

CS CONNECT

Volume 6, Issue 1

Publishing Month April, 2020

Computer Science & Engineering

From HOD's Desk

Sky has no limits. If you have talent you can achieve anything that you wish for, but to achieve something you need to work hard. The Acropolisians have proved that they are no less than the IITian's. They are not just proving to be the best employees of the renowned companies but they have proved to be the known entrepreneurs of the various leading companies. If you set your goal and apply the chemistry of hard work along with smart work then you can fly high and can excellence in the field of Computer Science & Engineering.



Dr. Sanjay Bansal

Data Analytics

Key Technologies, requirements and its future

- Prof. Praghya Trivedi

A single technology cannot encompass Big Data Analytics: there are few advanced technologies that work together to get the maximum information from the data. They are Machine Learning, Data Management, Data Mining, Hadoop, In-Memory Analytics, Predictive Analytics and Text Mining. As per now, people are producing more and more data as they are using the advent of mobile technology. In this way data sets continue to grow and thus we require the cloud to store, manage and analyze the big data. It has been observed that data is expected to grow up to 50 times by 2020. There are various in the organization like banking, healthcare, telecommunications, e-commerce, energy and risk management where there is great scope of data analytics. And in the coming era there will be lots of job requirements in the field of Data Analytics. It has been researched that the median salary of a Data analyst will be Rs 10 lakhs per annum and it will increase with increase in experience.

RANSOMWARE: A THREAT TO ECONOMY AND COUNTERMEASURES AGAINST IT.

- Prof. Sukrati Agrawal

Ransomware is a malware based on public key cryptographic technique. It is a virus that encrypts victim's documents, potentially causing an irreversible loss of data and then extracting money from the victim to get access on his own data upon payment. Among all of the latest cyber security threats that have been discovered over the years, none of them create as much fear and uncertainty as ransomware attacks, since people from all over the world are subjected to exaction on a huge scale as they are today. Around 67% of businesses attacked by ransomware have permanently lost part of all of their company data. By infecting secure database systems, encrypting data and threatening deletion or corruption of files unless a hefty ransom is paid, ransomware is a very dangerous form of malware. The massive increase in ransomware was triggered by the creation of crypto-currencies like Bitcoin (1 Bitcoin = 3,37,449.46 Indian Rupees), which allow ransom demands to be paid anonymously. The world wide loss due to Ransomware attack is around \$2,344,365. Ransomware attack against the New Orleans city government in early 2020 cost the city over \$7 million dollars. India among top nations attacked by latest ransomware in 2019. Cyber security Ventures predicts that a business will fall victim to a ransomware attack every 14 seconds by 2019, increasing from every 40 seconds in 2017. Ransomware damages are upto 15X in the past 2 years. Ransomware attacks on healthcare organizations are expected to quadruple by 2020. One can prevent himself from being captured by following protocols. These protocols won't stop a malware attack, but can make the damage much less significant;

1. By Keeping operating system patched and up-to-date, ensure that there is less vulnerability to exploit.
 2. While installing new software do not give administrative privileges unless you know exactly what it is and what it does.
 3. Install antivirus software, which detects malicious programs like ransomware.
 4. The most important is ofcourse, back up your files frequently.
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How To Survive In College

-KIRTI RATHORE 2nd Year (CS-2)

College days could be the happiest time of your life or maybe the saddest, It's for you to decide? It's not just a place where you are pursuing a college degree but it is also a place where you all would be growing up, learning new ways of experiencing new things finding new ways to cheat in tests and learning how to study a night before an exam. Choose your friends wisely because those idiots are going to support you in your ups and downs and throughout your college life and who knows maybe after that. However, above all those things learn to stand up for yourself don't hesitate and don't ever let anyone tell you what you can do or what you can't because they don't know you as you do yourself. Interaction with your seniors is going to be most amazing part of your college life. They might end up teaching you something really meaningful, which you might appreciate for the rest of your life. Toss a coin in the valley of Acropolis and get anything you want from the canteen. And of course, don't forget to complete your assignments and also start learning the tone of sarcasm early. Submit your library books on time period or that'll cost you a fortune literally. Four years may seem like an eternity, but it will go by faster than you could ever imagine. The Yavnika Hobby Club and E-cell will mold your life forever. But remember one thing even if life hurts you, because it will. Remember that hurt is good it means that you're out of that cave. Make the most of your college life.

