Computer Engineering Student Association

CESA INSIDER

2023 - 2024

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Founder President,
Pimpri Chinchwad Education Trust

Late. Smt. Lilatai Shankarrao Patil
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COMPUTER SOCIETY OF INDIA

INDIAN SOCIETY FOR TECHNICAL EDUCATION

ACHIEVEMENTS
ACM WINTER SCHOOL
2023

Ahmedabad University

- Prajwal Lonari
- Sakshi Kulkarni
- Mithilesh Rajput
- Shivraj Lawhare
- Disha Parale
- Lubhavan Burgate
- Pranjali Deshpande
- Aditi Dabhade

The Association for Computing Machinery (ACM) Winter School is an educational event organized by ACM, a premier global professional organization for computing professionals and researchers. The Winter School is designed to provide participants with an intensive and focused learning experience in various areas of computer science and related fields.

Offering top-notch educational programs to professionals, researchers, and students who want to advance their knowledge and expertise in particular computer science fields is the main goal of ACM Winter Schools. These institutions frequently concentrate on cutting-edge or niche subjects that conventional academic curricula might not cover in great detail.

ACM Winter Schools cover a wide range of topics within the field of computer science like artificial intelligence, machine learning, data science, cybersecurity, computational biology, computer vision, robotics, and more.

ACM Winter Schools typically feature a combination of lectures, tutorials, hands-on workshops, panel discussions, and networking sessions. The format may vary based on the nature of the topic and the target audience. Some Winter Schools may also include opportunities for participants to present their research or projects, provide them internship opportunities. ACM Winter Schools cater to a diverse audience, including undergraduate and graduate students, early-career researchers, academics, industry professionals, and anyone interested in advancing their understanding of specific topics in computer science.

ACHIEVEMENTS INDOML 2023

Indian Symposium on Machine Learning

- Prajwal Lonari
- Aditya Agre
- Mithilesh Rajput
- Lubhavan Burgate

- The Indian Symposium on Machine Learning (IndoML) is conference or symposium focusing on the latest research, developments, and applications in the field of machine learning. It may cover a broad range of topics within machine learning, deep learning, reinforcement learning, natural language processing, computer vision, LLM, and more.
- The symposium may feature keynote speeches by renowned experts and researchers in the field of machine learning. These speakers could provide insights into the latest advancements, emerging trends, and future directions in machine learning research and applications.
- IndoML could include sessions for researchers to present their latest work through paper presentations, poster sessions, or workshops. These sessions offer participants an opportunity to showcase their research findings, receive feedback from peers, and engage in discussions with fellow researchers.
- IndoML fosters mentoring of Indian Ph.D, Master, Bachelors students to network with their peers, seek expert guidance and develop early-stage collaboration. Get-togethers, and panel discussions, tutorials and fireside chat are a few examples of these networking sessions that could promote cooperation and knowledge sharing among the machine learning community.

ACHIEVEMENTS INNOTHON 2023

Amay Chandravanshi is our third-year computer engineering student. He is currently pursuing a research internship at the Indian Institute of Technology (IIT), Patna, under Dr. Sriparna Saha on the topic of "Deep Reinforcement Learning". He is currently conducting research on Conversational Recommender Systems (CRS). The goal is to create utterances that are not only naturally coherent, but also contextually accurate and friendly. This study is expected to contribute to recommendation systems by ensuring a user-friendly and efficient interaction between humans and machines in the field of Conversational Recommender Systems.

Grand Finale

- Prathamesh Theurkar
- Shubham Sangle
- Prajwal More
- Prajakta Martkar
- Deep Dhakate

- Innothon aims to foster a culture of innovation by bringing together individuals with diverse backgrounds and skills to collaborate on solving real-world challenges through creative and inventive solutions.
- Innothon focuses on promoting innovation across various domains, including technology, sustainability, healthcare, education, and social impact. It encourages participants to think outside the box and develop disruptive solutions to pressing issues.
- Innothon follows a hackathon-style format, providing participants with a limited timeframe (e.g., 24-72 hours) to collaborate intensively on developing solutions to predefined challenges or problems.
- Innothon presents participants with a range of challenges sourced from industry partners, government agencies, non-profit organizations, and other stakeholders. These challenges cover a wide spectrum of topics, allowing participants to choose the ones that align with their interests and expertise.

TRIBUTE

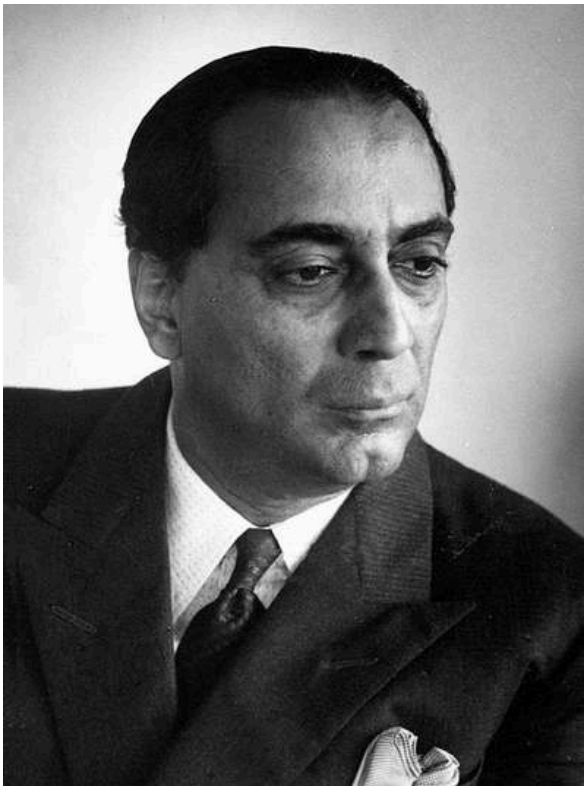
Dr. Homi Bhabha: Pioneer of India's Nuclear Program and Father of the Indian Nuclear Science.

Homi J. Bhabha was a distinguished Indian scientist who is widely regarded as the father of India's nuclear program. He made significant contributions to the development of nuclear science and technology in India, and his work has had a lasting impact on the country's scientific progress. Hence, he was the principal architect of the country's nuclear energy program

Born in Mumbai in 1909, Bhabha was educated at Cambridge University, where he received a doctorate in nuclear physics. He went on to work at several prestigious institutions, including the Cavendish Laboratory at Cambridge and the Institute for Advanced Study in Princeton.

In the years following India's independence in 1947, Bhabha played a key role in shaping the country's scientific policies and institutions. Bhabha realized that the development of nuclear energy was crucial for the future industrial growth of the country. Funded by businessman J.R.D. Tata, Indian nuclear research began with Bhabha at the helm.He convinced India's government to invest in a program to develop nuclear power, and he oversaw the construction of the country's first nuclear reactor in 1956. He also played a key role in establishing the Atomic Energy Commission of India, which has since become one of the world's leading nuclear research organizations.

Despite his many accomplishments, Bhabha died tragically in an airplane crash in 1966, at the age of 56 after which the TIFR institute was renamed as " Bhabha Atomic Research Centre (BARC)" by Prime Minister Indira Gandhi in his memory.

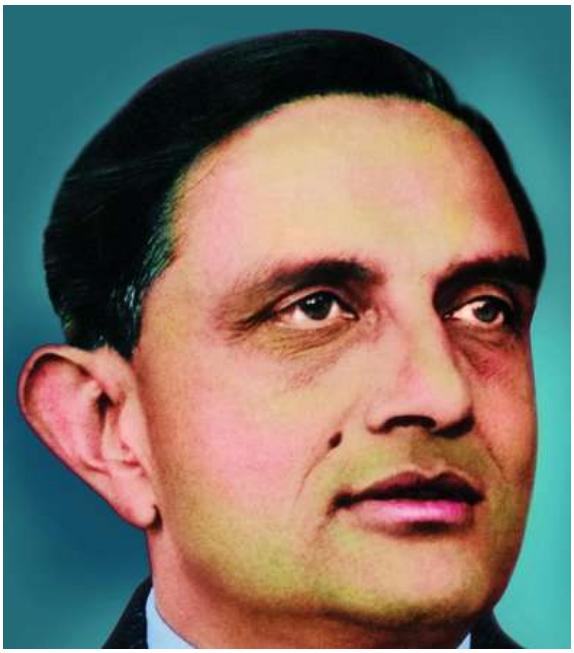


In recognition of his many achievements, Bhabha was awarded numerous honors during his lifetime, including the Padma Bhushan and the Padma Vibhushan, two of India's highest civilian awards. He was also elected a Fellow of the Royal Society in 1941, and he received the Adams Prize from Cambridge University in 1942.

Homi J. Bhabha's pioneering work in nuclear science and his tireless efforts to promote scientific research in India have left an indelible mark on the country's history and culture. He will always be remembered as a visionary scientist and a true champion of knowledge and progress.

TRIBUTE

The Father of the Indian Space Program: Vikram Sarabhai.



Born on August 12, 1919, to an influential and affluent Jain business family in Ahmedabad, Gujarat, Dr. Sarabhai completed his schooling at Gujarat College before pursuing Natural Sciences at St. John's College, University of Cambridge, in London. Upon returning to India, he focused his interests on charitable trusts managed by his family and friends to establish a research institution. At the age of 28, he founded the Physical Research Laboratory (PRL) in 1947, and he was appointed as the Chairman of the Atomic Energy Commission.

With the guidance of Dr. Homi Bhabha, Dr. Sarabhai established India's first equatorial rocket launching station at Thumba near Thiruvanathapuram in southern India. Later, Dr. Sarabhai oversaw the launch of the first Indian satellite, Aryabhata, which was put into orbit by the Russian Cosmodrome in 1975.

Dr. Vikram Ambalal Sarabhai is widely recognized as the pioneer of space technology in India, having laid the foundation for the country's space research system through the National Committee for Space Research in 1962. This system was later renamed as the Indian Space Research Organization (ISRO). Dr. Sarabhai played a crucial role in establishing a variety of institutions in various fields, which had a profound impact on the development of the newly independent nation. His significant contribution to science and technology earned him the titles of Padma Bhushan in 1966 and Padma Vibhushan in 1972, and he is still remembered around the world as "The Father of the Indian Space Program."

Dr. Sarabhai also played a crucial role in the creation of the Indian Institute of Management in Ahmedabad and convinced the Indian government to establish a space program for indigenous development, adding value to the evolution of nuclear technology for defence purposes. Dr. Sarabhai also worked alongside Dr. APJ Abdul Kalam, while they were both researchers under Dr. Sarabhai's leadership before joining the Defence Research and Development Service. In memory of Dr. Sarabhai, the "Vikram A Community Science Centre" was established to continue his legacy, and a postal stamp was released by the Indian Postal Department on his death anniversary in 1972. In 2019, the lander of Chandrayaan 2 was named in his honour. His inspiring legacy and traditions continue to drive the development of science and technology in India and around the world.

INTERVIEW

Hardik Jain:
Good morning listener welcome back to CESA Talks I am Hardik Jain advisor of ACM PCCOE. I am here with VENKATESHWARAN Sir. Sir please introduce yourself a bit.

Sir:
Hi, everyone, my name is VENKATESHWARAN . I have spent about 30 years more than 30 years in the IT industry. Most of my time was spent at persistent systems where I played several leadership roles including that as a CTO leading the IoT business and as well as the global CIO in the last few years. I have recently shifted out of persistent systems and I am now a professor of practice associated both with PCCOE as well as with another institute in Pune.
Prior to Persistent, I spent about 10 years outside in the US where I have spent a lot of time working as a researcher at Bell Laboratories.

Hardik Jain:
Yeah, sir has also earned his BTEC and M.Tech from IIT Bombay and has done his PhD at Washington State University. He is also a member of ACM India Council and a part of the ACM Eminent Speaker Program. So today he is here with us to enlighten us on the knowledge of generative AI.
So, let's start with the interview. So sir, what do you mean by the word generative AI or GPT?

Sir:
GPT ,if you look at it the 'G' stands obviously for you know the generative part there is . 'P' which is pre-trained and 'T' which is transformer. So it's a kind of a neural network based on the transformer model or it's a kind of class of neural networks comes under the transformer model and the GPT has been pre-trained on several data sources including books, blogs, news items, software, code, you name it pretty much a large volume of documents have been used to pre-train this model and to provide a very clean natural language interface to query this model.
The generative part comes in where then based on the query is able to look at the query, understand the context and be able to respond again in a natural language way, using all these the data that it has already been fed with. That's the overall view of what generative AI does. It's not just the text, it's also multi modal, you have ways to generate images, ways to generate audio content as well as video content. So it's a fairly all-encompassing technology and it has made significant disruptions in the last less than one to two years max.

Hardik Jain:
Thank you sir. So, my basic question is how can we students and CS practitioners take advantage of such generative text file models?

Sir:
As students of course, it provides a very good tool to I mean students have been using search technology for very long right. This obviously makes that search technology a lot more powerful, it by answering those queries the students queries in a very specific format. It helps them in their coding assignments helps them in understanding the concepts, it helps in making sure that they are able to use the technology for solving their challenges, right, which otherwise before the the gen AI or GPT would not have been easily possible.

It also helps to make sure that you know like these spell checkers of the past it helps to make sure the language is in the right Context ,it can write Articles or it can write synopsis, it can write Summarizations can do all of that very effectively and that's where students can really benefit from it. The most important way is it helps in the student productivity is in the area of coding where a lot of code can be generated by GenAI as well as existing code can be used for code comprehension which is a big productivity improvement to the other the traditional way of doing it .

Hardik Jain :
Sir, what about teachers how can they utilize this technology in their day to day lectures?

Sir :
For teachers see teacher's role is twofold, one is obviously you know they are in the their primary role is as teachers to impart knowledge to the students. So, the tools like Gen AI makes their life easy because lot of their time which is spent in you know doing research or going through material, course material from different places, to put all of the course material together lot of that can be quickly done through tools like GEN.AI.
Some of the teaching methodologies which require say an audio or a video content to be produced previously without Gen AI tools would require a lot of the teachers time to prepare that content; now that can be done faster through these Gen AI tools. This is one aspect on the teaching side, teachers are also you know they participate in research and when they participate in research they need to do read a lot of research papers, gen AI tools help in 'A' identifying the research papers and 'B' also summarizing them so that the teacher can decide or the researcher can decide whether that paper is something that is in their area of interest that they want to go deeper or it is something that you know they just need to cursory read. So it provides all kinds of productivity improvement tools, obviously it is not a replacement for research, it is not a replacement for a teacher imparting the knowledge, it is a tool that helps to enhance the teachers overall effectiveness in whatever role they play.

Hardik Jain :
Yes sir, so what are the current limitation or challenges faced by these generative texts basically?

Sir :
See, Generative AI is a fairly new technology. It has undergone rapid advancements in a very short amount of time, which means that it is still to stabilize into the, you know, there's a whole lot of hype around it. But it is still yet to stabilize in terms of the kind of use cases that Gen AI can be used for. There's a lot of hype around where all it can be applied. And maybe not all use cases are appropriate use cases for Gen AI.
Second, the technology right now as it stands today, as still some areas it may not necessarily give the correct responses. It all depends on how well it understands the context. One of the things that Gen AI does is it has a natural language interface and it is supposed to do very well on understanding the context. But if it misses out that context, then the final response deviates completely from what it is expected to respond.
For the user if they are reasonably well versed with their field they can then detect that the response is not in line with what they what is expected but if they are not very well versed they may not be able to distinguish between what the output that is produced by the Gen AI tools versus the reality there could be some gaps and this is what they call as hallucinations or bias and so on. There is also this challenge of you know the misuse of the technology right. So some of the challenges center around using the technology for creating you know fakes or deep fakes what they were because the content is anyway multimodal you can generate audio video content.

Even as you know somebody these tools are in the hands of people who can easily create these deepfakes and those deepfakes today there are the technology has not evolved where the deepfakes can be detected. So these are some of the challenges that need to be addressed in the you know in the current scenario but yes over a period of time it will have to improve.

Hardik Jain :
Okay sir, So where do you think the what is the future of generative AI in the next 5 to 10 years where will it be heading?

Sir :
Future is very hard to predict. I don't think a year ago we predicted that Gen AI would become so prevalent in a very short amount of time. The growth that we have seen is significant and so I can't put a finger on you know where GNI should be four years from now. But at least some of the challenges that we talked about in the earlier part right to your earlier question areas like deep fake.
The tool has to now evolve, other tools have to come in or the same tool can evolve to be able to now distinguish between what is real and what is fake. That is a one big area of focus that the tools have to evolve and I believe that you know in the 3 to 5 years those will happen. The number of the hallucinations that we see, the frequency of it should come down, will come down in the coming year so that the reliability of these responses becomes lot more. I mean one can rely on the responses more than what it is today. I mean again no nothing specific about the tool itself it is still in its early stages so some of these are par for the course but over a period of time they have to improve and that will happen in the 3 to 5 year time frame.
It will get more powerful, the use cases will become more clear and distinct, the hype is likely to go away and the Gen AI as a technology will settle down to the use cases that it serves best and it will be a significant value add and an efficiency improvement effectiveness all of this will improve over the course of next 3 to 5 years. But today if you speak there are these gaps and those need to be addressed.

Hardik Jain :
So my last question will be on a basic public demand. Do you think can AI destroy the world or can control the world in the future?

Sir :
Will AI control the world in the future? It is a philosophical question to some extent. So let me try to see again as a personal opinion there.
While we talk about this AGI or artificial general intelligence, yes it is the dream or most AI researchers we believe that you know we will reach AGI at some point. To some extent the GPT tool that we see today, the GEN-AI technology that we see today has achieved; started scratching that surface, but has it achieved significant level of AGI? I do not think so. Will it happen in the next? 10 years, 15 years, yes definitely there is a, I mean we will move closer towards it but will it be fully there, I am not, personally I don't think so.
There are two or three areas that. I believe have to be, you know, we have to make breakthroughs to for AGI to become a reality, right. One is this whole, you know, reasoning process, you know, is it able to really think through and reason. I do not think it has reached a level where, you know, we can, it can, AGI can reach, can reason out. Some part of the inferences are there, but it has not reached that level of sophistication.

