



DIGITAL OUTLET

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CCET ACM STUDENT CHAPTER
CCET, DEGREE WING
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■ OUR MISSION & VISION ■

Our Mission is to advance computing education and research, fostering innovation and collaboration globally. Through our bi-monthly digital outlet, we provide a platform for sharing knowledge and addressing societal challenges. We empower individuals within the computing community, promoting excellence and continuous learning.

Our Vision is to lead the forefront of computing's evolution, driving innovation and ethical practices that benefit all. We envision a dynamic global community where collaboration across disciplines sparks transformative solutions to society's most pressing challenges. ACM is committed to championing equitable access to computing's advantages worldwide. Through our magazine and platforms, we aim to inspire and inform, empowering computing professionals with invaluable resources and fostering a future where technology serves humanity's highest aspirations.

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A NOTE FROM OUR MENTORS



Our mission at CCET is not only to produce engineering graduates but to produce engineering minds.

Dr. Manpreet Singh
Principal CCET (Degree Wing)



ACM CCET provides student a great opportunity to learn scientific and practical approach of computer science.

Dr. Sunil K. Singh
Professor and HOD, CSE | Faculty Mentor



Every person should be provided with an opportunity to learn and explore the field of computer science.

Er. Sudhakar Kumar
Assistant Professor, CSE | Faculty Sponsor



CCET ACM Student chapter is a group of people with similar interests and goals in computer science. Together, this platform focuses on the growth and development at not only personal but professional level also as it has a unique learning environment.

Akash Sharma
UG Scholar, 7th Semester, CSE | Chairperson, CASC



ACM-W Student Chapter of CCET aims to promote women in technology. As a member of this community, you will have the opportunity to collaborate with others who share similar interests and explore different areas of computing in order to advance in them.

Anureet Chhabra
UG Scholar, 7th Semester, CSE | Chairperson, CASC-W



CCET ACM STUDENT CHAPTER



Research and Development



Student Speaker Program



Competitive Coding



Designing & Digital Art



Internship and Career Opportunity

ABOUT ACM

ACM boosts up the potential and talent, supporting the overall development needs of the students to facilitate a structured path from education to employment. Our Chapter CASC focuses on all the aspects of growth and development towards computer technologies and various different fields. Overall, we at CCET ACM Student Chapter, through collaboration and engagement in a plethora of technical activities and projects, envision building a community of like-minded people who love to code, share their views, technical experiences, and have fun. We have been trying to encourage more women to join the computing field, so we started an ACM-W Chapter to increase the morale of women. CASC launched an app which aimed at maintaining decorum of reading among CS members and sharing their ideas.



CCET ACM-W

STUDENT CHAPTER



Research and Development



Student Speaker Program



Competitive Coding



Designing & Digital Art



Internship and Career Opportunity

ABOUT ACM-W

The CCET ACM-W was founded in October 2021 with an aim to empower women in the field of computing and increase the global visibility of women in the field of research as well as development. We provide a platform for like-minded people so that they can grow together and contribute to the community in a way that shapes a better world. Our chapter was founded to encourage students, especially women, to work in the field of computing. The chapter's main goal is to create even opportunities and a positive environment for students, where they can work to develop themselves professionally. We at the ACM Student chapter aim to build a globally visible platform where like-minded people can collaborate and develop in their field of interest.

CASC'S RECENT ACHIEVEMENTS

ACM India Summer Schools 2023 provide self-driven students with comprehensive learning and research opportunities in cutting-edge technology domains. Led by top-tier faculty from academia and industry, each school offers a blend of academic and applied insights, fostering deep understanding and exploration of advanced tech subjects. Four exceptionally talented students from CASC, **Deepak Mahto, Devashish Gupta, Tarun, and Uday Madan** were selected to participate in the highly prestigious ACM India Summer School 2023.