Algorithm, Education & Mathematics

- Prof. Rahul Moriwal

Perhaps the most surprising and powerful aspect of place-value arithmetic is how it reduces any calculation to a set of purely abstract symbolic manipulations. In principle, I suppose, one could even be trained to perform such symbol-jiggling procedures without any comprehension whatever of the underlying meaning. We could even (if we can possibly imagine being so cruel) force young children to memorize tables of symbols and meaningless step-by-step procedures, and then reward or punish them for their skill (or lack thereof) in this dreary and soulless activity. This would help protect our future office workers from accidentally gaining a personal relationship to arithmetic as a craft or enjoying the perspective that outlook would provide. We could turn the entire enterprise into a rote mechanical process and then reward those who show the most willingness to be made into reliable and obedient tools. I wonder if you can imagine such a nightmarish, dystopian world. Let's try not to think about it.

SELF DRIVEN CARS

- Yogesh Kumar CS-4 Third Year

How far have they come?

Seemingly within just a few years, autonomous cars have gone from science fiction fantasy to reality. But while it seems like this technology emerged virtually overnight, the path to self-driving vehicles has taken a whole lot longer than that. Starting from the late 20's right after the birth of motor car it didn't take long for inventors to visualize a future with autonomous vehicles. In 1969, John McCarthy -a.k.a. one of the founding fathers of artificial intelligence, describes something similar to the modern autonomous vehicle in an essay titled "Computer-Controlled Cars." McCarthy refers to an "automatic chauffeur," capable of navigating a public road via a "television camera input that uses the same visual input available to the human driver." Naive right, but this idea sparked the future of the autonomous vehicles. Today, the reality is that autonomous car tech is becoming more prevalent by the day, and truly driverless cars are closer to becoming an everyday norm than you might think. Almost daily, there's a new development in the driverless car space, and nearly every major car manufacturer, ride-sharing service and tech company from Apple to Google has bought into the driverless car industry. And, if you take all the driverless car chatter at face value, we're only a couple years away from a utopian society where cars will navigate and park by themselves, and accidents become a rarity.

Stages of enhancement

The SAE autonomy scale is used by the auto industry to determine different levels of autonomous capability. Here's a breakdown.

STAGE 0: No automation, The driver controls steering and speed. This includes systems that only provide warnings to the driver without taking any action.

STAGE 1: Limited driver assistance. This includes systems that can control steering and acceleration/deceleration under specific circumstances, but not both at the same time.

STAGE 2: Driver-assist systems that control both steering and acceleration/deceleration. These systems shift some of the workload away from the human driver, but still require that person to be attentive at all times.

STAGE 3: Vehicles that can drive themselves in certain situations such as in traffic on divided highways. When in autonomous mode, human intervention is not needed. But a human driver must be ready to take over when the vehicle encounters a situation that exceeds its limits.

STAGE 4: Vehicles that can drive themselves most of the time but may need a human driver to take over in certain situations.

STAGE 5: Fully autonomous, Vehicles can drive themselves at all times, under all circumstances. They have no need for manual controls. By far we have reached Stage 3 autonomous capabilities with google's Waymo leading the way of self-driving cars .

Achievements

Department of Computer Science & Engineering

FDP Details

1. Dr. Shilpa Bhalerao delivered a lecture on ML Supervised learning concepts and application lecture on STTP at RGPV, Bhopal Sagar Institute.

2. Expert session by Dr. Shilpa Bhalerao and Prof. Vandana Kate for CS, IT, MCA on pre-requisite for Deep Learning from 23-26 Nov 2019.

