



# DIGITAL OUTLET

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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.

**Dr. 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.

**Saket Sarin**  
UG Scholar, 5th 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.

**Aishita**  
UG Scholar, 5th 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.

# VISION

Chandigarh College of Engineering and Technology aims to be a center of excellence for imparting technical education and serving the society with self-motivated and highly competent technocrats.

# MISSION

1. To provide high quality and value based technical education.
2. To establish a center of excellence in emerging and cutting edge technologies by encouraging research and consultancy in collaboration with industry and organizations of repute.
3. To foster a transformative learning environment for technocrats focused on inter-disciplinary knowledge; problem-solving; leadership, communication, and interpersonal skills.
4. To imbibe spirit of entrepreneurship and innovation for development of enterprising leaders for contributing to Nation progress and Humanity.

# JAVASCRIPT BOOTCAMP

18th January, 2024

## Event Details

On 18th January 2024, the CCET ACM and ACM-W Student Chapters collaboratively hosted an event called JavaScript Bootcamp. In this event the participants were offered an amazing opportunity to learn the basic fundamentals of JavaScript and delved deeper to familiarize themselves with the topic. The speaker , Sahil Garg, guided the students by sharing valuable insights and helped them gain an incredible experiencev

## Event Gallary



# BLOCKCHAIN, ETHEREUM, SMART CONTRACTS, AND SOLIDITY: REVOLUTIONIZING DECENTRALIZED APPLICATIONS

Palvasha Bansal [CSE 2021]

## 1. Abstract

Blockchain technology, with its decentralized and immutable nature, has ushered in a new era of trust and transparency in digital transactions. Ethereum, as a pioneering blockchain platform, introduced the concept of smart contracts, self-executing agreements with the potential to revolutionize various industries. This article delves into Ethereum, smart contracts, and the programming language that powers them, Solidity.

## 2. Introduction

Blockchain technology has revolutionized digital transactions, with Ethereum emerging as a foundational platform for decentralized applications (DApps) with the use of smart contracts which are fundamental to Ethereum blockchain. Fueling the creation of these smart contracts is the programming language known as Solidity. Solidity is Ethereum's native language, designed to enable the development of complex, secure, and efficient smart contracts. Its unique syntax and features facilitate the translation of human-readable contract terms into machine-execut-

able code, laying the groundwork for innovative applications across a spectrum of industries.

As we begin to understand Ethereum better it becomes evident that Ethereum, smart contracts, and Solidity are not just technological innovations but catalysts for a fundamental shift in how we interact with digital systems.

## 3. Ethereum Blockchain

The Ethereum blockchain is a revolutionary decentralized digital ledger system, reshaping digital transactions. It transcends typical blockchain uses, offering a versatile platform for decentralized applications (DApps) and self-executing smart contracts. Fundamentally, Ethereum serves as a decentralized framework for the execution and recording of smart contracts. These smart contracts are self-executing agreements governed by pre-defined rules and conditions. They are not only immutable but also autonomously execute when specific criteria are met, thereby eliminating the need for intermediaries across various transactions and processes. Ether (ETH), Ethereum's cryptocurrency, motivates

network participants like miners and developers. Ethereum's blockchain, powered by "Proof of Stake" (PoS) consensus mechanism, which ensures both security and immutability, establishing an environment of trust and transparency suitable for a wide array of applications.

### 4. Smart Contracts and Dapps

Smart contracts and decentralized applications (DApps) are two pillars of blockchain technology that are transforming how we conduct transactions and interact with digital systems. Smart contracts are automated agreements that execute based on pre-defined rules within a blockchain. When specific conditions are met, they trigger actions without the need for intermediaries, ensuring transparency and reducing the potential for manipulation. Their versatile applications span across various sectors, from finance to supply chain management, bringing about a transformative impact by automating operations and bolstering security, unlike conventional contracts. Decentralized Applications (DApps), on the other hand, are applications that run on a decentralized network, typically a blockchain. DApps leverage smart contracts to provide functionality, enabling trustless interactions between users. They range from finance and gaming to healthcare and governance. DApps are open-source, community-driven, and resistant to censorship, ensuring transparency and user

control.

The primary elements of a system architecture consist of a smart contract residing within the blockchain, a native Ethereum client running locally, and a web application. The web app furnishes a user-friendly interface for the Ethereum client, whether it's local or not, facilitating communication with the smart contract situated on the Ethereum blockchain.