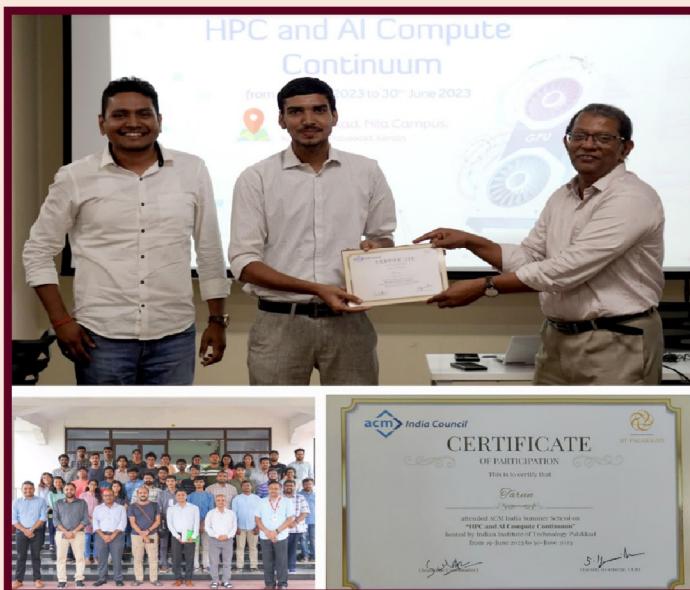
Deepak Mahto participated in the prestigious Summer School at IIT Hyderabad between 14th-24th June. The focus of this intensive ten-day program was "**Algorithmic Techniques in Computational Biology**", a highly specialized and cutting-edge field that seamlessly merges biology, computer science, and mathematics. IIT Hyderabad, renowned for its academic excellence and research prowess, provided the perfect environment for him to immerse himself in this captivating subject.



Devashish Gupta, a talented individual from our college, demonstrated his intellectual acumen by participating in the Summer School held from June 26th to July 7th, 2023. The focus of his academic pursuit was "**Algorithms for Data Science**", a crucial field that underpins contemporary data analysis and decision-making processes across various industries.

CASC'S RECENT ACHIEVEMENTS

Tarun (Vice-Chairperson ACM) and Uday Madan (Secretary ACM) began their shared intellectual journey at the ACM India Summer School, a pivotal event held from June 19th to June 30th, 2023. Their focus was the program titled "HPC (High-Performance Computing) and AI Compute Continuum", which took place at the esteemed IIT Palakkad. This program delved into the cutting-edge domains of high-performance computing and artificial intelligence, both holding vast potential for groundbreaking advancements in diverse industries.



MACHINE LEARNING

A BEGINNER'S PERSPECTIVE

4th June, 2023

Event Details

As part of the AICTE SPICE Scheme, CCET ACM and ACM-W Student Chapters collaborated to organize an event centered around Machine Learning. This event encompassed a range of topics, including the fundamental principles of Machine Learning and Deep Learning, crucial concepts within the realm of Machine Learning, preprocessing of data and extraction of features, as well as the inner workings of various Machine Learning algorithms.



Speaker



Akash Sharma

CSE, 2020

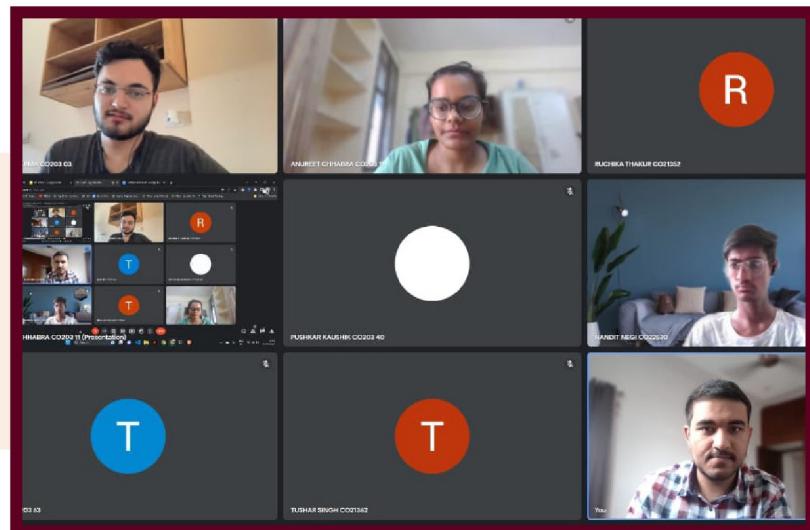


Anureet Chhabra

CSE, 2020

The speakers, Akash Sharma and Anureet Chhabra, delivered an exceptionally insightful session for the audience, educating them on the foundational aspects of AI.