Second, which is the most or one of the more critical parts is the whole emotional aspect, right. It is still a machine, right not able to emotionally attached to the question at hand or the problem at hand and if it is not emotionally vested, whatever outcome that comes out will have a one component missing the emotional component. So my sense is that AGI is still some ways off in terms of you know and of course the other part is you know yeah we are training it for a specific set of use cases. How this system will be able to transfer that training whatever learning it has happened because of the training to transfer it to a completely different scenario which is it it has not been trained for, for this huge gap in terms of that transfer happening. So in the near future definitely it is not going to happen but yes the current advancement that we see show that yes it is possible to reach some better level of sophistication, better level of you know scratching the surface of AGI.But to be fully replace a human or human thought process. I do not think it will happen in the near future. I don't think it will happen in the 10 to 15 or 20 year time frame. If it happens in my lifetime, I will be pleasantly surprised. I doubt that it will.

Hardik Jain :
Thank you, sir and thank you listeners for joining on to this podcast. I hope all your questions have been answered. So we will be back with another guest on the next podcast. Thank you for listening.

Sir :
Thank you, Hardik for having me on this podcast. And it was a pleasure interacting with you.

Hardik Jain :
Thank you VENKATESHWARAN Sir for your valuable time.

How 5G Technology is Revolutionizing the Business Landscape

Anil Pawar, MTech

The fifth generation of cellular technology, or 5G, has the potential to transform the way businesses operate, offering faster speeds, lower latency, and greater capacity compared to previous cellular networks. In this article, we will explore the benefits and challenges of 5G technology for businesses and discuss how it could impact different industries.

Benefits of 5G for Businesses

The benefits of 5G technology for businesses are numerous. One of the most significant advantages is increased productivity. With 5G, employees can work more efficiently, as they can download and upload data much faster than before. This means that tasks that used to take minutes to complete can now be done in seconds. This increased speed can also enable new applications and services that were not possible before, such as augmented reality and virtual reality, which can be used for training and collaboration.

Another benefit of 5G technology is improved customer experiences. With the increased speed and capacity of 5G, businesses can offer faster and more reliable services, such as real-time video streaming and online gaming. This can help businesses to better engage with their customers and provide them with a more personalized experience.

5G technology also has the potential to enhance efficiency in the supply chain. With 5G, businesses can use sensors and other devices to track inventory and shipments in real-time, making it easier to optimize logistics and reduce waste.

Challenges of Implementing 5G

While the benefits of 5G are clear, there are also challenges to implementing this new technology. One of the biggest challenges is the need for significant infrastructure investment. 5G requires a much denser network of small cells
compared to previous cellular networks, which means that businesses and service providers need to invest in new infrastructure to support this technology.

The fifth generation of cellular technology, or 5G, has the potential to transform the way businesses operate, offering faster speeds, lower latency, and greater capacity compared to previous cellular networks. In this article, we will explore the benefits and challenges of 5G technology for businesses and discuss how it could impact different industries.

Impact of 5G on Different Industries

The impact of 5G technology on different industries is likely to be significant. In the healthcare industry, for example, 5G can be used to enable telemedicine, allowing doctors to remotely monitor patients and provide care. In the manufacturing industry, 5G can be used to support the automation of production lines, making it possible to operate more efficiently and with fewer errors.

In the transportation industry, 5G can be used to support the development of autonomous vehicles, which could revolutionize the way people and goods are transported. In the retail industry, 5G can be used to provide more personalized and immersive experiences, such as augmented reality shopping and virtual try-on services.

Conclusion

In conclusion, 5G technology is set to revolutionize the business landscape, offering faster speeds, lower latency, and greater capacity compared to previous cellular networks. While there are challenges to implementing 5G, the benefits for businesses are numerous, including increased productivity, improved customer experiences, and enhanced efficiency in the supply chain. The impact of 5G on different industries is likely to be significant, and businesses that embrace this new technology are likely to be well-positioned for success in the years to come.

Unlocking the Secrets of Cryptography

An Interactive Guide to the Technology Behind Secure Communication

As the world becomes increasingly connected and digital, the need for secure communication and protection of sensitive information has become more important than ever. This is where cryptography comes in. Cryptography is the practice of using mathematical algorithms to protect information from unauthorized access and to ensure that confidential information can only be accessed by those who have the proper key to decode it.

At its core, cryptography involves transforming plain text into an encrypted form using encryption algorithms. This encrypted information can only be deciphered by those who have the corresponding decryption key.

There are various types of encryption algorithms, each with its own strengths and weaknesses, and they are used in a variety of applications, including online transactions secure communication, and storage of confidential information.

One of the most important aspects of cryptography is its ability to maintain the privacy and confidentiality of information even in the face of active attacks. This means that even if a third-party intercepts the encrypted information, they will not be able to understand its contents without the decryption key.

In conclusion, cryptography is an essential technology for secure communication in our digital world. By transforming information into an encrypted form cryptography helps to protect sensitive information and ensure that confidential information can only be accessed by those who are authorized to do so. Whether you are an individual looking to secure your online transactions or a business looking to protect your confidential data, cryptography is a crucial tool in maintaining the security and privacy of your information.

ARE WE WITNESSING THE DEATH OF ARTISTRY?

Théâtre D'opéra Spatial

August of 2022 saw a revolution we had only dreamt of. The prestigious 150-year-old Colorado State Fair held its Fine Arts competition and the result created a debate so massive that it engulfed the social media for days. Jason Allen, a synthetic media artist was chosen as the winner as he created a painting named as **Théâtre D'opéra Spatial** using generative AI. The decision enraged a swarm of Twitter critics, one of them even going as far as to term it *"the death of artistry"*.

I am sure each one of us is aware of the notorious tool that is known for its helpful nature of reducing human effort. Of course, we are talking about Artificial intelligence. Many had already predicted that AI will be everywhere in tech, replacing many present-day technologies but what we didn't see as clear was the ability of AI to take control over even the creative aspects of life. The one AI technology that stands out is AIGC (AI-generated content). What basically happens in this technology is that the user gives an input as a text prompt to the computer and it in turn generates images related to the input. Many companies have come up with their own AIGCs. For example, DALL-E 2 and Stable Diffusion are focused on western-style artwork whereas Baidu's ERNIE-ViLG and Wenxin Yige programs are influenced by Chinese art.

This development is concerning at times but if we look at the brighter side, it can help artists get rid of repetitive and time-consuming tasks. It makes sense especially when the world is inclining rapidly towards interactive digital art.

The future looks bright and to address the concerns of AI replacing real time physical art, only this sentence can make us understand: when photographs and cameras were newer, they were considered to overpower the traditional style of painting but even today there is something different about those hand made pictures and we value them even more.

THE GENERATIVE AI REVOLUTION: OBSERVATIONS FROM A PUNE ENGINEERING CAMPUS

By Anil Pawar
Post-Graduate Student, Department of Computer Engineering
Pimpri Chinchwad College of Engineering, Pune

Sitting in our bustling computer laboratory at PCCoE in late 2022, amidst the whirring of cooling fans and the persistent Pune heat, I find myself reflecting on the extraordinary transformation that artificial intelligence has undergone in recent months. The launch of ChatGPT in November 2022 marks what I believe future generations will recognise as the genesis of the generative AI revolution, particularly from our unique perspective as engineering students in India.

A Transformative Year in Technology

When I enrolled in my post-graduate program at PCCoE in 2021, our discussions in the Advanced Computing labs primarily revolved around traditional machine learning algorithms and their applications in solving Indian industry challenges. The landscape has shifted dramatically since then. We've witnessed the emergence of generative AI models that seamlessly integrate various domains of artificial intelligence, creating possibilities we had only theorised about in our research methodology sessions.

The sequence of innovations has been remarkable to witness from our vantage point in Pune's technology hub. DALL-E 2's introduction in April 2022 demonstrated unprecedented capabilities in image generation.

The release of Stable Diffusion later that year democratised access to these tools, sparking intense discussions in our department about the future of visual design and creative professions. However, it was ChatGPT's arrival that truly transformed our academic landscape, achieving what our professors noted as unprecedented user adoption rates and becoming a frequent topic of discussion in our technical seminars.

Academic Impact in the Indian Context

As a post-graduate student at PCCoE, I'm experiencing firsthand how generative AI is reshaping education in the Indian context. Our department, known for its rigorous technical curriculum, has been engaged in thoughtful deliberations about integrating these tools into our teaching methodology. During our Advanced Computing Lab sessions, we frequently debate the balance between leveraging AI for learning enhancement and maintaining academic integrity.

Recently, during our Software Engineering patterns practical, our guide demonstrated how GitHub Copilot could efficiently generate complex design patterns – traditionally a challenging topic for many students. The laboratory fell silent as we watched it create a complete implementation of the Observer pattern, prompting serious discussions about the future of software engineering education in India.

Research Perspectives from Pune's Tech Ecosystem

The rapid evolution of AI technology has created unique challenges and opportunities for researchers in our institution. Our department's research papers, particularly those focusing on local industry applications, must constantly adapt to keep pace with global developments. The traditional academic publishing timeline, already challenging in the Indian research context, seems increasingly misaligned with the speed of AI advancement.

However, this era has also democratized research opportunities for institutions like PCCoE. Through cloud-based APIs and collaborative platforms, we can now experiment with state-of-the-art AI models without requiring extensive computational infrastructure. This has enabled our research groups to focus on innovative applications relevant to Indian markets and social contexts.

Looking Forward from PCCoE

As we progress through 2023, the trajectory of AI development appears both promising and challenging from our perspective at PCCoE. The models are evolving rapidly, and their potential applications in the Indian context seem boundless. Some of my classmates have already begun incorporating GPT-3 into their project work, while others maintain a more traditional approach to problem-solving.

Our position as students in one of Pune's premier engineering institutions gives us a unique vantage point to observe and participate in this technological revolution. The intersection of India's technical talent, growing digital infrastructure, and diverse societal needs creates an exciting environment for AI innovation.

Conclusion

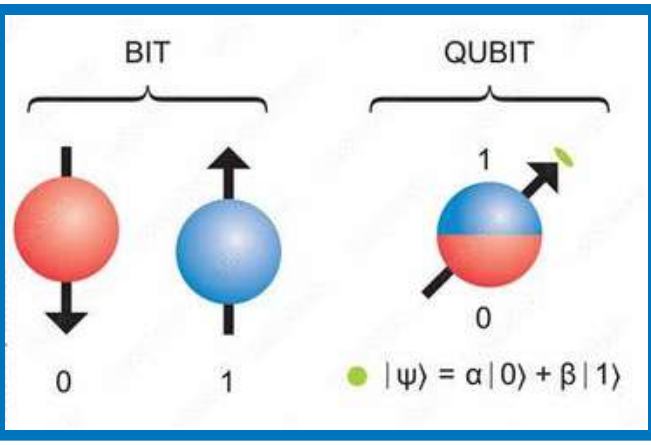
Writing this from our campus in early 2023, I recognize that the field of generative AI is evolving so rapidly that parts of this article may soon be outdated. However, the perspective from PCCoE – situated in Pune's dynamic tech ecosystem – offers valuable insights into how this technology is being received and adapted in the Indian context.

For post-graduate students like myself at PCCoE, this period represents an unprecedented opportunity to contribute to the development of AI applications that address both global and distinctly Indian challenges. The questions we explore in our research, the ethical frameworks we develop, and the solutions we create will help shape how AI technology serves our diverse society.

Author's Note: This article reflects observations made during the 2022-2023 academic year at Pimpri Chinchwad College of Engineering, Pune, capturing a crucial period in the evolution of generative AI technology.

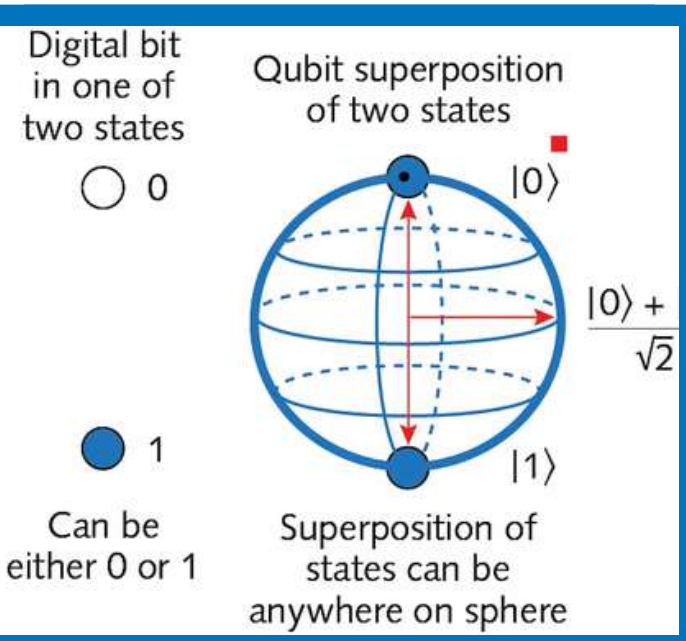
ENTANGLING AND SUPERPOSITIONING OF BITS: A QUANTIZED APPROACH TO PROBLEM SOLVING.

- Nitin Pandita



We all have learnt Quantum Mechanics in High School, from Heisenberg's uncertainty to Pauli's exclusion principle. At the end, all we remembered is that there is something that is in fixed quantities i.e. quantized which follows some properties. These particles were said to have states (or what we call spin) this spin decides the properties of the quantum particles.

With the world encountering increasingly difficult problems, scientists needed a way to solve such problems quickly. This gave rise to the era of quantum computing. A quantum computer is a computer that takes advantage of quantum mechanical phenomena In traditional computers, Data is represented in the form of bits which can have strictly two values 0 or 1, True or False, On or Off. Now what makes quantum computers so powerful is that these particles can have values either 0 or 1 or both at the same time, which makes them immensely powerful. These are called Qubits. While classical bits are made up of transistors which follow classical physics, qubits are made up of anything that exhibits quantum properties like an electron, atom or even a molecule. Now since we know that quantum particles can be in two states at once. This phenomenon is called Quantum Superposition. We can leverage this phenomenon to create quantum algorithms and machines, since in superposition the number of outcomes increases exponentially.

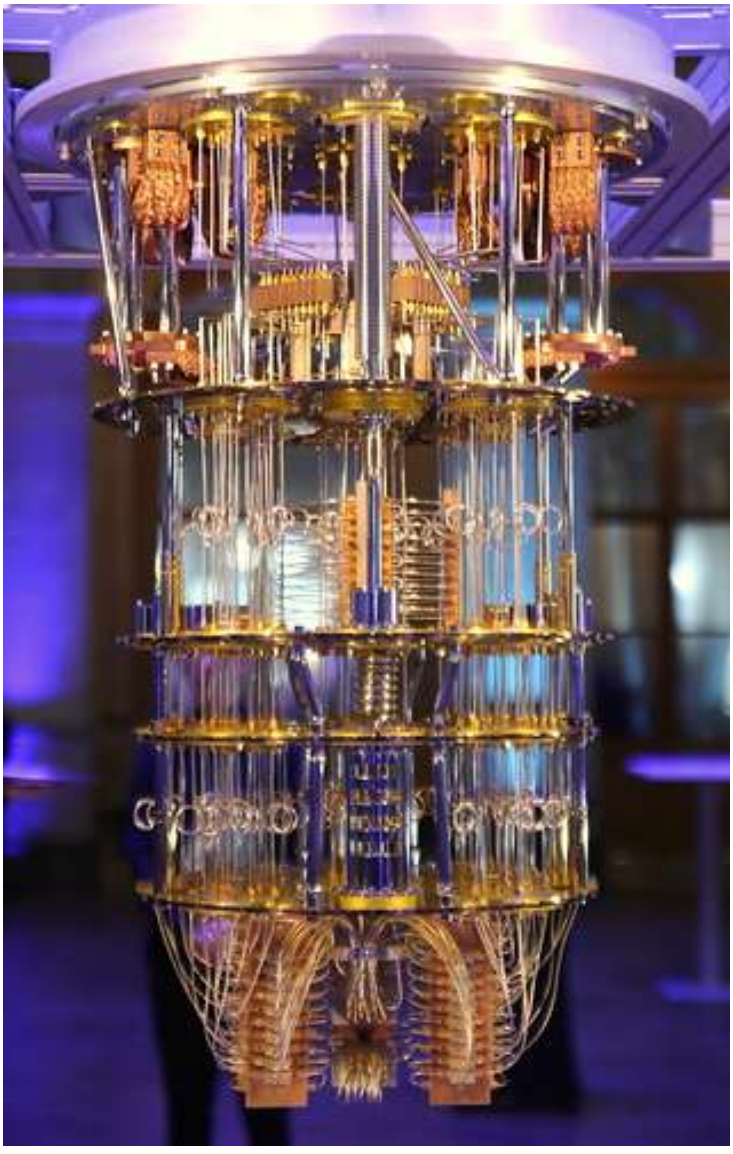


Consider 1 qubit, there are 2 possible outcomes, if you have 4 qubits, there are 16 possible outcomes, SImilarly if we consider for 300, there would be 2^{300} possibilities. This is greater than the number of atoms in the observable universe, greater than the age of the universe, greater than the number of neurons in the human brain. This opens a whole new world of possibilities to solve problems that were never even thought of before. Another intriguing phenomenon is called Quantum Entanglement.Consider 2 Photons far apart from each other, doing their respective tasks. They collide with each other and are now said to be "entangled".