### 5. Solidity

Solidity, a high-level programming language, is purpose-built for crafting smart contracts on the Ethereum blockchain. It forms the backbone of Ethereum's decentralized ecosystem, enabling the creation of self-executing contracts with predefined rules, automating trustless transactions. Drawing from JavaScript, Python, and C++, Solidity offers developers a familiar platform for constructing decentralized applications (DApps) and digital agreements. This language plays a pivotal role in ensuring smart contract security and reliability.



### 6. Conclusion

In summary, Ethereum, smart contracts, and Solidity are pioneering the future of decentralized applications. Their impact on diverse industries is undeniable, offering transparency, automation, and security. As they continue to evolve, their transformative potential remains at the forefront of blockchain innovation, reshaping how we interact in the digital realm.



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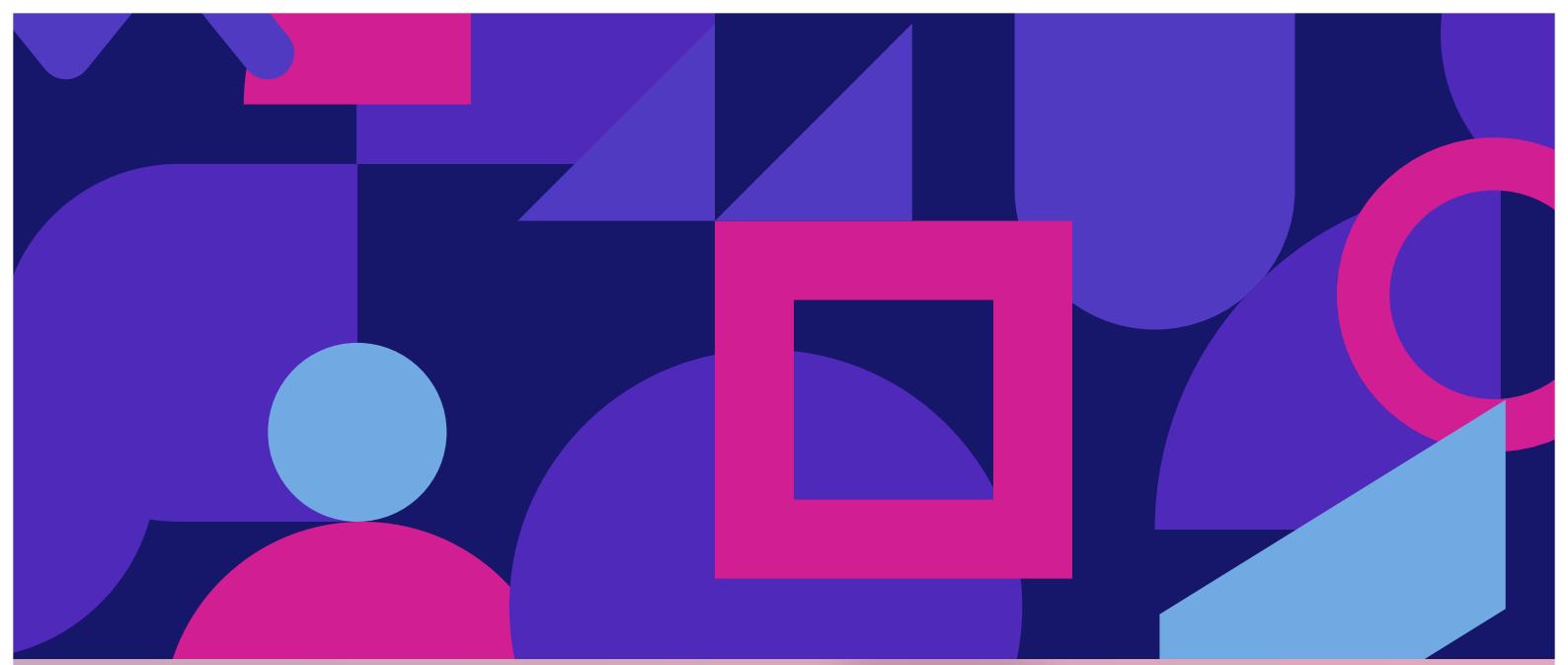
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"Scientists explore the mysteries of what exists, while engineers bring to life what once only existed in dreams."



Theodore von Kármán  
Pioneer Aerospace Engineer and Physicist

-  acmccet@gmail.com
-  /acmccet
-  <http://ccet.acm.org/>
-  CCET ACM Student chapter
-  /acmccet
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CCET Details  
Department of CSE  
CCET, Degree Wing  
Sector - 26, Chandigarh

Contact Us  
For general submissions  
and feedback, contact us.  
Website: [www.ccet.ac.in](http://www.ccet.ac.in)