Event Gallery



THE DARK SIDE OF CHATGPT

SAHIL GARG [CO22358, CSE]

The most common AI that we are all familiar with is ChatGPT. But imagine what would happen if ChatGPT started answering questions like: 'How to make a Bomb?', 'Whom should we vote for next?', 'Generate a paragraph defaming the prime minister'. Isn't it scary, where our world would go if ChatGPT started giving out strategies to kill someone, to defame someone, expel racist comments against someone, and influence a country's election?

Catering to these issues is important for the overall betterment of the human race as a whole. These large language models (LLMs) such as ChatGPT or Bing AI are free to use and available to everyone. In such an era solving these kinds of issues is of utmost importance. These concerns are not something that only a non-tech fellow would think, even the CEO of OpenAI (the company behind ChatGPT), Sam Altman has some similar thoughts.

Analyzing his tweets about ChatGPT's influence, it is clear that he is worried about the involvement of ChatGPT. Taking steps on this, OpenAI organized a competition offering an astounding amount of \$100,000 to develop a framework to control AI. This framework would help the developers develop models that are non-racist, non-defaming, unbiased, and unharful.

Alongside OpenAI, individual developer communities have been taking initiatives to develop frameworks even before this initiative was taken by OpenAI to prevent such a disaster. One such community that is very popular is the GATO (Global Alignment Taxonomy Omnibus) community. They have been developing a 70-page framework (version 2023.05.21) that defines rules that must be followed to develop AI models that are aligned with the greater goal of humanity, which is peace and harmony. This is a hot document that is ever-updating

and tries to incorporate all the challenges that the human race faces due to AI.

In conclusion, developing AI models that are trained to follow good human values is very challenging but very important. If not prevented this could lead to an increase in fake information being floated on social media. Deep Fakes of politicians, actors, and CEOs conveying or doing something against their regular statements could lead to the deterioration of relations between countries, civil wars, and even the economic fall of a country and its stock market. But with a collaborative effort from all in this area, most of these things are preventable.

EDGE COMPUTING: BRINGING THE CLOUD CLOSER TO HOME

RUCHIKA THAKUR [CO21352, CSE]

As more and more devices become connected to the internet, the amount of data being generated is growing exponentially. It is predicted that by 2025, there will be over 75 billion connected devices worldwide, each generating vast amounts of data. This presents a significant challenge for traditional cloud computing, which relies on centralizing data processing in large data centers. However, a new computing paradigm is emerging that aims to address this challenge: edge computing.

What is Edge Computing?

Edge computing represents a decentralized approach to computing where data processing occurs in proximity to the data source. Instead of sending all data to a central data center for analysis, edge computing handles data at the network's periphery near the originating devices. This approach has the potential to greatly diminish latency and bandwidth demands for data transfer, while also enhancing data security and privacy by maintaining data's proximity to its origin.

Edge computing can be implemented in various ways, but typically involves the use of small computing devices, such as sensors, mobile devices, or IoT devices, to collect and process data. These devices are often located at the

edge of the network, near the devices that generate the data. Data processing can be performed on the device itself, or a nearby server or gateway.

Benefits of Edge Computing

There are several benefits to using edge computing over traditional cloud computing:

-Enhanced Response Speed: Edge computing outperforms traditional cloud computing by swiftly responding to data processing requests at the network's edge. This is in contrast to cloud computing, which necessitates data transmission to centralized data centers, causing delays.

-Minimized Network Congestion: Edge computing effectively curtails the volume of data sent to centralized data centers by processing data at the network's periphery. Consequently, this reduces the burden on network traffic by decreasing the amount of data transmitted.

-Elevated Data Security: Edge computing's strategy of maintaining data proximity bolsters data security and privacy. This approach mitigates the risk of data breaches and unauthorized access, as data remains in closer proximity to its source.

-Cost Efficiency: Edge computing results in cost savings by diminishing the necessity for extensive data transmission to centralized data centers. This reduction in data transmission and storage requirements leads to lower associated costs.

Applications of Edge Computing

Edge computing finds application across diverse industries, including:

-Smart Cities: By processing data from sensors and cameras embedded in smart cities, such as



traffic cameras, air quality sensors, and waste management systems, edge computing offers real-time insights and augments city services.

-Healthcare: Edge computing processes data from medical devices, like wearables and implantable devices, for instantaneous health monitoring and enhanced patient outcomes.

Manufacturing: Edge computing handles data from sensors and machinery in manufacturing plants, optimizing production procedures and minimizing downtime.