Now when we go to measure Photon A, Photon B which is now entangled will be in a state relative to Photon A. This could be used to minimize the time taken to send information from a qubit to another in a quantum computer. It can also be used for instant communication around the world since we have billions of entangled particles around the world.

There are mainly 5 parts in a Quantum Computer:
Protective Shell: This protected the quantum computer against elements of nature, There are 5 shells covering a quantum computer. *Nerves:* These are the cables which are used to make connections inside of the computer.
Skeleton: These are the areas which cool the quantum computer, They are preferably made out of gold. There are 3 golden plates which are used for cooling, the bottom most plate has a
temperature more colder than outer space!
Heart: This is the core of the quantum computer where liquid helium 3 and helium 4 separate, evaporate thereby diffusing the heat and cooling the system.
Brain: Also known as the QPU-Quantum Processing Unit. It is pure magic. It is a gold plate at the extreme bottom which holds a silicon chip. This is where all the calculations occur. Some companies on the forefront of this quantum revolution include Google, IBM, Amazon, Microsoft, Intel etc.
For all of them there is a common goal, that is to achieve “Quantum Supremacy”.
Quantum Supremacy means demonstrating that a quantum computer can solve a problem that no traditional computer can solve in a feasible amount of time.In 2019 Google claimed that it has achieved quantum supremacy when their quantum computer Sycamore performed a problem that a supercomputer would take 10,000 years to solve in merely 200 seconds! Yes seconds. At that time Sycamore had 53 qubits, which means it can encode any number between 0 to 9 quadrillion even all of them at once!

In 2023 Google performed a similar feat using Sycamore with 70 qubits, performing a problem that would take the most powerful computer in the world, Frontier supercomputer over 47 years in just a few seconds. IBM on the other hand has been following a quantum-computing roadmap that roughly doubles the number of qubits every year. Starting with Falcon in the year 2019 with 27 qubits.
In 2022 IBM introduced the Osprey quantum processor with 433 qubits. Osprey's 433 qubits
translate to an unimaginable computational capacity. With each qubit representing a quantum state, the number of potential states on this machine surpasses the combined atoms in the known universe!
This raw power unlocks the door to solving previously intractable problems in fields like
materials science, drug discovery, financial modeling, and cryptography.



But IBM did not stop there, In 2023 IBM said to have achieved “True” Quantum supremacy with the most powerful quantum computer ever built named Condor with 1,123 qubits which is nearly double to its predecessor Osprey. I think there is no need to again go for the number of possibilities. But a problem arises here, as the number of qubits rises, the number of simultaneous computational states scales up too. This dramatically slashes the time it takes to perform calculations. Qubits are notoriously error-prone and need to be kept at a temperature near absolute zero, which is minus 459.67 degrees Fahrenheit.

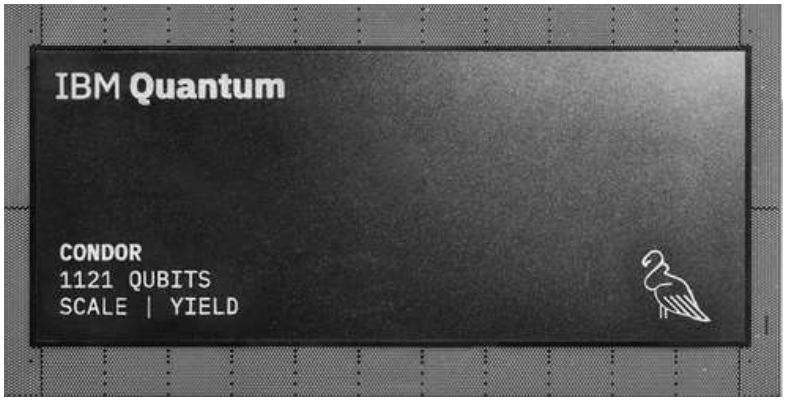
One in one quintillion (that is one followed by 18 zeros!) bits in a conventional computer fails, while the failure rate in quantum computers is close to 1 in thousand.

This problem with the Condor chip has led IBM to focus its new Heron Chip, having 133 qubits has an error rate five times lower than that of the Condor.

The game changing factor for the Heron chip is that Heron chips will be able to connect directly to other Heron chips, which is a breakthrough in building a modular quantum computer composed of multiple processors connected together.

Be it Google, IBM, Microsoft or Countries like China and the United States, all big boys are in the race to create a workable, operationally efficient and feasible quantum computer.

Because the company or nation that does this, will definitely rule the world economy. The advancements in quantum computing by them are pushing the boundaries of computing. Quantum computers are demonstrating capabilities far beyond those of classical supercomputers, which could lead to significant changes in various industries, from medicine and drug discovery to cryptography and climate science.



BEYOND WORDS
BEYON DEEP DIVE INTO THE LATEST GENERATIVE TEXT MODELSD WORDS

- Mahima Nair

Generative AI, also known as Generative Artificial Intelligence, is a subset of Artificial Intelligence (AI) that focuses on creating new content or data, rather than just processing or analyzing existing data. It is a form of AI that is capable of generating new ideas, designs, and even entire systems, by learning from examples and patterns in data. Generative AI has the potential to change the world in many ways, by automating creative tasks, enabling new forms of human-computer collaboration, and creating new opportunities for businesses and individuals.

One of the most captivating applications of generative AI is in the realm of text generation. In this article, we will delve into the concept of generative AI, its underlying principles, and explore the latest advancements in generative text models.

While ChatGPT is the most prominent name in today's world, it's the engine that powers it—GPT—that's grooming the power of AI. GPT-3 and GPT-4, its two latest versions, are incredibly powerful, and they're available as an API, which just means that other developers can add AI text generation to their apps. And that's the reason why there are so many AI text generators available—all with very similar features.

How do AI Text generators work?

AI text generators work by using advanced natural language processing(NLP) techniques to analyze existing text and generate new text that is similar in style and content. This typically involves training a large language model on a large dataset of text, such as a collection of books or articles. The language model is then able to generate new text by predicting the next word or phrase in a sequence of words, based on the patterns it has learned from the training data.

Based on the trained algorithm, AI text generators form a word in response to user queries. Based on the new word, they go on to produce a string of words that are highly coherent and sensible. APIs, like GPT-2, GPT-3, and GPT 3.5, are powered with NLP software, which teaches machines the primary language, grammar, and syntax rules. Apart from NLP, natural language understanding (NLU) software, reinforcement learning with human feedback (rlhf), and general adversarial networks create human-like content and are present in various models such as LaMDA, Gemini and so on.

In simpler terms, GPT has crunched through the sum total of human knowledge and built a deep learning neural network—a complex, many-layered, weighted algorithm modeled after the human brain.

What most of these AI text generator apps do, then, is add a user interface on top of GPT that allows you to control its output. It's nothing you can't do in ChatGPT,
but it's presented in a way that makes sure you don't forget any important details, helping you get the best output possible. For example:

- In ChatGPT, if you wanted to write a 150-word email in a friendly tone to a customer about your new product feature, you'd need to type that all right into ChatGPT
- For example, you'd type: "Write a 150-word email in a friendly tone to a customer about the new matching human/dog outfits offered by Winston.ly."
- In an AI text generator, you'd get prompted for all that information. It would have you indicate the content type, let you select the length, choose a tone from a dropdown menu, and so on. Most AI text generators also offer a text editor, where you can edit the AI-generated text directly from the app.

The Best AI Writing Tools:

Among the numerous AI text generators available, the following outlines the AI
tools that have demonstrated superior performance.

Jasper:

Jasper is one of the biggest names in AI text generation. It's good at generating
high-quality content of any length that can be customized to best fit your brand
voice. The only downside is that Jasper is one of the pricier apps on this list, so
make sure to use the free trial and be sure you like it.

Content At Scale

Content at Scale is the fastest growing AI content creation tool that creates the
most human-like content. Mostly used for long-form, informational articles by its
users, it provides you with all the options to create the content as per your need.
With the help of their self-produced editing model "CRAFT," you will need to do
some little tweaks to the content and make it ready to publish.

How to Use AI Writing Tools

While using AI tools to create text helps solidify our ideas, it's essential to learn how to use them effectively to shape our vision.

Step 1: Produce content ideas

Brainstorm your content ideas first, before using the AI tool. This helps you to solidify your foundations even stronger on the particular topic.

Step 2: Create your own outlines

AI text generators offer topic suggestions, but they're not creative and may be incomplete. You must add your unique ideas and SEO data to enhance the outlines.

Step 3: Draft each section

Instead of asking the AI text generator to complete an entire article at once, it's far more effective to walk it through the process of each section. This ensures you're getting specific, on-topic content rather than surface-level.

Step 4: Proofread and polish

Even though AI generates grammatically correct sentences, it is essential to have a human review to correct inaccuracies, and customize the information as per your needs

Step 5: Check for plagiarism

If Google determines that your website contains copied content, it can negatively impact your site's ranking. Tools like Copyleaks and Grammarly have features that can help with this.

Rytr

Rytr, an AI-driven writing platform, leverages cutting-edge AI for rapid content creation. Using historical data, it generates customizable, grammatically correct factual articles. With Rytr, you can produce a long-form blog post in under an hour across various topics like technology, business, and sports, creating diverse content types such as blog posts, articles, and reviews effortlessly

Writesonic

Writesonic might be the best free AI text generator. 10,000 words is enough for a blog post a week. Even better, it's one of the few apps that lets you directly select what version of GPT to use to generate text. Words generated with GPT-4 cost more than those generated with GPT-3, but for the highest quality copy, it can be
worth it.

Limitations of AI Writers

AI writers have limitations that content creators should be aware of.AI writers are helpful, but not magicians. They mash up existing text, so forget creativity. They can't generate creative or original content, lack understanding of context, emotions,and intentions, and struggle with adapting to changing writing styles or requirements. These constraints make them unsuitable for tasks requiring creativity, context awareness, emotional expression, or adaptability to evolving writing styles

Whether AI writing is worth it depends on your goals. It can generate content
quickly, but may not be as high-quality or original as human writing. AI can still be valuable for rephrasing existing content or creating basic copy. Ultimately, choose AI as a supplement to, not a replacement for, human writing. Prices vary, so evaluate your needs and budget before investing

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With the help of their self-produced editing model “CRAFT,” you will need to do some little tweaks to the content and make it ready to publish.

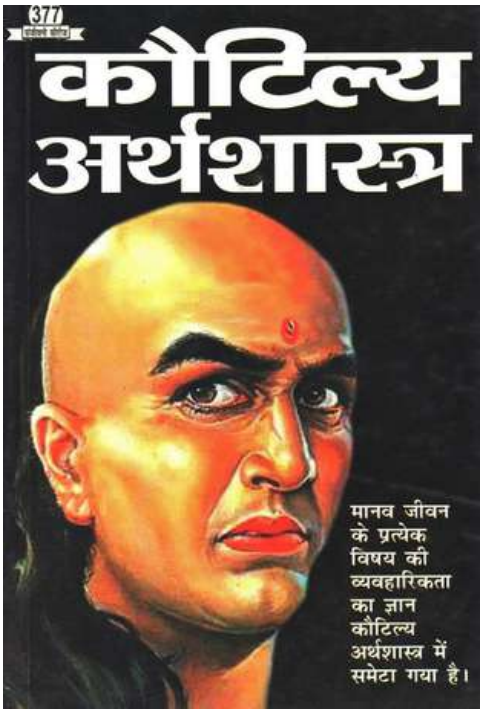
Indian Knowledge System

Introduction:
The Bhartiya way is sustainable and strives for the welfare of all. It is important that we regain the comprehensive knowledge system of our heritage and demonstrate the 'Indian way' of doing things to the world. This requires training generations of scholars who will demonstrate and exemplify to the world a way of life so unique and peculiar to our great civilization.The NEP, 2020 recognizes this rich heritage of ancient and eternal Indian knowledge and thought as a guiding principle. The Indian Knowledge Systems comprise of Jnan, Vignan, and Jeevan Darshan that have evolved out of experience, observation, experimentation, and rigorous analysis.

This tradition of validating and putting into practice has impacted our education, arts, administration, law, justice, health, manufacturing, and commerce. This has influenced classical and other languages of Bharat, that were transmitted through textual, oral, and artistic traditions. "Knowledge of India" in this sense includes knowledge from ancient India and, its successes and challenges, and a sense of India's future aspirations specific to education, health, environment and indeed all aspects of life. The main objective of drawing from our past and integrating the Indian Knowledge Systems is to ensure that our ancient systems of knowledge represented by unbroken tradition of knowledge transmission and providing a unique perspective (Bhāratiya Drishti) is used to solve the current and emerging challenges of India and the world. The IKS is to be incorporated in scientific manner in the school and higher educational curriculum s. This would include tribal knowledge and indigenous and traditional ways of learning and will cover and include mathematics, astronomy, philosophy, yoga, architecture, medicine, agriculture, engineering, linguistics, literature, sports, games, as well as governance, polity and conservation. Specific courses in tribal ethno-medicinal practices, forest management, traditional (organic) crop cultivation, natural farming, etc. will also be made available. An engaging course on Indian Knowledge Systems will also be available to students in secondary school as an elective.

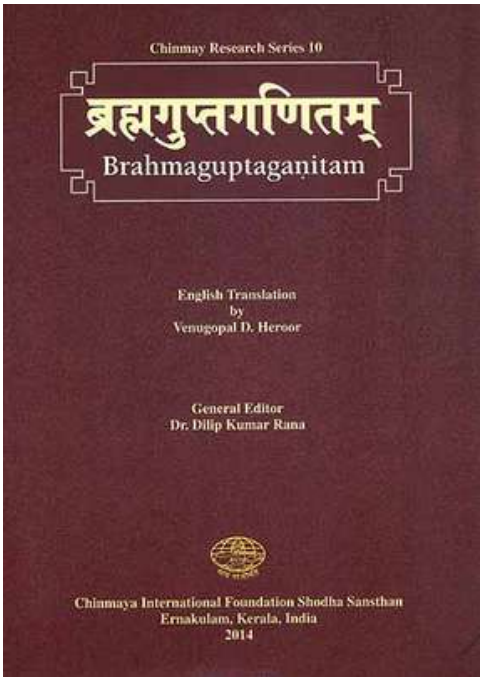
4. Metallurgical Expertise:
The Arthashastra, attributed to Chanakya, discusses advanced metallurgical techniques. It describes the process of alloying metals to create materials with specific properties, showcasing a level of metallurgical science that was ahead of its time.

Example: Arthashastra - Elaborate discussions on mining, metal extraction, and alloying processes.



5. Environmental Wisdom in Arthashastra:
The Arthashastra not only provides insights into governance and economics but also emphasizes environmental sustainability. It underscores the importance of responsible resource management, protection of forests, and wildlife conservation.

Example: Arthashastra - "In the happiness of his subjects lies the king's happiness; in their welfare, his welfare. He shall not consider as good only that which pleases him but treat as beneficial to him whatever pleases his subjects."



Conclusion:

These examples offer a glimpse into the depth and sophistication of the Indian knowledge system, providing early insights into concepts that have become integral to modern scientific understanding. Acknowledging and appreciating these contributions not only enriches our understanding of global intellectual history but also fosters a more inclusive narrative that recognizes the interconnectedness of human wisdom across cultures and time periods.
The journey of uncovering India’s hidden gems is a testament to the enduring legacy of its intellectual heritage.


acm
PCCOE

ACM 2023-24

Welcome to the ACM section of our magazine! ACM is the world's largest educational and scientific computing society. Dedicated to advancing the computing profession, ACM provides resources, networking opportunities, and platforms for innovation to empower individuals at all stages of their computing journeys, from students to seasoned professionals.

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ACHIEVEMENTS
ICPC CHENNAI REGIONALS

The International Collegiate Programming Contest (ICPC) is one of the oldest and most prestigious competitive programming competitions in the world.
ICPC is organized by the Association for Computing Machinery (ACM), an international scientific and educational organization dedicated to advancing computing as a science and profession. The contest is also sponsored by organizations like IBM, Jet Brains, and others.
During the contest, teams are presented with a set of complex algorithmic problems. The teams must work together to solve as many problems as they can within a limited time frame, typically around five hours.

ICPC starts with regional contests held around the world. Teams compete in their respective regions for a chance to advance to the World Finals. Regional contests are typically organized by universities or local ACM chapters.
The top teams from regional contests advance to the ICPC World Finals, which is held annually at a different host location each year. The World Finals brings together the best collegiate programmers from around the world to compete for the title of world champion.
ICPC is highly regarded in the academic and professional programming communities. Participating in ICPC can provide students with valuable experience, networking opportunities, and recognition in the field of competitive programming.

ICPC fosters a global community of passionate programmers and computer science enthusiasts. Participants often collaborate, share knowledge, and form lasting connections with peers from different countries and cultures.

MICROSOFT LEARN STUDENT AMBESSADOR

Microsoft Learn Student Ambassador (MLSA) is a program designed to empower students to lead technology communities on their campuses and engage with peers, Microsoft professionals, and community leaders to share their passion for technology.

Student Ambassadors serve as advocates for Microsoft technologies and platforms on their campuses and in their local communities. They act as a bridge between Microsoft and the student community, organizing events, workshops, and hackathons to promote learning and collaboration.

Microsoft provides Student Ambassadors with various resources, including training materials, access to Microsoft products and services, and opportunities to participate in exclusive events and workshops. Ambassadors receive guidance and support from Microsoft professionals to help them develop their technical and leadership skills.

Student Ambassadors are encouraged to engage with their peers and organize activities that promote learning and skill development. They may host coding sessions, technology workshops, hackathons, and other events to foster a sense of community among students interested in technology.

The program offers Student Ambassadors the chance to connect with industry professionals, Microsoft employees, and other Student Ambassadors from around the world. This networking provides valuable opportunities for career development, mentorship, and collaboration on projects.

