services that are unknown today.

Enhanced mobile broadband
In addition to making our smartphones better, 5G mobile technology can usher in new immersive experiences such as VR and AR with faster, more uniform data rates, lower latency, and lower cost-per-bit.

Mission-critical communications
5G can enable new services that can transform industries with ultra-reliable, available, low-latency links like remote control of critical infrastructure, vehicles, and medical procedures.

Massive IoT
5G is meant to seamlessly connect a massive number of embedded sensors in virtually everything through the ability to scale down in data rates, power, and mobility—providing extremely lean and low-cost connectivity solutions.

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