-Transportation: Edge computing processes data from vehicle sensors, furnishing real-time traffic and weather updates while bolstering vehicle safety.

Challenges of Edge Computing

While edge computing has many benefits, it also presents several challenges, including:

-Standardization: There is currently no standardized approach to implementing edge com

puting, which can make it difficult to integrate different edge devices and platforms.

-Management: Managing a large number of distributed devices can be challenging, as it requires sophisticated device management and security protocols.

-Software and hardware architectures: Developing software and hardware architectures that can support edge computing can be complex, as it requires balancing the need for local processing with the need for centralized management and control.

Conclusion

Edge computing is rapidly gaining momentum, driven by the growing adoption of IoT devices and the increasing demand for real-time data analysis and decision-making. Edge computing is expected to become increasingly important in the coming years, as organizations seek to leverage the benefits of real-time data analysis and decision-making to gain a competitive advantage.

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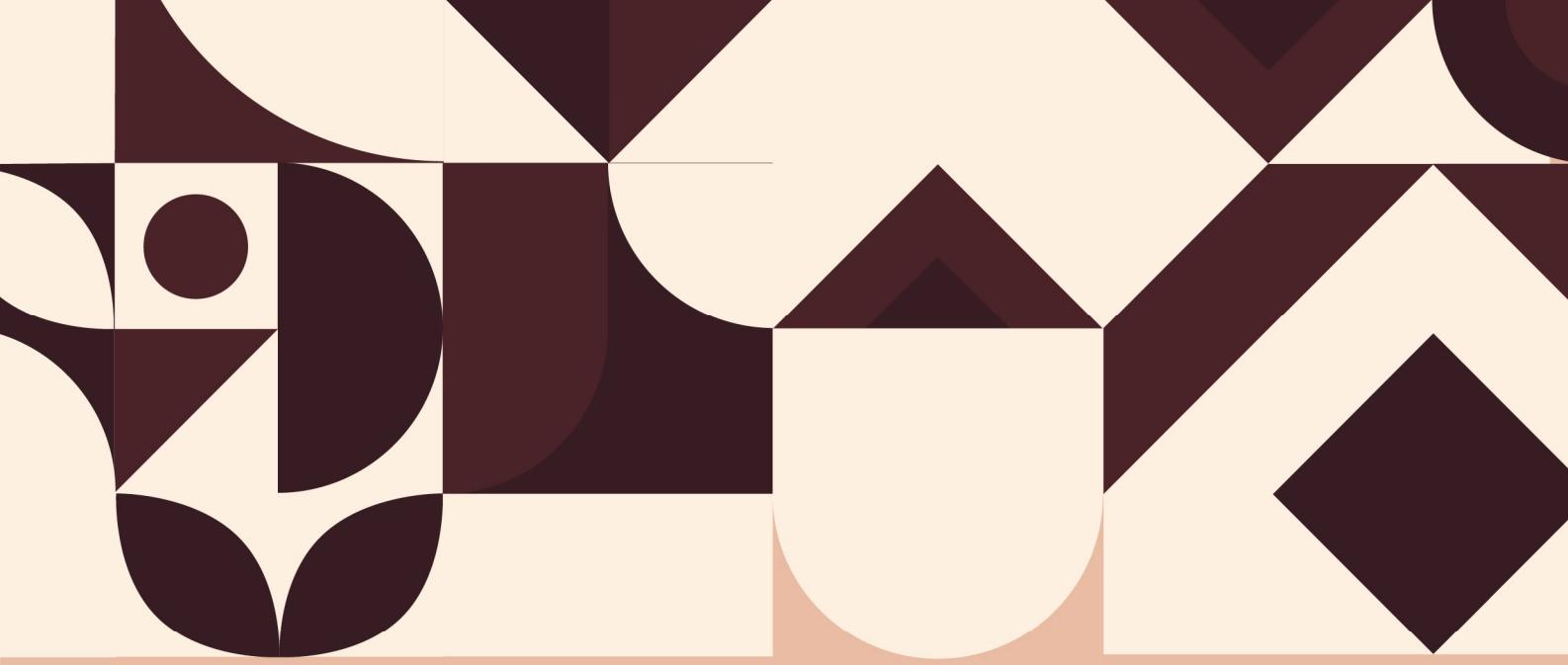
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“Software is a great combination of artistry and engineering.”

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