Participation in the program helps students develop leadership, communication, and teamwork skills, which are valuable for their personal and professional growth. Student Ambassadors gain experience in project management, public speaking, and community engagement through their involvement in the program.

The Microsoft Learn Student Ambassador program operates in countries around the world, enabling students from diverse backgrounds to participate and make a positive impact in their communities through technology.

SMART INDIA HACKATHON

- The Smart India Hackathon (SIH) is an annual initiative organized by the Government of India under the Ministry of Education and All India Council for Technical Education (AICTE).
- The event aims to harness the creativity and problem-solving skills of students to solve real-world challenges faced by various government departments and organizations.
- The primary objective of the Smart India Hackathon is to provide a platform for students to showcase their innovative solutions to problems faced by government agencies and industries. The event encourages participants to develop creative technological solutions that address specific challenges and contribute to the country's socio-economic development.
- The Smart India Hackathon is open to students pursuing undergraduate, postgraduate, and doctoral degrees from engineering, management, and other technical institutions across India. Teams are formed with students from the same institution, and each team is required to register and select a problem statement to work on.
- Government ministries, departments, public sector organizations, and private industries submit problem statements related to their specific domains and challenges. These problem statements cover a wide range of areas, including agriculture, healthcare, education, transportation, smart cities, digital governance, cybersecurity, and more.
- Participants in the Smart India Hackathon utilize a variety of emerging and cutting-edge technologies to develop their solutions. These may include artificial intelligence, machine learning, data analytics, Internet of Things (IoT), blockchain, virtual reality, augmented reality, robotics, and other innovative technologies.
- Participating teams receive guidance, mentorship, and technical support from industry experts, domain specialists, and mentors assigned by the organizing committee. Mentors help teams refine their ideas, develop prototypes, and prepare for the final presentation.
- At the end of the hackathon, teams present their solutions to a panel of judges consisting of government officials, industry leaders, and subject matter experts. Solutions are evaluated based on criteria such as innovation, feasibility, scalability, technical implementation, and potential impact.

ICPC AWARENESS SESSION

[OCTOBER 18, 2023]

The International Collegiate Programming Contest (ICPC) stands as a prestigious annual competition where university students worldwide gather to demonstrate their prowess in algorithmic programming. Operating in teams of three, representing their respective institutions, participants engage in solving real-world problems, fostering collaboration, creativity, and innovation.

Established in the 1970s, the ICPC boasts a rich history and has evolved into the world's largest and most esteemed programming competition. It serves as a platform for identifying and nurturing some of the globe most talented young programmers. The competition unfolds in regional and world finals, where participants from diverse regions contend for top honors.To enlighten PCCOE students about the intricacies of the ICPC, the PCCOE ACM Student Chapter and Team CESA organized a session. This session was led by the Technical team members providing valuable insights into the competition structure, rules, and regulations, offering guidance on effective preparation. During the session, emphasis was placed on the significance of teamwork and communication skills in the ICPC. The preparation strategy, which involved tackling previous years questions, engaging in mock competitions, and honing time management skills was discussed. The session aimed to equip students with a comprehensive understanding of the ICPC and empower them for success in this challenging programming arena.

The session underscored the advantages of taking part in the ICPC competition. Beyond the honor and prestige of emerging victorious, participants also acquire exposure to authentic programming challenges, fostering the enhancement of their problem-solving capabilities.In summary, the International Collegiate Programming Contest provides an exceptional avenue for college students to showcase their algorithmic programming prowess, collaborate in teams, and address real-world problems. Engaging in such competitions is instrumental in skill development, preparing students for forthcoming challenges in their careers.

The policy recognizes that the knowledge of the rich diversity of India should be imbibed first hand by learners. This would mean including simple activities, like touring by students to different parts of the country, which will not only give a boost to tourism but will also lead to an understanding and appreciation of diversity, culture, traditions, and knowledge of different parts of India. Towards this direction under ‘Ek Bharat Shrestha Bharat’, 100 tourist destinations in the country will be identified where educational institutions will send students to study these destinations and their history, scientific contributions, traditions, indigenous literature, and knowledge, etc., as a part of augmenting their knowledge about these areas.India's profound knowledge system boasts a wealth of insights that have often been overlooked or underappreciated. As we delve deeper into specific examples, it becomes evident that concepts integral to modern scientific understanding were not only present in ancient Indian texts but were articulated with surprising precision. This article aims to shed light on some of these remarkable contributions and the importance of acknowledging India's role in shaping the world's intellectual landscape.

1. Gravity in Ancient Texts:

The Rigveda, composed around 1500-1200 BCE, contains verses that seem to hint at an understanding of gravity. In particular, the concept of 'gurutvakarshan' describes the force of attraction, suggesting an awareness of gravitational forces. While Sir Isaac Newton formulated the laws of gravity in the 17th century, the Vedas offer a glimpse into the early conceptualization of this fundamental force.

Example: Rigveda 10.22.14 - "This earth is devoid of hands and legs, yet it moves ahead. All the objects over the earth also move with it. It moves around the sun."

2. Sushruta Samhita and Surgical Techniques:

The Sushruta Samhita, attributed to the ancient sage Sushruta, provides detailed descriptions of surgical procedures, including rhinoplasty and plastic surgery. This text, dating back to approximately 600 BCE, demonstrates an advanced understanding of anatomy and surgical techniques, laying the foundation for modern medical practices.

Example: Sushruta Samhita - Elaborate descriptions of surgical instruments, anesthesia, and techniques for various surgical procedures.

3. Mathematics and Astronomy:

The Brahmasphutasiddhanta by Brahmagupta, written in the 7th century CE, contains pioneering mathematical concepts. Brahmagupta introduced the concept of zero, the decimal system, and solved quadratic equations. Aryabhata’s work in the Aryabhata covered elliptical orbits and the rotation of the Earth, demonstrating a sophisticated understanding of astronomy and mathematics.

Example: Brahmasphutasiddhanta - "A debt minus zero is a fortune; a fortune minus zero is a debt."

COLLINATORS

[OCTOBER 28, 2023]

In a transformative event named “Collinators” the spotlight shone on the imperative task of cultivating a problem-solving culture within our society. Esteemed speakers Mr. Sunil Bhave ,Mr. Jimmy Eapen, Mr. Prafulla Diwan, and Mr. Siva Regilla took the stage to impart insights aimed at fostering a more positive, cohesive, and solution-oriented social environment. The session transcended conventional boundaries, delving into the nuances of recognizing and addressing societal challenges. Attendees gained valuable perspectives on the steps essential for efficient problem-solving, not only on a community level but also in navigating personal challenges. The speakers, with their wealth of experience, guided students on adopting an active approach to problem-solving and cultivating empathy in their endeavors.

The event concluded with an engaging Question and Answers session, where participants had the opportunity to interact directly with the speakers, seeking clarification, guidance. “Collinators” left its mark by not only equipping students with problem-solving skills but also by inspiring a collective commitment to building a society that actively seeks solutions to its challenges. As the curtain fell on this insightful event, the seeds of a problem-solving culture had been sown, promising a future generation of Collinators ready to tackle the complexities of our evolving world.

TECHNICAL TUESDAY

[EVERY TUESDAY]

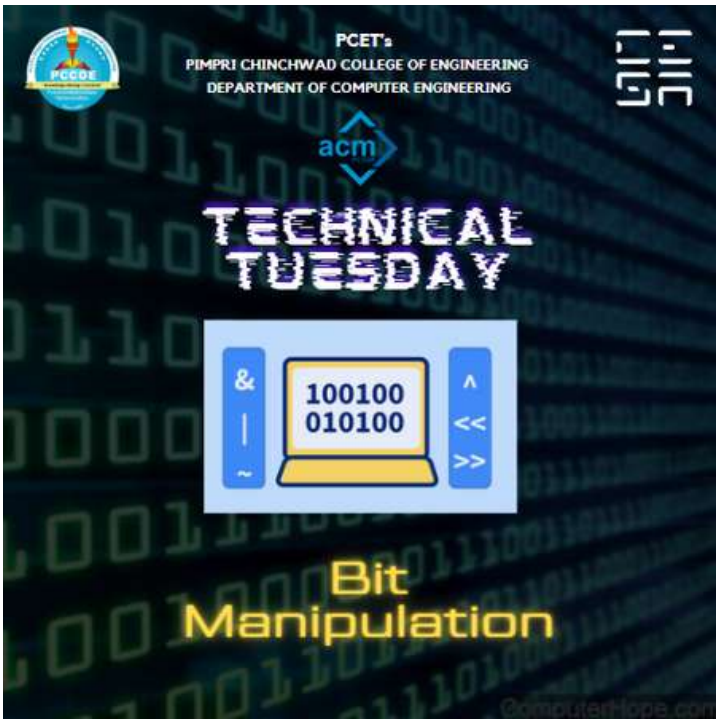
The PCCOE ACM Student Chapter proudly introduces “Technical Tuesday” an initiative set to revolutionize the learning experience for coding enthusiasts. Launched on October 24, 2023, This weekly series is a testament to our commitment to empowering students with the latest coding insights.

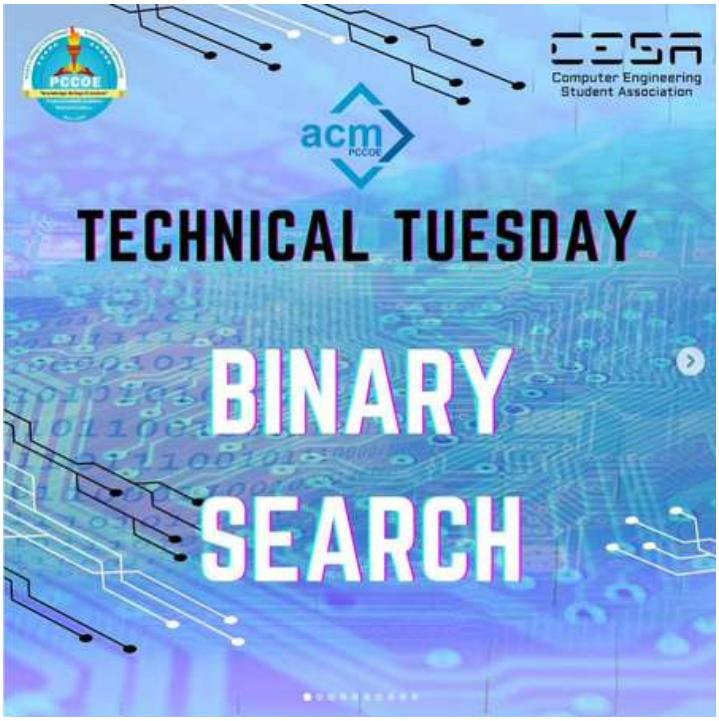
“Technical Tuesday” is more than just a series; it’s a dedicated effort to create a consistent and invaluable resource for the student community. Every Tuesday, brace yourselves for a journey into the depths of coding as we unveil insightful posts covering various facets of programming.

Whether you are a novice or an experienced coder, our series is designed to offer a structured approach to learning, helping you enhance your programming skills systematically.

Expect a diverse range of technical concepts, coding tips, and best practices that cater to all levels of expertise. From algorithmic wonders to language-specific nuances, “Technical Tuesday” is your weekly rendezvous with the fascinating world of coding.

Join us in this exciting venture as we strive to make learning technical concepts an engaging and enriching experience. Follow our Instagram account to stay updated and embark on a journey of continuous learning and skill development. With “Technical Tuesday” let’s code our way to excellence!





HACKTOBERFEST 2023

[OCTOBER 26, 2023]

DAY - 1

In a bid to ignite the spirit of open-source contribution among students, PCCOE ACM Students Chapter orchestrated a two-day hands-on workshop, marking the inception of HacktoberFest 2023. The primary objective was to familiarize participants with the intricacies of HacktoberFest and equip them with the skills needed to make meaningful contributions to open-source projects .The first day of this enriching event kicked off with an insightful journey into the fundamentals of version control using Git and GitHub. Students, ranging from beginners to advanced, found a common ground to explore and understand the basics. The interactive session addressed queries comprehensively, ensuring that every participant gained a solid foundation in using these essential tools for collaborative coding.Led by the Webmasters of PCCOE ACM Students Chapter, the first part of the workshop laid the groundwork for the upcoming open-source contribution session.The focus on Git and GitHub not only demystified version control but also set the stage for the participants toseamlessly engage in collaborative coding projects.The second part of the day ventured into the heart of open-source contribution – projects inrepositories. The students delved into the practicalities of navigating repositories, understandingissues, and making their first pull requests.With real-world examples and hands-on

exercises,the Webmasters guided the participants through the process, demystifying the challenges of contributing to open source.The enthusiasm among the students was palpable as they started working on projects,channeling their newfound knowledge into tangible contributions. The meticulously organizedworkshop not only addressed the technical aspects but also fostered a collaborative and supportive environment, where participants felt encouraged to ask questions and explore thevast realm of open source.The focus on Git and GitHub not only demystified version control but also set the stage for the participants to seamlessly engage in collaborative coding projects.The second part of the day ventured into the heart of open-source contribution – projects inrepositories. The students delved into the practicalities of navigating repositories, understandingissues, and making their first pull requests. With real-world examples and hands-on exercises,the Webmasters guided the participants through the process, demystifying the challenges ofcontributing to open source.The enthusiasm among the students was palpable as they started working on projects,channeling their newfound knowledge into tangible contributions. The meticulously organizedworkshop not only addressed the technical aspects but also fostered a collaborative andsupportive environment, where participants felt encouraged to ask questions and explore thevast realm of open source.

HACKTOBERFEST 2023

[OCTOBER 27, 2023]

DAY - 2

Day 2 of the PCCOE ACM x Hacktoberfest event unfolded with an immersive journey into the mechanics of open-source contribution, expertly guided by the proficient Webmaster team of PCCOE ACM Student Chapter. This day was dedicated to unraveling the technical intricacies involved in making impactful contributions to open-source projects. The session was meticulously crafted to provide participants with a comprehensive understanding of the step-by-step process. From creating new branches to the art of crafting pull requests and the nuances of addressing and creating issues, every essential element for successful open-source collaboration was dissected and explained. A pivotal moment during the day was the unveiling of a special list of projects collaboratively developed by the PCCOE ACM and GDSC PCCOE teams, officially sanctioned by Hacktoberfest organizers. Active contributions to these projects were recognized as direct and official contributions to the Hacktoberfest event, adding a meaningful dimension to the participants' involvement. The call for engagement from the PCCOE ACM Student Chapter was met with enthusiasm as participants eagerly

embraced the opportunity to contribute to a real-world project. The palpable excitement in the room was complemented by a touch of healthy competition, as the top 10 contributors to the project were promised felicitation with enticing goodies. As participants delved into the world of open-source collaboration, the air was filled with the spirit of camaraderie and shared accomplishment. The event not only provided a platform for practical learning but also fostered a sense of community and achievement among the budding contributors.With day two drawing to a close, participants left with a tangible sense of accomplishment, having made meaningful contributions to open-source projects. The culmination of this two-day event marked the beginning of a journey for these participants, as they continue to navigate the exciting landscape of open-source collaboration, armed with newfound skills and a taste of the vibrant community that surrounds it.

HOUR OF CODE

[DECEMBER 12, 2023]

In a concerted effort to ignite a passion for computer science among school students, thePCCOE ACM Student Chapter orchestrated a highly impactful event known as the "Hour ofCode." Aligned with the global initiative led by the Association for Computing Machinery (ACM),this event served as a gateway to the world of coding, introducing learners of all skill levels to the wonders of computer science.

This year's celebration, hosted at S.B. Patil School, focused on inspiring students in coding andartificial intelligence (AI). The chapter actively contributed to this global initiative by organizing adynamic session where AI and ML concepts were unveiled to eager young minds. In a one-hourinteractive experience, the students were not only introduced to the fascinating realms of AI andML but also treated to a live demonstration of an Image Recognition model.

The hands-on session went beyond theoretical concepts, providing students with a tangibleglimpse into the exciting possibilities of these cutting-edge technologies. A highlight of the eventwas the live demonstration of an Image Recognition model, showcasing the recognition of handgestures through a machine learning model. This immersive experience not only demystifiedcomplex concepts but also kindled a spark of curiosity, fostering a deep-seated interest incomputer science.The "Hour of Code" event, locally organized by PCCOE ACM, exemplifies the chapter'scommitment to education, innovation, and community outreach. By actively participating in thisglobal initiative, the chapter contributed to creating a future generation of tech enthusiasts,empowering young minds to navigate the digital landscape with confidence and curiosity. The impact of this event extends beyond the immediate classroom, sowing the seeds oftechnological curiosity and paving the way for a future where coding and AI are embraced asaccessible and exciting avenues of exploration.