TCS Lecture Series

1. An expert session on "Fundamentals of Unix & Linux System Administration" dated on 31/08/2019 by Aashutosh Sharma.

2. An Expert session on "Lateral Thinking" conducted on 16 sept 2019 by Mr. Gourav Gehlani.

3. An Expert lecture on "Adoption of digital technologies and its impact on industries" conducted on 27 sept 2019 by Mr. Manish Santalani

Placement

100% student placement achieved in various companies like Tchracers, Web Indore, ApoloMunji, Emperia Etc.

Faculty Achievement

1. Dr. Sanjay Bansal Honoured with the best professor in Computer Science & Engineering Studies by Business School Affair & Dewang Mehta National Education Awards 2019.

2. Prof. Rahul Patel participated in AWS re:Invent 2019 Keynote held at USA.

3. Prof. Rahul Moriwal published 5 research papers with the students.



Sanchit Pandya CS-4 (IV year)

Student Achievement

1. Shadab Khokar secured winning position in blind coding event organized by Chameli Devi Group of Institution named CITRONICS Techno Management fest 2019 and got cash prize of Rs. 3000/-

2. Four teams of students Hemant & Kapil, Chandresh & Gaurav, Dheeraj & Kunal, Chetan & Divyesh secured the 2, 3, 5 & 7 rank & got the prize money of Rs. 11000/- In TechFlix annual Fest 2019 Held at SAGE University.

3. Shadab Kokar secured First Position GENESIS 2019 CodeHawks Organised by DAVV, Indore

RESEARCH AND CERTIFICATIONS



**21 RESEARCH PAPERS
HAVE BEEN PUBLISHED BY
FACULTY MEMBERS IN
VARIOUS INTERNATIONAL
JOURNALS.**

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FACULTY CERTIFICATION

The faculty of the Dept. are highly devoted to provide excellent guidance to their students for that they did certification in various fields.



STUDENT CERTIFICATION

Students of CSE Dept. earned various certification under the mentorship of Faculty Members

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FACULTY DEVELOPMENT PROGRAM

9 Faculty Development programs been completed through some of the very prestigious institutes of our country.



CSE Dept Glimpses



Recognizing AITR alumnus of the year (Jan-Dec) Mr Tushar Pal, CSE 2016 pass out.



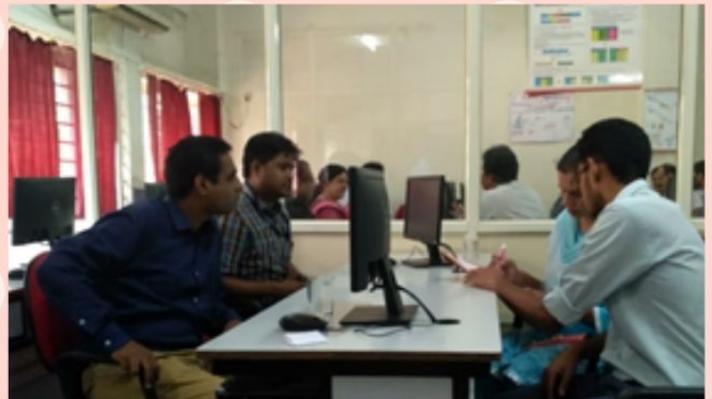
Expert Lecture on "How to Excel in Campus Placement"



Industry Visit at "WebVillee Technology PVT. LTD."



Parent-Teacher Meet held on 21st Sep 2019



Expert Talk by Mr. Manish Santlani (Service Delivery Manager at Tata Consultancy Services, Indore)



Mission & Vision

The department strives to produce competent and qualified computer professionals and researchers to serve the community and profession with moral values and ethics.

Advisory Board

Dr. Sanjay Bansal
Dr. Shilpa Bhalerao

Chief Editors

Prof. Sukrati Agrawal
Prof. Divya Gupta

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Yashaswini Taose
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