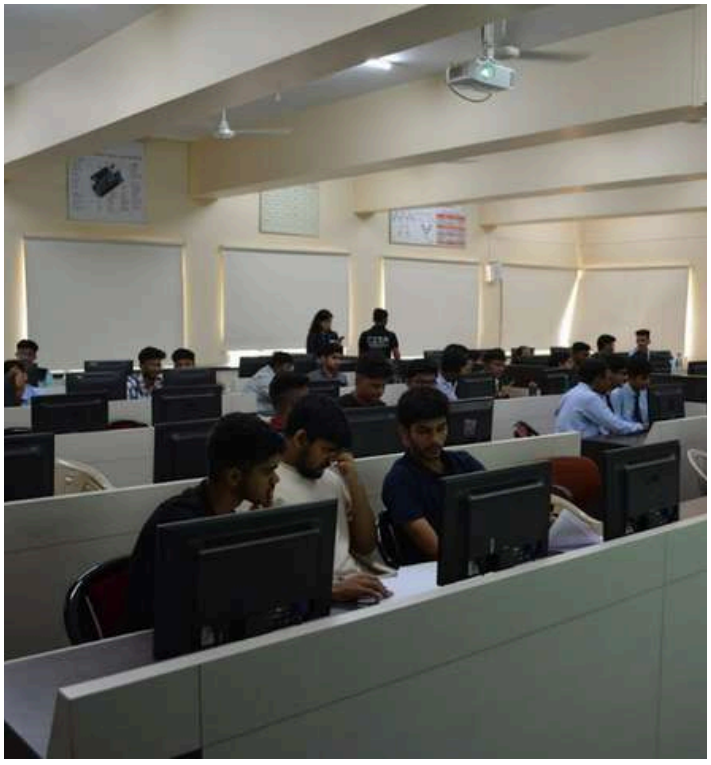
ANANTYA 2023

Events

CODIGO 3.0 WEBBIT PERPLEXO HACKATHON COSMIC APTITUDE TEST STARTUP MANIA THE ALPHA ANALYST G20X ANANTYA MOVIE TRIVIA UNLEASH THE ART

In the dynamic realm of academic excellence, the PCCOE ACM Student Chapter recently orchestrated a dazzling symphony of intellect and creativity through its flagship event. This multifaceted extravaganza, a testament to the chapter's commitment to holistic development, drew participants from various colleges, creating an engaging tapestry of talent and innovation. At the heart of the event were coding brilliance and technological artistry. The competitive programming contest, Codigo 3.0, transcended language barriers, uniting participants in the universal language of code.

Simultaneously, Webbit became the canvas for web development enthusiasts, allowing them to weave digital experiences that blended technology with artistic innovation. The event embraced brain teasers and innovation through Perplexo, a hackathon-style challenge that pushed participants to unravel complex problems within a set timeframe. The intellectual marathons continued with the Cosmic Aptitude Test, testing language, quantitative, relational, and logical reasoning skills, while The Alpha Analyst delved into the intricate world of the stock market, challenging participants to decode financial trends and make strategic decisions.



The Innovation Hub at Startup Mania became a springboard for aspiring entrepreneurs, providing a platform to pitch innovative ideas and vie for funding. This not only showcased the chapter's dedication to nurturing innovation but also emphasized the transformative power of turning dreams into reality. The event expanded its horizons to global insights with G20x Anantya, a geopolitical debate event that echoed with impassioned discussions. Participants navigated the complexities of global affairs, showcasing their knowledge and diplomacy skills on a compelling stage.

In the realm of entertainment, Movie Trivia celebrated the world of films, quizzing participants on their cinematic knowledge. Simultaneously, Unleash the Art offered a visual symphony through photography and reel-making competitions, providing a canvas for artistic expression. This grand success wasn't merely a competition; it was an essay of collaboration, innovation, and intellectual prowess. The event showcased the diverse skills of students, leaving an indelible mark on the academic landscape. As the curtain fell on this spectacular showcase, it set the stage for future editions to unfold even more magnificently, leaving a lasting impression on the vibrant community of PCCOE ACM. The event, in essence, was a celebration of the collective pursuit of knowledge and the boundless possibilities that arise when talented minds converge with a shared passion for excellence.

WORLD ENVIRONMENT HEALTH DAY: TREE PLANTATION

In celebration of World Environment Day, the Computer Engineering Students' Association (CESA) ACM Chapter organized a Tree Plantation Drive. This initiative encouraged participants to plant a tree near their homes and share a picture of the planted sapling.The event aimed to raise awareness about the importance of trees in mitigating climate change, improving air quality, and fostering a sense of responsibility towards the environment among students.

The Tree Plantation Campaign, conducted by CESA ACM, witnessed widespread participation from its members. Participants embarked on the tree planting activity at locations of their choice, be it their backyard, community garden, or nearby green spaces. The event encouraged a personal connection with nature and allowed individuals to take direct responsibility for the well-being of the environment.

An essential aspect of the campaign was the social media component. Participants were encouraged to share pictures of themselves planting the trees to create a virtual forest of community contributions. Social media has become a central place for everyone to share their stories, show the different places where they planted trees, and make the event's overall impact even bigger.

The Tree Plantation Campaign organized by CESA ACM was a resounding success, combining environmental consciousness with community involvement. By encouraging participants to plant trees near their homes, the event not only celebrated World Environment Day but also inspired a sense of responsibility towards nature and the planet. The stories and pictures we shared online were like a digital forest showing all the good things people did. It was a way of saying we're all working together to make our community and the world better, greener, and healthier

GIT AND GITHUB: GUEST SESSION

In the beginning of October, the PCCOE ACM Student Chapter, in collaboration with GDSC PCCOE, organized a special expert session dedicated to Git and GitHub in the context of HacktoberFest on October 10,2023. The distinguished speaker for this session was Mr. Sanket Deshmukh, Lead Data Scientist at Altimetrik. The event primarily focused on providing a fundamental understanding of Git and GitHub, insights into the HacktoberFest 2023 initiative, and techniques for effective problem-solving

Mr. Sanket Deshmukh, with his extensive experience as a Lead Data Scientist, brought valuable insights to the session. His expertise added depth to the discussion on Git and GitHub, making it a valuable learning experience for the students. The expert session centered on the basics of Git and GitHub, essential for collaborative coding and version control. Additionally, the speaker shed light on the significance of HacktoberFest 2023, encouraging participation and explaining its relevance in fostering a collaborative coding culture.

The session not only covered technical aspects but also provided insights into effective problem-solving. Attendees gained practical knowledge on how to approach coding challenges and contribute meaningfully to open-source projects.
The event proved to be a wholesome experience for the students, sparking their interest and passion for participating in HacktoberFest. The interactive nature of the session allowed students to clarify doubts and engage actively with the speaker.

The expert session on Git and GitHub led by Honarable Mr. Sanket Deshmukh served as a valuable initiative to equip students with essential skills for participating in HacktoberFest 2023. The collaboration between PCCOE ACM Student Chapter and GDSC PCCOE facilitated a comprehensive learning experience, fostering a culture of collaboration, problem-solving, and active participation in open-source contributions. The session left participants with newfound enthusiasm and readiness to actively engage in the upcoming HacktoberFest activities.

CESA INDUCTION 2023-24

The CESA Induction Ceremony stands as a significant event, designed to extend a warm welcome to the newly recruited members of the Student Committee within the Computer Department. This ceremony serves as a platform for the introduction of the new committee, allowing them to share their vision and present the comprehensive plan for the upcoming tenure of 2023-2024.

The induction held on September 4,2023 commenced with the newly appointed Core Committee members expressing their vision for the term. This session provided insight into their goals, aspirations, and strategies to enhance the overall student experience within the Computer Department. A pivotal aspect of the ceremony involved the formal handover of files and responsibilities from the outgoing Core Committee to the incoming Core Committee members. This symbolic transfer ensures a seamless transition and continuity in the organizational functions of CESA.

The Induction Program saw active involvement not only from CESA but also from other esteemed student committees, including GDSC, OWASP, and ACM-W. This collaborative participation reinforced the sense of community within the Computer Department and promoted a unified approach towards achieving shared objectives. The CESA Induction Ceremony for the 2023-2024 term was a big and important event. It helped the new committee members and everyone in the Computer Department feel like a team. The ceremony was a chance for the new leaders to share their plans and get everyone excited about working together. They also took over responsibilities from the old leaders in a smooth way. The positive and team-spirited atmosphere during the event makes us look forward to a year of working together, being creative, and achieving success as a group.

ESP SESSION

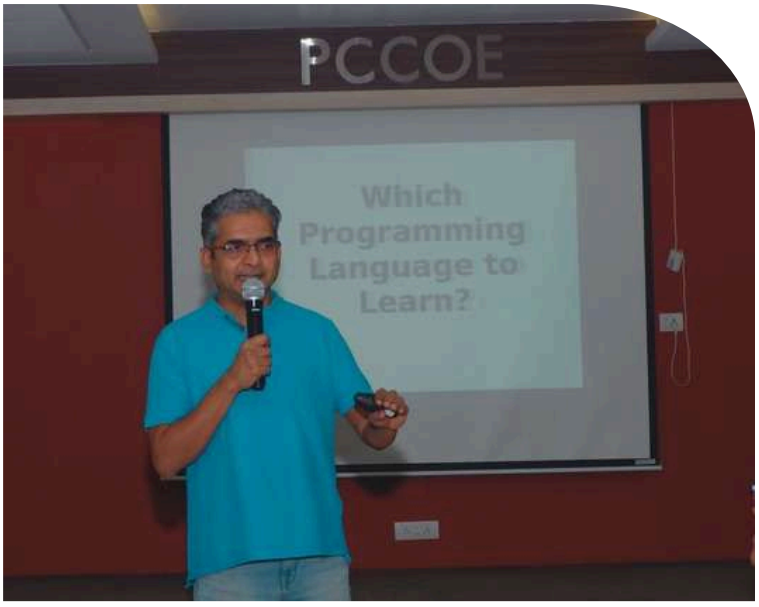
by Dr. R Venkateswaran

An Eminent Speaker Program is a valuable initiative by ACM that brings accomplished and influential individuals to share their insights, experiences, and expertise with a broader audience. One of the key benefits of an Eminent Speaker Program is the opportunity it provides for attendees to learn directly from successful individuals who have made significant contributions to their respective fields. These speakers often bring a wealth of practical knowledge, real-world experiences, and unique insights that can inspire, motivate, and educate the audience. PCCOE ACM students chapter organized various ESP sessions for students to enrich their knowledge and motivate them to work for betterment of technology and society.

An Eminent speaker program was organized on September 4,2023 by Dr. R Venkateswaran. The topic for the program was “Technology for Good”. Dr. Venkateswaran discussed how technology is solving global issues and helping to strengthen international relations among countries. Sir provided a comprehensive overview of how technological innovations have been instrumental in addressing pressing global challenges. Sir also expounded on the transformative influence of technology in education, underscoring its ability to broaden educational access through digital platforms and e-learning technologies. He highlighted numerous open-source software applications and resources, emphasizing their significance in promoting collaborative and accessible technology solutions. The speaker brought attention to the value of freely available software tools that can be openly used, modified, and shared by the community for collective benefit. The talk ended with a lively question and answer part where people asked questions and got thoughtful answers. This helped everyone understand more about the right and wrong ways to use technology for making society better

The talk about using technology for good was really interesting. It showed students how tech can help make the world a better place by solving big problems and being fair to everyone. The event reminded everyone that if we use technology in a good way, it can be a strong force for making positive changes in the world.

ESP SESSION
by Dr. Navin Kabra



Another ESP program was organized by CESA ACM on September 15,2023. The topic was “Which Programming Language You Should Learn and Why”. Dr. Navin Kabra was the eminent speaker for the day. Dr. Navin Kabra started the session by asking a very simple yet tricky question- “**Which is the most important programming language in today's world?**”. The interactive session helped students brainstorm and put forth their ideas for the best programming language. Further sir explained briefly about plenty of programming languages. The speaker underscored the importance of aligning programming language choices with specific tasks. Different programming languages are designed to excel in particular areas, such as data analysis, web development, artificial intelligence, or mobile app development. Understanding the unique strengths of each language ensures optimal efficiency in task execution.

Mr. Navin Kabra showed examples of programming languages that excel in specific domains. For example, Python's versatility for data science, JavaScript's dominance in web development, and C++'s efficiency in system-level programming. The talk told students it's a good idea to pick a programming language based on the kind of work we want to do. It's like choosing the right tool for the job.

The session concluded with an engaging question and answer segment, where participants sought guidance on choosing languages for emerging technologies and industry trends. The interactive discussion allowed attendees to clarify doubts and gain further insights into aligning their skillsets with the ever-evolving demands of the technology landscape.


acm-w

ACM-W 2023-24

Welcome to the ACM-W section of our magazine! ACM-W is dedicated to supporting, celebrating, and advocating for women in computing fields. With a commitment to fostering diversity and inclusion, we aim to empower women at all stages of their computing careers, from students to professionals.

Dr. Aparna Joshi
ACM-W Faculty Sponsor

Dear Reader,a hearty welcome to all, as the coordinating faculty, I am thrilled to extend a warm invitation to all passionate learners, innovators, and advocates for diversity in technology. At ACM-W, we believe in fostering a community where every voice is heard, every idea is valued, and every dream is nurtured. Here, within our dynamic student chapter, you'll find a plethora of opportunities to unleash your potential, fuel your curiosity, and forge lifelong connections. Whether you're a seasoned coder, an aspiring entrepreneur, or simply someone eager to make a difference, ACM-W at PCCoE is your gateway to a world of endless possibilities.

Through our engaging events, workshops, and mentorship programs, we aim to empower individuals of all backgrounds to thrive in the ever-evolving landscape of computing. From exploring cutting-edge technologies to championing diversity and inclusion initiatives, we are committed to shaping the future of tech one keystroke at a time. Join us as we embark on this exhilarating journey of learning, growth, and empowerment. Together, let's defy boundaries, break stereotypes, and pave the way for a brighter, more inclusive tomorrow. Your adventure begins here, with ACM-W at PCCoE. Let's code, innovate, and inspire—together!

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Technical Head

Mrunal Gaikwad

Social Media Head

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Rachana Yadav

Publicity and marketing Head

Induction 2023-24

[September 4,2023]

Induction program was the first event conducted by team CESA. The primary objective of the event was to acquaint second-year students with Team CESA, setting the stage for a collaborative and engaging journey ahead. The distinguished presence of Director Dr. Govind Kulkarni, HOD Dr. K. Rajeshwari, and Dr. Venkateswaran as the Guest of Honour added a sense of importance to the occasion. Their valuable insights and guidance served as the cornerstone for the event.

Chapter leaders transferred their responsibility to the newly appointed team leaders during the formal handover ceremony. The induction ceremony also featured a solemn oath-taking by every team member, underscoring their dedication and sense of responsibility towards the team's objectives. Following this, each chapter leader presented their team's agenda and goals. This event was collaborated by ACM-W, ACM, GDSC, OWASP.

Overall, the Team CESA Induction Program was a pivotal event that laid the groundwork for a year of innovation and growth, leaving participants excited and committed to the team's success.

ESP Session on Machine Learning and Image Processing

[September 12,2023]

The Association for Computing Machinery's Women in Computing (ACM-W), in collaboration with the Association for Computing Machinery (ACM), recently organized an enlightening ESP (Emerging Speaker Program) session featuring Dr. Sukhendu Das, a distinguished figure in the Computer Science and Engineering (CSE) department at the prestigious Indian Institute of Technology Madras (IITM). Dr. Das is widely recognized for his profound contributions to various domains within the field, including Visual Perception, Computer Vision, Image Intelligence, Graphics and Visualization, Biometry, Computational Science and Engineering, Analog and Digital Systems, and Soft Computing.

With a remarkable portfolio boasting over 200 publications in esteemed research journals and conferences, Professor Das demonstrated his profound expertise during the session. He navigated through intricate concepts in Machine Learning and Image Processing with ease, providing invaluable insights to the eager audience comprising students and enthusiasts alike. Professor Das's academic journey was palpable throughout the session, reflecting his deep-seated knowledge and proficiency in the subject matter.

One of the highlights of the event was the interactive Q&A segment, where students had the opportunity to directly engage with Professor Das. This segment not only facilitated a deeper understanding of the topics discussed but also fostered an environment conducive to open dialogue and knowledge-sharing. Students were able to pose questions, seek clarifications, and gain further insights from Professor Das's wealth of experience, enriching their learning experience significantly.

Moreover, this ESP session served as a bridge between theoretical knowledge and real-world applications, aligning perfectly with the mission of ACM and ACM-W to empower students with the skills necessary to navigate technology's rapidly evolving landscape. By connecting students with esteemed professionals like Dr. Sukhendu Das and providing a platform for meaningful interaction and learning, ACM-W continues to play a pivotal role in nurturing talent and fostering innovation within the field of computing.

ENGINEER'S DAY EVENT - CYBER SLEUTH

[September 15,2023]

The collaboration between the ACM-W Student Chapter and OWASP Student Chapter at PCCOE culminated in an engaging event titled 'CYBER SLEUTH,' which centered around cybersecurity challenges. This event attracted engineering enthusiasts eager to showcase their problem-solving skills in the realm of cybersecurity. 'CYBER SLEUTH' provided a platform for participants to not only test their technical acumen but also to enhance their knowledge, foster creativity, and promote teamwork.

The event comprised several rounds, each designed to progressively challenge and engage the participants. Initially, participants formed teams of two, and the event kicked off with Round 1, conducted online as a quiz segment. This segment served as an initial filter, testing participants' theoretical knowledge and understanding of cybersecurity concepts. The top-performing teams from Round 1, totaling 30, advanced to Round 2.

Round 2 of the event featured an escape room challenge, adding an element of excitement and hands-on problem-solving. Teams were presented with a series of computer-based quizzes and puzzles, each designed to test their technical proficiency and critical thinking skills. Successfully completing these challenges led teams to access a final Google Drive link containing questions related to ethical hacking, adding a practical dimension to the competition.

From Round 2, the top 10 teams emerged as finalists and progressed to Round 3, which introduced a treasure hunt format. This stage of the event incorporated cybersecurity-related clues, which teams had to decipher to unveil the puzzle's solution. The treasure hunt not only challenged participants' cybersecurity knowledge but also their ability to think creatively and strategically in deciphering the clues.

Overall, 'CYBER SLEUTH' provided participants with a multifaceted experience, combining theoretical knowledge, practical application, and teamwork. By organizing such events, the ACM-W Student Chapter and OWASP Student Chapter at PCCOE effectively promoted cybersecurity awareness, encouraged skill development, and fostered a collaborative learning environment among engineering enthusiasts.

SY-Recruitment

[September 26,2023]

The 'ACM-W SY Recruitment' for second-year students was a highly anticipated opportunity, signifying a crucial phase in the journey of joining esteemed organizations. The process commenced with an initial stage where interested candidates were required to fill out a comprehensive Google Form. This form encompassed a range of inquiries, seeking personal information, attendance records, CGPA, achievements, and insights into their interests and dedication toward contributing to the team. The intention was to gain a holistic understanding of the candidates and their alignment with the goals of the organization.

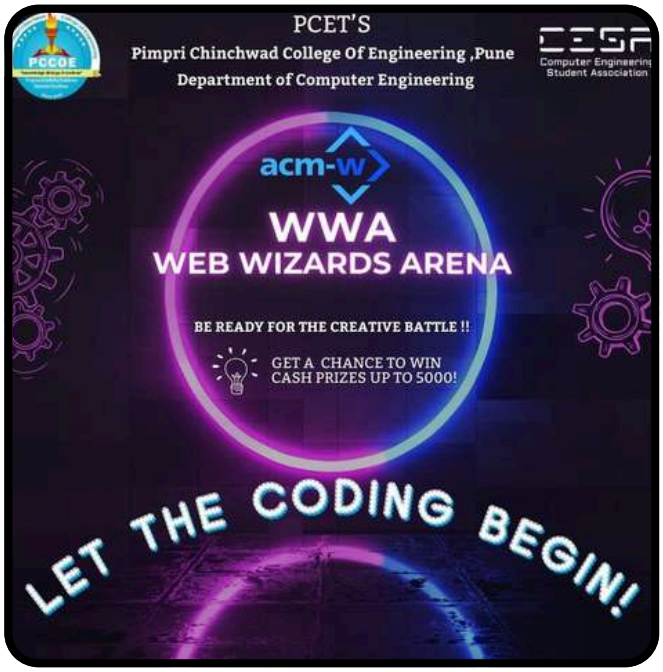
From a pool of over 125 applicants, a meticulous shortlisting process ensued based on the responses received. The shortlisted candidates advanced to the second screening, which involved offline interviews. These interviews, conducted in a formal manner, allocated each candidate a brief 5-minute slot. The structured interviews began with candidates introducing themselves, followed by probing questions related to their chosen domains of interest. General inquiries about teamwork and management responsibilities were also included to gauge their overall suitability.

Following the offline interviews, a third round was introduced, conducted online for some selected positions and students just to ensure their acceptance for the role. After a thorough and comprehensive evaluation process, 23 students were successfully selected for various roles within the ACM-W team. The results, including designated positions and the names of the selected candidates, were promptly announced, concluding the recruitment process.

WWA : Web Wizard Arena

[October 25,2023]

Web Wizard Arena (WWA) was a thrilling event designed for web enthusiasts, providing a platform for students to showcase their web development skills. The competition was separated into two groups - Group A, consisting of first and second-year students, and Group B, comprising third and fourth-year students. Each team could have a maximum of three members, and participants were required to bring their own laptops and essentials.



Problem Statements: Group A and Group B were given different problem statements on spot, challenging participants to create web pages or websites that addressed the given challenges.

Duration: Teams were given a total of 3 hours to conceptualize and implement their solutions.

Submission: Participants were required to upload their completed websites on Git and share a video demonstrating the functionality of their web pages on a provided drive link.

Round 1 Results:

Date and Time: The first round of the event took place on October 25th from 2:00 to 5:00 pm.

Shortlisted Teams: Four teams from each group (A and B) were shortlisted for the next round.

Round 2 Details:

Date: The second round took place on October 31st.

Presentation: Shortlisted teams were instructed to present their developed websites in front of a panel of judges.

Judges: Prof Shailesh Galande and Prof Madhura Kalabhor were invited as judges for the event.

Evaluation Criteria:
Teams were assessed based on predefined rubrics that considered various aspects of their web development projects, including design, functionality, innovation, and overall execution.

Round 2 Results:
Winners:
-Group A: Three teams were declared winners.
- Group B: Two teams emerged victorious.

Web Wizard Arena provided an excellent opportunity for students to showcase their web development skills and creativity. The event successfully engaged participants in problem-solving and teamwork, fostering a competitive yet collaborative environment. The judging panel, consisting of Prof Shailesh Galande and Prof Madhura Kalabhor, added a layer of expertise to the evaluation process, ensuring a fair and thorough assessment of the teams' efforts.

DEEP LEARNING SESSION

[October 28,2023]

Team ACM-W from Pimpri Chinchwad College of Engineering, Pune, is thrilled to announce the successful organization of an Expert Session on Deep Learning. The event took place at Pimpri Chinchwad College of Engineering, catering to SY and TY B Tech computer students. Ms. Kriti Sinha, a Data Scientist at Toll Technology, Pune, with extensive experience in real-time projects, graciously shared her insights.

Dedicated to promoting and supporting women in the field of Computer Science, the ACM-W team at PCCOE designed the session to cover the fundamentals of Deep Learning.

This endeavor aimed to benefit students and members eager to explore and excel in the rapidly evolving landscape of technology. The primary objective was to impart students with a foundational understanding of Deep Learning and its diverse applications. During the session, the guest speaker, Ms. Kriti Sinha, not only shared valuable knowledge but also provided students with comprehensive information and materials for future reference. The interactive nature of the session contributed to its overall success, achieving the intended goal of fostering learning and engagement among the participants.

Industrial visit

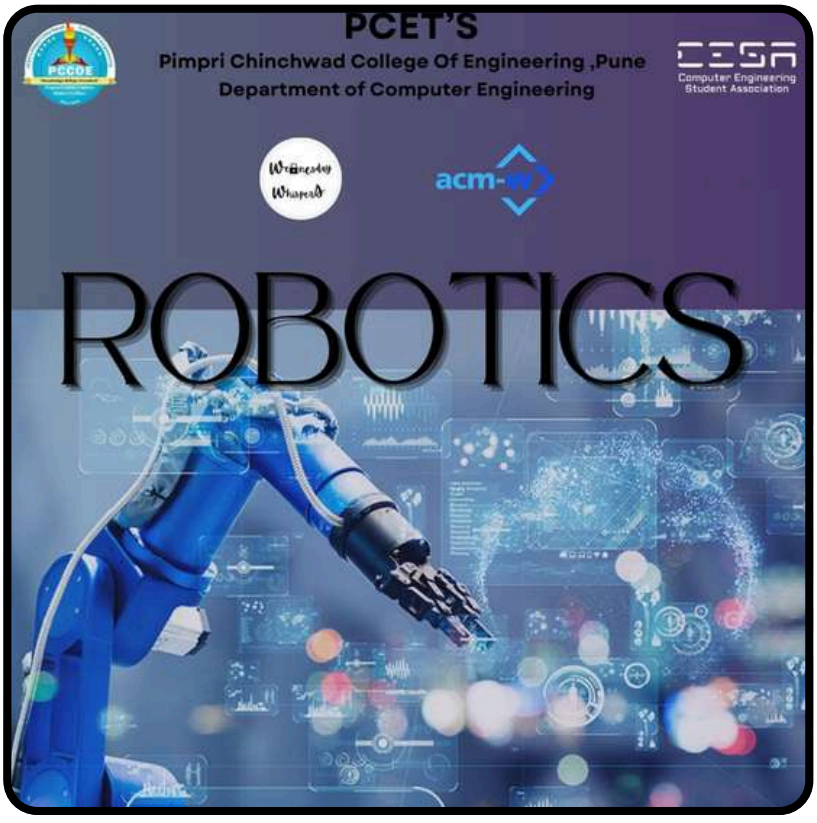
[November 3,2023]

Team AMCW PCCOE Pune embarked on a privileged tour of Atreya Innovations, an avant-garde healthcare technology firm committed to reshaping the landscape of holistic wellness. During the immersive visit, the seamless integration of ancient and modern healthcare methodologies, all powered by cutting-edge data-driven AI predictive algorithms, was witnessed firsthand by our team. Atreya's unwavering goal to enhance individualized diagnoses and recommendations for optimal wellness was palpable, reflecting their commitment to holistic health.

A pivotal moment during the tour was the presentation on Nadi Tarangini, Atreya's groundbreaking product. This innovative tool, utilizing the Nadi Pariksha method, is provided with in-depth reports to Ayurvedic practitioners, thereby revolutionizing diagnostic approaches in conventional medicine The ongoing closed alpha trials for a new wellness product were also unveiled during the tour, showcasing Atreya's dedication to continuous innovation. This upcoming product further underscores Atreya's commitment to developing and enhancing personalized wellness solutions, tailoring them to the unique needs of individuals.

In conclusion, a captivating glimpse into a transformative approach to wellness was provided to Team AMCW PCCOE Pune during the tour of Atreya Innovations. The experience served as a profound learning opportunity, emphasizing the potential of innovative technologies in the pursuit of individualized, holistic health.

Wednesday Whisper



The ACM-W Club's recent initiative, "Wednesday Whispers," stands as a captivating initiative designed to disseminate engaging and intriguing content to a broader audience. Spearheaded by the SY Team of ACM-W, this initiative unfolds every Wednesday through Instagram posts that delve into various thought-provoking topics. Subjects covered till now included topics such as the dark web, ancient Indian technology, virtual reality, augmented reality, blockchain, and biometrics. This initiative aims to connect individuals with shared interests, fostering a collaborative environment within the academic community. Beyond information sharing, "Wednesday Whispers" serves as a catalyst for active discussions, idea exchange, and potential collaborations among peers. By providing a space for regular engagement, the initiative contributes to the development of a supportive community, enriching participants' knowledge and fostering a sense of unity in the dynamic field of technology.

OWASP PCCOE

OWASP PCCOE

OWASP FOUNDATION

Welcome to the domain of the **Open Worldwide Application Security Project® (OWASP),** where the vision is simple yet profound: "*No More Insecure Software.*" Our mission is clear – to be a global open community ensuring secure software through education, advanced tools, and collaboration.

PCCOE OWASP

In 2022, the inception of **PCCOE OWASP Student Chapter** marked a commitment to cybersecurity awareness. Aligned with OWASP's objectives, our mission is to disseminate knowledge through CTFs, elevate cybersecurity consciousness via social media, and curate impactful events. Our dynamic team, divided into Technical and Non-Technical branches, collaborates seamlessly. The Technical Team, comprising cybersecurity-savvy students, spearheads CTFs and awareness initiatives. The Non-Technical Team forms the creative backbone, comprising Design, Content, Web Development, Video Editing, and Outreach departments. Together, they harmonize efforts, infusing life into the chapter's functionality through collaborative innovation.

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Co-Management Head
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CTF Head
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Member
Anuj Momle

EXCEPTIONAL PERFORMANCE IN CTF TIME

A GLOBAL ACHIEVEMENT

Security Head
Deep Dhakate

CTF Head
Sahil Bombale

Pimpri Chinchwad College of Engineering's OWASP Student Chapter proudly congratulates **Deep Dhakate, Security Head, and Sahil Bombale, CTF Head**, for their remarkable feat in the world of cybersecurity. Both individuals have secured a place among the **top 5% globally on CTF Time**, a prestigious platform for Capture The Flag (CTF) competitions.

This extraordinary achievement is a testament to their unparalleled skills and profound grasp of cybersecurity concepts. Deep Dhakate and Sahil Bombale have demonstrated exceptional dedication, perseverance, and expertise in navigating the intricate challenges posed by CTF competitions.

Their success not only reflects their individual brilliance but also highlights the calibre of talent nurtured within the OWASP Student Chapter at PCCOE. As ambassadors of cybersecurity excellence, Deep and Sahil exemplify the commitment to continuous learning and innovation essential in today's rapidly evolving digital landscape.

Their accomplishment serves as an inspiration to aspiring cybersecurity professionals, encouraging them to strive for excellence and push the boundaries of their capabilities. Through their remarkable performance, Deep Dhakate and Sahil Bombale have not only brought pride to the OWASP Student Chapter but have also solidified their place as leaders in the field of cybersecurity.

As PCCOE continues to foster a culture of excellence and innovation, achievements like these reinforce the college's position as a hub for aspiring cybersecurity leaders. The OWASP Student Chapter extends its heartfelt congratulations to Deep Dhakate and Sahil Bombale on this remarkable milestone, and we look forward to witnessing their continued success and contributions to the field of cybersecurity.

A REMARKABLE ACHIEVEMENT IN VISHWA GLOBAL CTF

The OWASP Student Chapter's CTF team, consisting of Chetan Indulkar, Nikhil Pattewar, Kartik Totlani, and security team member Omkar Pote, has showcased their exceptional skills on a global stage. In the highly competitive Vishwa Global CTF organized by Vishwakarma Institute of Information Technology (VIIT), the team secured an impressive 97th position out of 700 participating teams worldwide.

This remarkable achievement is a testament to their expertise and dedication in navigating complex cybersecurity challenges. By excelling in a prestigious international competition, the team has demonstrated their ability to compete at the highest level and emerge victorious.

The OWASP Student Chapter takes immense pride in the accomplishments of Chetan, Nikhil, Kartik, and Omkar. Their success not only reflects their individual talents but also underscores the collaborative spirit and collective effort within the chapter.

As cybersecurity continues to be a critical area of focus in today's digital landscape, achievements like these highlight the importance of cultivating talent and fostering a culture of excellence within educational institutions. The OWASP Student Chapter at PCCOE stands as a shining example of this commitment to nurturing cybersecurity leaders of tomorrow.

Congratulations to Chetan, Nikhil, Kartik, and Omkar on their outstanding performance in the Vishwa Global CTF. Their triumph is a source of inspiration for aspiring cybersecurity professionals and a testament to the OWASP Student Chapter's dedication to promoting excellence in cybersecurity education and practice.

-:Security and CTF Team:-

A REMARKABLE ACHIEVEMENT IN
HSBC IITB TRUSTLAB CTF

The cybersecurity prowess of the OWASP Student Chapter's team from PCCOE continues to shine as they secure yet another impressive accolade. In the prestigious HSBC IITB TrustLab CTF, the team showcased their exceptional skills and dedication, earning an outstanding overall rank of 19 among participants from Pune and Hyderabad.

This stellar performance further solidifies their position as frontrunners in the cybersecurity domain. The team's ability to navigate complex challenges and compete at such a high level is a testament to their expertise and unwavering commitment to excellence.

As cybersecurity continues to be a critical area of focus in today's digital landscape, achievements like these underscore the importance of continuous learning and skill development. The OWASP Student Chapter remains committed to fostering a culture of excellence and innovation, empowering future cybersecurity leaders to thrive in a dynamic and ever-evolving field.

The OWASP Student Chapter at PCCOE celebrates this remarkable achievement, recognizing the hard work and dedication of the team members. Their success not only brings honor to the chapter but also highlights the collaborative spirit and talent nurtured within the cybersecurity community at PCCOE.

Congratulations to the team from OWASP Student Chapter PCCOE on their stellar performance in the HSBC IITB TrustLab CTF. Their achievement serves as an inspiration to aspiring cybersecurity professionals and reinforces the chapter's commitment to excellence in cybersecurity education and practice.

-:Security and CTF Team:-

SHER-LOCK
A FUTURISTIC CAMPUS QUEST

UNLOCKING ADVENTURES IN ANANTYA

SHER-LOCK

28 March 2023

In a digital-dominated world, our college campus transformed into an adventure zone as participants embraced Sher-Lock, an innovative treasure hunt hosted by our cybersecurity enthusiasts. This high-tech quest challenged problem-solving skills, teamwork, and cybersecurity acumen.

Sher-Lock wasn't your ordinary treasure hunt. With over 200 teams exploring the campus, each consisting of two members, it became a fusion of exploration and cybersecurity in Anantya. Participants navigated through a labyrinth of high-tech puzzles, unlocking hidden clues and unraveling the mysteries of Sher-Lock.

Beyond the fun, Sher-Lock was a multifaceted activity offering numerous benefits. It served as a crucible for teamwork and collaboration, pushing individuals to decipher clues collectively. The competitive edge added thrill, motivating participants to think critically and act decisively in their pursuit of victory.

Designed with purpose, Sher-Lock honed specific skills essential in today's dynamic landscape – from problem-solving to strategic thinking and creativity. The buzz of excitement and mystery resonated across the campus, turning Sher-Lock into a memorable day filled with laughter, camaraderie, and shared achievements.

Sher-Lock's versatility became a powerful tool for fostering social interaction and skill-building, injecting an adventure into the campus environment. As teams explored, solved puzzles, and embraced the adventure, Sher-Lock symbolized the dynamic spirit that defines our campus community.

In the grand tapestry of campus events, Sher-Lock stood out as a thrilling success, leaving everyone with unforgettable memories of a day marked by excitement, camaraderie, and the joy of discovery. It wasn't just a treasure hunt; it became a symbol of our community's readiness to embrace challenges and unlock new horizons.

BABYCON'23

UNVEILING THE **POWER OF RESEARCH**
BEYOND ACADEMICS TO INFINITE HORIZONS

27 March 2023

Embarking on a research endeavor transcends the boundaries of academia, offering a transformative experience that leaves a lasting impact on personal and professional development. Beyond the cultivation of critical thinking and enhanced communication skills, research becomes a holistic venture contributing to existing knowledge.

This exploration delves into the diverse benefits of research, showcasing its pivotal role in fostering intellectual curiosity and preparing students for the challenges of postgraduate studies and future careers. More than a mere academic pursuit, research instills a lifelong passion for the relentless pursuit of knowledge.

At the heart of our commitment to research excellence is BabyCon, our student conference, which emerges as a hotspot of innovation. Over 50 teams from our college showcased their groundbreaking research in AI/ML and Cybersecurity, creating an electrifying atmosphere of ideas and inspiration. Students, true to their brilliance, shared their innovative concepts, providing a glimpse into the bright future of innovation.

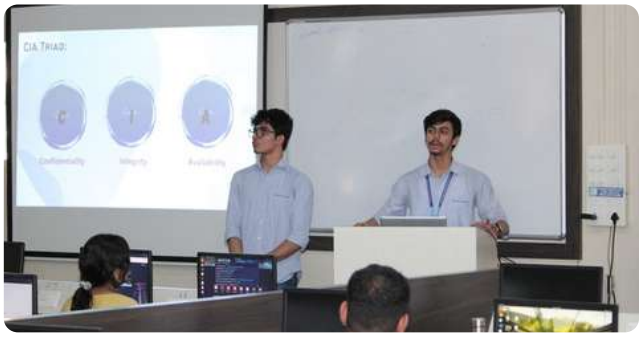
BabyCon was not just an event; it was a celebration of talents, showcasing the potential for innovation in AI/ML and Cybersecurity. The day was brimming with excitement, marking endless possibilities and reinforcing our commitment to fostering a culture of research excellence. As we reflect on BabyCon, it becomes evident that research is not just a part of academic curriculum; it's a journey that propels us toward a future defined by innovation, exploration, and the pursuit of knowledge.

XSPLOIT 2.0

13 sept 2023

The OWASP Student Chapter recently held its electrifying XSPLOIT 2.0 session, igniting a spark of cybersecurity curiosity among second-year computer students. With digital reliance soaring and cyber threats looming, the event was a beacon of knowledge in safeguarding sensitive data and thwarting malicious attacks.

From OWASP's global mission to the CIA Triad's security principles, attendees embarked on a journey through cybersecurity fundamentals. The session illuminated the vital role of confidentiality, integrity, and availability in fortifying digital defenses.



Diving into the Dark Side: Cyber Attacks

Participants were captivated by tales of cyber attacks, each narrating a real-world threat scenario. As encryption emerged as the hero of the digital realm, attendees learned the art of shielding data from prying eyes.

Encryption took center stage as attendees delved into its inner workings. From symmetric to asymmetric encryption, the audience unraveled the secrets of securing information in the digital age.

Protocols: The Gatekeepers of Security

HTTPS, SSL/TLS, and SSH emerged as the guardians of secure communication. Attendees were enlightened on how these protocols pave the way for safe data transmission in an increasingly connected world.

Meet the Masters

The event was graced by cybersecurity stalwarts Arya Kaslikar, Omkar Pote, Vedant Bijwe, Ajinkya Mali, Deep Dhakate, Sahil Bomble, and Chetan Indulkar. Their expertise and passion inspired attendees to chart a course in the dynamic world of cybersecurity. Empowering Tomorrow's Defenders, With over 200 eager minds in attendance, XSPLOIT 2.0 heralded the dawn of a new era in cybersecurity education. It was more than just an event; it was a rallying cry for the next generation of cyber defenders.

XSPLOIT 2.0 sparked passion and knowledge in attendees, delving into cybersecurity's core. The OWASP Student Chapter empowers future leaders, safeguarding our digital realm as it evolves.

CYBER SLUETHS 1.0

15 Oct 2023

In the era of digital dominance, cybersecurity takes center stage, and Cyber Sleuths 1.0 stands as a testament to its critical importance. More than an event, it's a collective effort to secure the digital frontier.

Conducted by the OWASP Student Chapter on October 15, 2023, as part of Engineer's Day celebrations, Cyber Sleuths 1.0 drew an impressive registration of 148 teams. The competition unfolded in three intense rounds, challenging 2-member teams to showcase their cybersecurity acumen.

The online quiz kicked off the action with 100 teams at 8 am, featuring cybersecurity questions to enhance participants' knowledge. Moving to the offline realm, 30 teams tackled encryption methods and computer logic, leading to the final showdown for the top 15 teams.

The third round, a cybersecurity scenario challenge with 10 intricate questions, tested problem-solving skills and immersed participants in real-world cybersecurity scenarios. Beyond the competition, Cyber Sleuths 1.0 served as an educational experience, contributing to cybersecurity awareness and knowledge.

As the echoes fade, Cyber Sleuths 1.0 remains more than a contest; it's a beacon for innovation, collaboration, and continuous learning in the realm of cybersecurity. In a concise narrative, it encapsulates the spirit of securing our interconnected world in the face of evolving digital threats.

CYBERKAVACH
OCTOBER'23

11th Oct 2023

October's spotlight shines not just on falling leaves but also on National Cybersecurity Awareness Month (NCSAM). In collaboration with IIC, OWASP Student Chapter and SIG CNIS launched a month-long initiative - CYBERKAVACH. With the rallying cry "Asuras on the Cyberspace is not a Myth," it became a nexus of tech and non-tech events, amplifying cybersecurity education and awareness.

CYBERKAVACH, more than a month's endeavor, echoes a commitment to fortifying our digital landscape. Under its banner, OWASP Student Chapter conducted sessions at colleges and schools, spreading crucial insights on cyber safety.

October brings the winds of Cyber Security Awareness Month, and PCCoE OWASP CHAPTER is geared up to illuminate the cyberspace landscape. In a dazzling inauguration ceremony, the team presented a flash mob and unveiled a 40-feet-long flex, symbolizing the vulnerability of the digital realm.

The ribbon was gracefully cut by the Head of the Department, officially launching the month-long CYBERKAVACH events. Attendees were briefed about the upcoming activities through a standee display, ensuring everyone is well-informed with information flyers in hand.

CYBERKAVACH is not just an event; it's a collective effort to fortify the digital realm. PCCoE OWASP CHAPTER invites everyone to join this cybersecurity awareness extravaganza, promising a month of education, awareness, and proactive cybersecurity measures.

CYBERSAFE CHECKPOINT

13 Oct 2023

In the era where smartphones store our lives, OWASP Student Chapter in collaboration with SIG-CNIS took charge with "Cybersafe Checkpoint" on October 13, 2023, as part of CYBERKAVACH. Focused on device security, the event aimed to arm students against cyber threats.

The session kicked off with insights into the current threat landscape, highlighting strategies used by cybercriminals. The OWASP team then conducted hands-on vulnerability checks, examining open ports, rooted phones, outdated software, malware detection, and more.

"Cybersafe Checkpoint" wasn't just an event; it was a journey into cybersecurity. Participants left with practical steps to fortify their device security, showcasing OWASP's commitment to proactive cybersecurity education. As guardians of the digital realm, OWASP Student Chapter continues to lead the charge for cybersecurity awareness.

As a culmination of the event, participants gained not only an enhanced understanding of device security but also tangible steps to implement in their daily digital interactions. The event wasn't just a checkpoint; it was a comprehensive journey into the intricacies of cybersecurity, fostering a sense of responsibility and empowerment among the participants.

SB PATIL SESSION

DIGITAL GUARDIANS

13th Oct 2023

In an era marked by rapid digital evolution, instilling cybersecurity awareness among the younger generation is paramount. PCCoE OWASP Student Chapter champions this cause, aiming to fortify our community against emerging cyber threats and cultivate a digitally literate and cyber-resilient generation.

As part of the Cyber Security Awareness month in October, PCCoE OWASP Student Chapter embarked on a mission to spread awareness about cyberspace. Their proactive approach took them to S.B Patil School, Ravet, where they conducted an engaging session titled “Digital Guardian.”

The session was a holistic exploration into the fundamentals of cybersecurity, tailored for young minds. Covering a spectrum of topics, the team interacted with the students, imparting valuable insights and knowledge to navigate the cyber arena responsibly.

Key points covered in the session included:

- What is Cyber Security?
- Types of Hackers
- Social Engineering
- Phishing Attacks
- Mobile Device Security
- Social Media Use
- Removable Media
- Passwords
- Authentication & Authorization
- Combatting Cyber Bullying

The experience was not just educational but interactive and impactful, creating a positive engagement with the young audience. PCCoE OWASP Student Chapter demonstrated that, indeed, it's a good team that can make significant changes happen.

As the session concluded, the echoes of cyber literacy lingered, fostering a generation equipped to face the digital future with resilience and responsibility. PCCoE OWASP Student Chapter continues to pave the way for a safer and more secure cyberspace, one awareness session at a time.

PCU SESSION
PIMPRI CHINCHWAD UNIVERSITY

17 Oct 2023

In the dynamic realm of higher education, where the digital landscape shapes both instructors and students, fostering cybersecurity awareness becomes paramount for cultivating safe online practices. OWASP Student Chapter took this imperative to Pimpri Chinchwad University, Talegaon, offering a session titled "Cyber Security Essentials" enriched with practical implementations tailored for engineering students.

The theoretical points covered in the session included:

- What is Cyber Security?
- CIA Triad
- OWASP Top 10
- Dark Web
- MITM & DDOS
- Firewall. Complementing the theory, practical implementations delved into: Kali Linux, Basic Tools, Burp Suite

Going beyond traditional cybersecurity discussions, the initiative aimed to bridge the knowledge gap between academia and industry by integrating technological advancements with practical applications. The session not only raised awareness of potential cyber threats but also provided valuable tools and techniques applicable in personal, professional, and academic settings.

The interactive session served as a platform for like-minded individuals to explore the cyber arena collaboratively. As the session concluded, it reiterated the impact of a cohesive team in driving meaningful changes. OWASP Student Chapter continues to be at the forefront, shaping the cybersecurity landscape through education, practical insights, and collaborative exploration.

ROADMAP

CYBER SECURITY

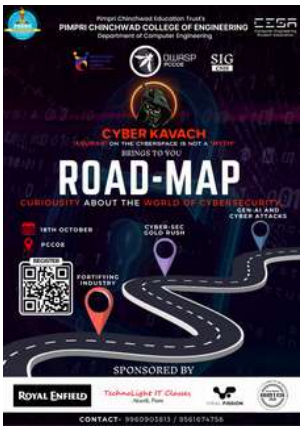
18th Oct 2023

In a digital landscape fraught with escalating cyber threats, the demand for cybersecurity professionals is soaring, promising job security and lucrative salaries. The field's diversity allows individuals to carve out specialized career paths, whether in ethical hacking, incident response, or security analysis. Continuous learning stands as a foundational element, providing cybersecurity professionals with an intellectually stimulating environment to thrive.

At OWASP's recent Roadmap Event, industry expert Mr. Kamaljeet Singh took the stage to share his distinguished career journey. Offering practical guidance, he outlined strategic steps and educational pathways to empower individuals in advancing their cybersecurity careers. The event provided participants with a profound understanding of cybersecurity's diverse career prospects and the essential strategic steps for success. As a beacon in cybersecurity education, OWASP Student Chapter continues to shape the next generation of professionals through impactful events like these.

On October 18, 2023, OWASP Student Chapter orchestrated a transformative Roadmap event, drawing in 150 eager participants at the Seminar Hall, Mechanical Building. The event featured two accomplished speakers who generously shared their expertise, experiences, and invaluable tips for charting a successful career in cybersecurity.

The event kicked off with an engaging presentation by Mr. Atul Kulkarni, the first guest speaker. Mr. Kulkarni provided insights into current industry trends and challenges, offering participants a glimpse into the ever-evolving cybersecurity landscape.



CYBER SLUETHS 2.0

20 Oct 2023

In the ever-evolving digital landscape, cybersecurity emerges as a paramount shield against emerging threats. PCCoE OWASP Student Chapter, in alignment with Cyber Security Awareness month, orchestrated Cyber Sleuths 2.0—an event transcending traditional bounds.

Comprising three exhilarating rounds, the event kicked off with an online quiz challenging 50 teams with insightful cybersecurity questions. Transitioning to offline realms, the second round delved into encryption methods and computer logic, narrowing the field to 15 adept teams. The pinnacle—the third round—immersed participants in cybersecurity scenarios, testing their acumen with ten intricate questions.

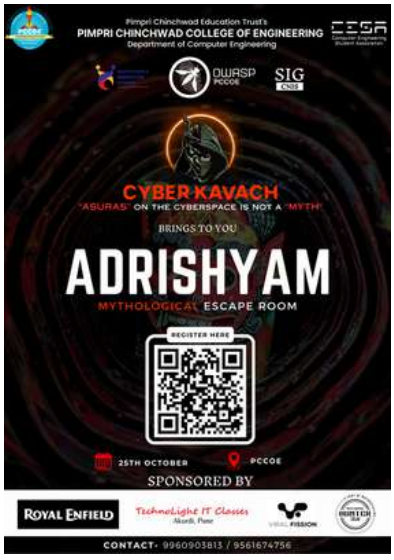
Beyond a mere competition, Cyber Sleuths 1.0 served as an educational expedition, fostering cybersecurity awareness and knowledge augmentation. The event's distinctive flair lies in its fusion of practical, creative problem-solving challenges, elevating participants beyond conventional discussions to real-world cybersecurity scenarios. As guardians of the digital frontier, OWASP Student Chapter paves the way for a cyber-resilient future through engaging and enlightening events like Cyber Sleuths 2.0.

ADRISHYAM

THE MYTHOLOGICAL ESCAPE ROOM

25th Oct 2023

Embark on an extraordinary journey where the mystical echoes of ancient myths blend seamlessly with the modern allure of immersive adventures. Welcome to Adrishyam—an enthralling Mythological Escape Room experience that transcends the boundaries of conventional entertainment.



The climax, aptly named "Mahayudh," centered around the theme of Sita Haran. Teams navigated through six intricately woven clues, each unraveling the saga from Sita Haran to the epic war between Ram and Ravan. The culmination awaited the team that successfully decoded the mysteries, escaping the room and claiming victory.

Adrishyam stands as a testament to innovation, seamlessly fusing ancient tales with the modern escapade of escape rooms. The event not only enthralled participants but also revitalized the essence of age-old myths, bringing them to life in a captivating tapestry of riddles, mysteries, and enchantment. As the myth unfolds, Adrishyam continues to carve its place as a unique and captivating experience in the realm of escape room adventures.

The mythological escape room event unfolded its mystical realms on October 25, captivating 49 teams, each with 4 intrepid members. The initiation, named "YUDH," commenced with a Sanskrit quiz adorned with Hindi translations, spanning two riveting slots. Out of the competition, 12 teams emerged victorious, earning passage to the next challenge— "AGYATVYAS," inspired by the Mahabharata's enigmatic agyatvyas. Held in labs, teams deciphered clues leading to crosswords and ultimately unlocking the final mystery.

QUESTCON CTF
CAPTURE THE FLAG

Fri, 27 Oct. 2023 -
Sun, 29 Oct. 2023

The relevance of Capture the Flag (CTF) competitions has risen in the ever-changing field of cybersecurity education. Among these, the Questcon CTF emerges as a cornerstone, offering participants an immersive platform that goes beyond the traditional contest, providing a rich array of challenges and fostering a culture of continuous learning. Capture The Flag events are not just competitions; they serve as catalysts for transforming theoretical knowledge into practical skills.

The Questcon CTF, held from October 27 to October 29, 2023, took this educational paradigm a step further by creating an environment where participants could apply their cybersecurity understanding to solve real-world challenges. The event unfolded both online and offline, hosted at Pimpri Chinchwad College of Engineering, Pune. Questcon CTF aimed not only to test participants' skills but also to nurture them. The competition delved into multifaceted challenges, covering domains such as cryptography, forensics, web security, and more. Unlike traditional contests, Questcon CTF became an immersive experience, offering a holistic view of the cybersecurity landscape.

What sets Questcon CTF apart is its commitment to being more than just a contest. It became a dynamic opportunity for learning, enabling participants to enhance their problem-solving capabilities and connect with like-minded individuals in the cybersecurity community. The collaborative spirit of the event contributed to building a network of professionals with shared interests and aspirations.

Questcon CTF attracted participants from around the world, showcasing its global appeal. Countries such as Africa and Saudi Arabia, along with prestigious Indian Institutes like IIT Roorkee and IIT Varanasi, contributed to the diversity and richness of the event. This international participation not only elevated the competition's stature but also provided a platform for cross-cultural learning and collaboration.

Questcon CTF exemplifies the evolving landscape of cybersecurity education. By offering a platform for skill enhancement, problem-solving, and global collaboration, the event remains a beacon, guiding participants towards excellence. As the digital frontier continues to transform, Questcon CTF stands as a testament to the commitment of educational initiatives in shaping the future generation of cybersecurity professionals.

In conclusion, Questcon CTF transcends the traditional boundaries of a competition, emerging as a holistic educational experience that nurtures the cybersecurity prowess of participants and contributes to the broader discourse in the field.

Google Developer Student Clubs

INDUCTION 2023-24

Google Developer Student Clubs
Core Team

Vishakha Deshpande
GDSC LEAD

Aditya Agre
Management Head

Satyam Mirgane
Management Head

Anushka Lahare
Design Head

Shreya Mohod
Design Head

Tanmay Shindkar
Android Head

Vinayak Shete
Android Co -Head

Sanika Mahabaleshwar
Flutter Head

Darpan Neve
Flutter Co-Head

Pranav Kulkarni
Web Head

Saurabh Asnare
Web Co-Head

Pranav Kulkarni
Web Co-Head

Amruta Kothawade
Web Domain Member

Amay Chandravanshi
AI/ML Head

Aabid Kacchi
AI/ML Co-Head

Aditi Aher
Cloud Head

Google Cloud Study Jams (Information session)

Unlocking Cloud Mastery: A Recap of Google Cloud Study Jams Event

Date: September 6, 2023

Speaker: Aditi Aher (Cloud Head)

Number of Attendees: 126

In a digital convergence of eager minds on September 6, 2023, Aditi Aher, the Cloud Head, orchestrated an enlightening online event that delved into the intricacies of Google Cloud Study Jams. With 126 participants in tow, the virtual gathering became a hub for knowledge dissemination and empowerment.

Unveiling the Foundation: Google Cloud Computing Framework

The focal point of the session was the introduction to the Google Cloud Computing Foundation (GCCF) framework. Aditi Aher skillfully navigated the attendees through the foundational aspects of this framework, offering a comprehensive understanding of the bedrock upon which their cloud journey would unfold.

Navigating the Cloud: Getting Started and Setting Milestones

An essential aspect of the event was guiding participants on how to embark on their Google Cloud Study Jams journey. Aditi Aher provided valuable insights on getting started, ensuring that attendees were equipped with the tools and knowledge needed for a seamless initiation into the world of Google Cloud. Setting clear milestones, she emphasized the importance of deadlines for course completion, underlining the significance of timely progress.

Crucial Criteria: Swags as a Symbol of Success

The allure of 'swags' served as an additional incentive for participants to excel in their Google Cloud Study Jams coursework. Aditi Aher laid out the criteria for earning these coveted rewards, infusing the event with a sense of achievement and tangible recognition for those who met the challenges presented by the program.

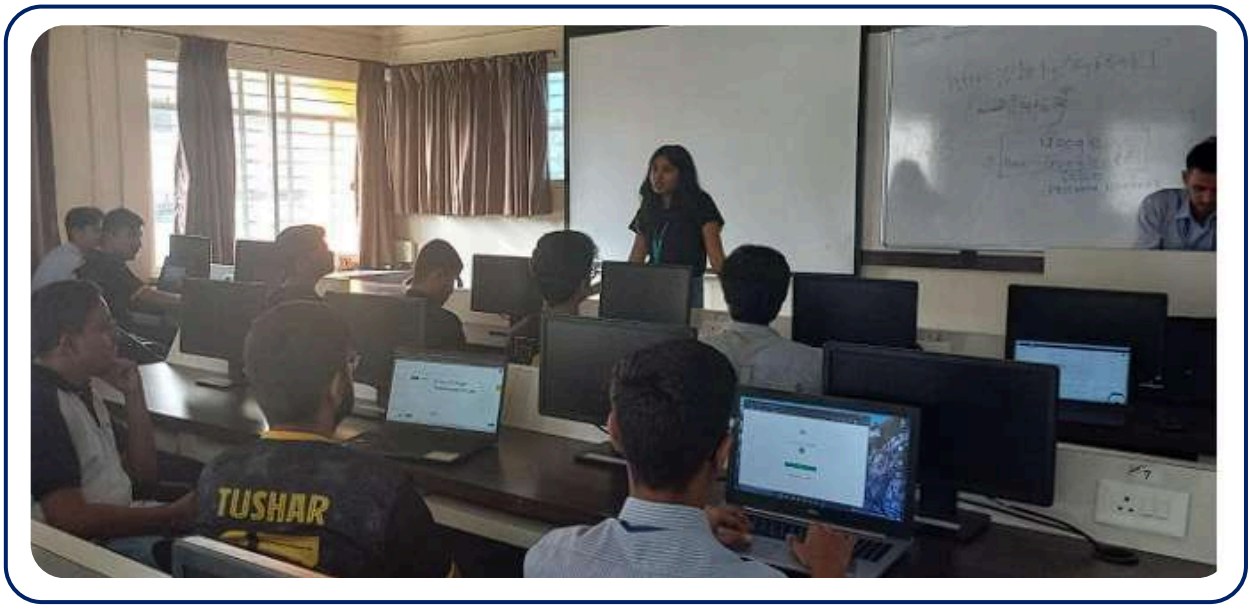
Interactive Learning: A Dynamic Digital Environment

The online event wasn't just a one-way street of information; it fostered an interactive learning environment. Attendees actively engaged with Aditi Aher, seeking clarification and guidance, transforming the session into a dynamic exchange of knowledge.

As the virtual curtains fell on the event, 126 participants dispersed into the digital realm, armed not only with knowledge but with a roadmap for their journey through Google Cloud Study Jams. Aditi Aher's insights had ignited a spark of motivation, propelling attendees towards a future where cloud mastery is not just a goal but an achievable reality.

In conclusion, the September 6, 2023, Google Cloud Study Jams event, led by Aditi Aher, was more than a virtual gathering; it was a stepping stone for 126 individuals venturing into the cloud. The GCCF framework, the roadmap to getting started, and the allure of 'swags' were all unveiled, setting the stage for a collective journey into the vast expanse of cloud computing.

Google Cloud Study Jams (Labs Exploration)



Date: Sept 27, 2023
Number of Attendees: 35
Speaker: Aditi Aher (Cloud Head)

Session Overview:

The Google Cloud Study Jams event aimed to create an interactive and immersive learning experience for technology enthusiasts interested in Google Cloud Platform (GCP) technologies. Led by Aditi Aher, who is an experienced Cloud Head, the event drew a crowd of 35 attendees eager to dive into hands-on labs and deepen their understanding of Google Cloud services.

Throughout the session, participants engaged in a series of practical exercises and guided tutorials, covering various aspects of Google Cloud Platform. The focus was not only on individual skill development but also on fostering a collaborative learning environment.

Aditi Aher provided insightful guidance and mentorship, ensuring that attendees could navigate through the labs effectively and address any challenges they encountered. By emphasizing collaboration and teamwork, the session encouraged participants to work together, share insights, and collectively overcome obstacles.

Overall, the Google Cloud Study Jams event was a resounding success, providing participants with valuable learning opportunities, practical skills, and a supportive community of fellow enthusiasts. Through hands-on labs, guided mentorship, and collaborative learning, the session empowered attendees to deepen their expertise in Google Cloud Platform and advance their careers in cloud computing.

Google Cloud Swags Distribution

Date: Jan 5, 2024
Number of Attendees: 40
Organizer : Aditi Aher (Cloud Head)

Session Overview:
The Google Cloud Swags Distribution event was a celebratory occasion aimed at recognizing and appreciating the engagement and participation of attendees in Google Developer Student Clubs (GDSC) events. With a total of 40 eager participants in attendance, the atmosphere was palpably charged with excitement and anticipation as they eagerly awaited their collection of Google Cloud swag, which included coveted T-shirts and vibrant Google Cloud stickers.

Beyond the mere receipt of merchandise, the event held deeper significance for many attendees, symbolizing acknowledgment of their active involvement in GDSC activities. For these individuals, the swag served as a tangible token of recognition for their dedication and contributions to the GDSC community. Such events play a vital role in fostering a sense of camaraderie and belonging among participants, strengthening the bonds within the GDSC community.

In essence, events like the Google Cloud Swags Distribution serve as pivotal moments for the GDSC community, reaffirming its values of inclusivity, collaboration, and appreciation. Through these initiatives, GDSC not only celebrates the achievements of its members but also lays the groundwork for a vibrant and supportive community ecosystem that thrives on mutual respect, recognition, and shared experiences.

Github Session

Date: Oct,10,2023
Number of Attendees: 122
Speaker: Saket Deshmukh (Lead data scientist at Altimetrik)

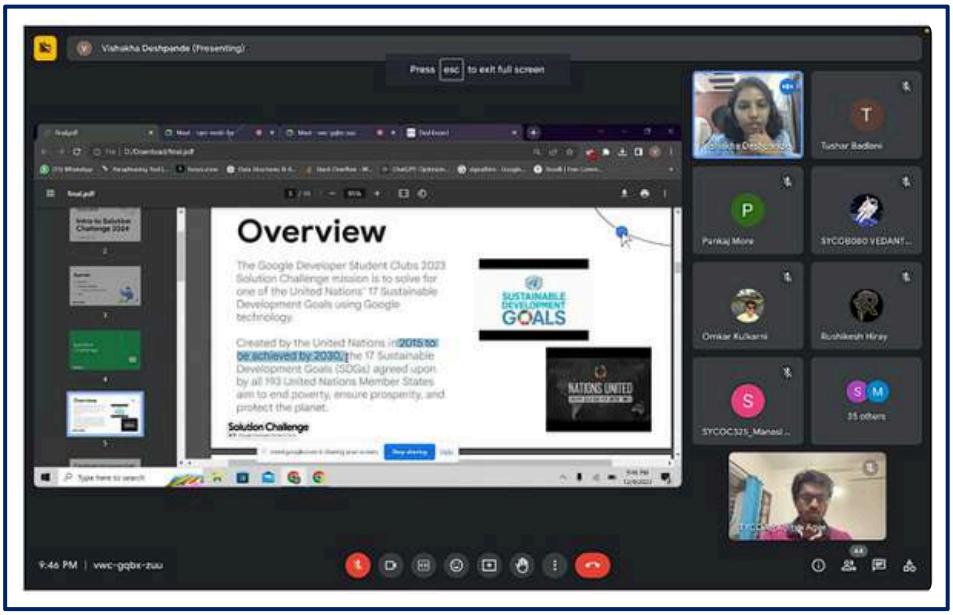
Session Overview:

The session facilitated by Saket Deshmukh, provided a comprehensive overview of Git's fundamental concepts and its practical applications. Attendees delved into the nuances of version control systems, understanding the pivotal role Git plays in enabling seamless collaboration among software development teams. Additionally, the session explored Git's versatility across different industries and highlighted its significance in ensuring project efficiency and integrity. Through interactive discussions and hands-on exercises, participants gained proficiency in basic Git commands, empowering them to initiate projects, track changes, and collaborate effectively.

During the event, Mr. Sanket Deshmukh extensively covered key Git concepts such as cloning, pulling, merging, and provided a step-by-step guide on creating a Git repository. He also offered a comparison between GitHub and GitLab, enriching attendees' understanding of version control platforms. Through his industry experience, attendees gained a clear insight into the importance of Git and GitHub in both professional and student life, emphasizing their significance in collaborative software development environments.

In conclusion, this event was a major hit that was truly beneficial for the attendees.

Solution Challenge Information Session



Date: Dec 9, 2023
Number of Attendees: 45
Speaker: Vishakha Deshpande (GDSC Lead)

Session Overview:

The Google Solution Challenge stands as an annual beacon, beckoning students worldwide to harness the power of Google technologies in addressing pressing issues aligned with the United Nations' 17 Sustainable Development Goals (SDGs). This initiative serves as a transformative platform, igniting students' passion and ingenuity to effect positive change on a global scale, irrespective of their prior tech experience.

At its core, the Google Solution Challenge embodies an exceptional opportunity for students to leverage their skills and unleash their creativity in service of tackling some of humanity's most daunting challenges. By aligning their projects with one of the UN's SDGs, participants are not only encouraged but empowered to engineer innovative solutions that hold the potential to drive meaningful impact .

It provides a nurturing environment where novices can immerse themselves in the world of coding, data analytics, machine learning, and other cutting-edge technologies, guided by the overarching goal of making a tangible difference in the world.

Ultimately, the Google Solution Challenge transcends traditional boundaries, serving as a catalyst for innovation, social impact, and personal growth. It empowers students to become agents of change, emboldening them to harness the power of technology as a force for good and leaving an indelible mark on the world for generations to come.

Roadmap to crack GSOC 2024!

Date: Oct 25, 2023
Number of Attendees: 103
Speaker: Rahul Kulkarni (Ex Head of Project Managment at Google)

Session Overview:

In this enriching session, participants were privileged to delve into a comprehensive exploration of the Google Summer of Code (GSoC) 2024, guided by the esteemed Rahul Kulkarni, renowned for his leadership as the former Head of Project Management at Google. The session left no stone unturned as it meticulously dissected essential facets of the program, including the meticulous process of project selection, the art of crafting adept proposals, strategies for effective engagement with mentors, the cultivation of optimal coding practices, and the mastery of proficient project management techniques.

With a keen focus on arming attendees with indispensable knowledge and skills, the session offered a crystal-clear roadmap for navigating the intricacies of GSoC with aplomb. Participants were not only equipped with a deeper understanding of the nuanced requirements for excelling in GSoC 2024 but also gained practical, hands-on experience to bolster their competitiveness in the program.

Through an immersive and focused approach, the session served as a catalyst for participants, preparing them to confront the challenges and seize the myriad opportunities presented by the esteemed GSoC initiative. Undoubtedly, it stood as a testament to the power of education and mentorship in empowering the next generation of innovators and leaders in the tech industry.

AI/ML Workshop - 3 Days Event

Day 1: Trending ML and DL Topics

Date: Jan 17, 2024
Number of Attendees: 88
Speaker: Aabid Kacchi & Vishakha Deshpande

Session Overview:
The first day of the AI/ML workshop delved into trending Machine Learning (ML) and Deep Learning (DL) topics. Participants explored the latest advancements, discussed industry applications, and gained insights into the current landscape of ML and DL technologies.

Day 2: Introduction to ML

Date: Jan 18, 2024
Number of Attendees: 77
Speaker: Amay Chandravanshi

Session Overview:
The second day provided an introductory session to Machine Learning (ML). Participants learned about the fundamental concepts, algorithms, and use cases of ML. The session aimed to lay a solid foundation for attendees to comprehend the broader aspects of ML.

Day 3: Hands-On and Closing Ceremony (Online)

Date: Jan 19, 2024
Number of Attendees:56
Speaker: Amay Chandravanshi

Session Overview:
The final day featured hands-on activities where participants applied their knowledge acquired in the previous sessions. It concluded with a closing ceremony, acknowledging the efforts of participants and celebrating their achievements during the 3-day AI/ML workshop.

FLUTTER FRENZY

Workshop - 4 Days Event

Day 1: Basic UI/UX, Widget Tree, Screen as a stack (stateful and stateless)

Date: Jan 29, 2024
Number of Attendees: 88
Speaker: Satyam, Sanika and Darpan

Session Overview: In this session, participants explored the essential principles of UI/UX design, focusing on creating intuitive and visually appealing interfaces. The core concept of Flutter, known as the widget tree, was introduced, highlighting its significance in structuring the UI hierarchy of applications. Through practical examples, attendees gained insights into how widgets serve as building blocks for constructing various UI elements, facilitating the development of seamless user experiences.

Day 2 :Notes App(UI) Building, Documentation

Date: Jan 30, 2024
Number of Attendees: 88
Speaker: Sanika and Darpan

Session Overview: During this hands-on session, participants actively applied the UI/UX design principles learned on Day 1 by building the interface of a simple notes app. Through practical application, they reinforced their understanding of the widget tree concept in Flutter and gained valuable experience in structuring UI elements effectively. By implementing the learned concepts in a real-world scenario, participants solidified their skills and prepared themselves for tackling more complex UI challenges in future projects.

FLUTTER FRENZY

Workshop - 4 Days Event

Day 3: Github, Firebase, Working on the App

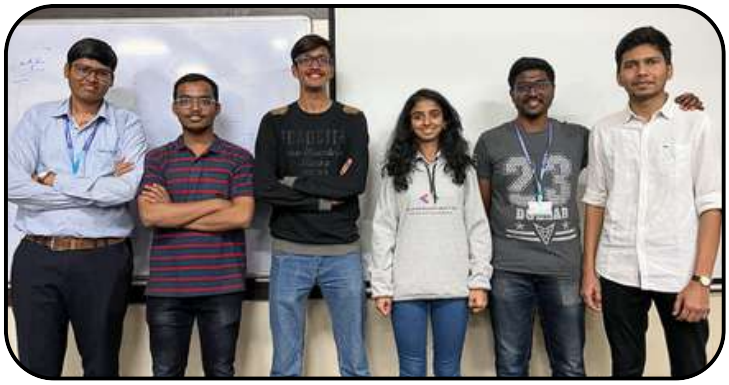
Date: Jan 31, 2024
Number of Attendees: 88
Speaker: Sanika and Darpan

Session Overview: Firebase, a widely used backend development platform by Google, was introduced as a pivotal tool for enhancing the functionality of the notes app. Participants actively integrated Firebase into their projects, leveraging its capabilities for features such as user authentication and data storage. This hands-on implementation allowed them to extend their notes app with essential functionalities while gaining practical experience in utilizing Firebase as a backend solution.

Day 4: Finishing on the app and Hosting it on Playstore

Date: Feb 1, 2024
Number of Attendees: 88
Speaker: Sanika and Darpan

Session Overview: On the final day, participants concentrated on refining and completing their notes app. They meticulously reviewed their code, identifying and resolving any lingering bugs to ensure the app operated seamlessly. Moreover, the session encompassed guidance on publishing the developed app on the Google Play Store. Participants were acquainted with the app store's prerequisites, the significance of signing certificates, and the comprehensive deployment procedure. This enabled them to gain insights into the crucial steps involved in making their app accessible to a wider audience.



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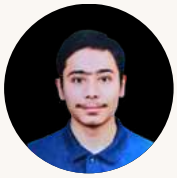

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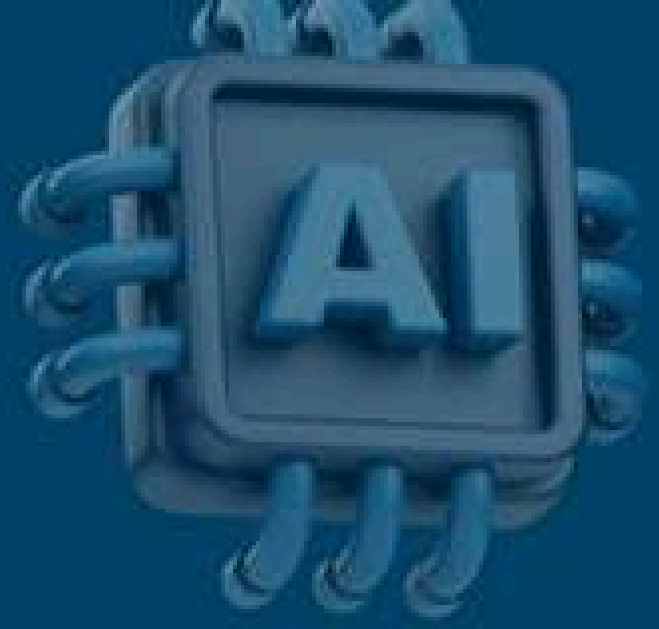

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