



TECHNIZ

2023- 2024

COMPUTER DEPARTMENT

SIES Graduate School Of Technology

NBA Accredited 2021-2024



This is the annual magazine of the “Department Of Computer Engineering”, SIES Graduate School OF Technology.

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Vision

To be a centre of Excellence in Computer Engineering to fulfill the rapidly growing needs of the Society.

Mission

- To Impart quality education to meet the professional challenges in the area of Computer Engineering.
- To create an environment for research, innovation, professional and social development.
- To nurture lifelong learning skills for achieving professional growth.
- To strengthen the alumni and industrial interaction for overall development of students.

PEO

- Practise Computer engineering in core and multi-disciplinary domains.
- Exhibit leadership skills for professional growth. Pursue higher Studies for career advancement.
-

PSO

- To apply computational and logical skills to solve computer engineering problems
- To develop interdisciplinary skills and acquaint with cutting edge technologies in software industries

EDITORIAL BOARD



***Anindita K. (Faculty
Incharge)***



Avaneesh Iyer (BE)



Sonali Magdum (BE)

Message from HOD's desk

Dr. Aparna Bannore



Dear Reader,

I am delighted and congratulate the TECHNIZ team for their brilliant and original efforts. I sincerely thank everyone for submitting articles and contributing to the success of TECHNIZ. Without innovation, there would be no progress, and we would be forever repeating the same patterns.

This is an opportunity to appreciate the role of science, technology and innovation in the development of the country. I sincerely hope that all the articles will significantly contribute to the long term dream and to ensure that it benefits the development and improving quality of life.

I wish all the readers Best of Luck & a bright future ahead, filled with joy and success.

HOD-CE



Message from Faculty Incharge

Prof. Anindita A Khade

We are glad to introduce Issue 6 of the departmental magazine of Computer Engineering Department of SIES GST, Techniz. Techniz is all about technology that inspires students to do something, that leaves an everlasting mark in the world of technology. Thus, it is our job to ensure inspiring technological developments are being brought to the students of SIES GST, by the students and faculty members of SIES GST itself.

We retained most of the members from the previous issue team. Everything right from the collection of articles up to the final edits was quite smooth. We worked closely as team to ensure that everything was done according to the deadlines. The magazine was compiled and edited in professional manner. Thanks to the team of Techniz for their commendable efforts.

I would also like to thank each member of Techniz without whose support this would not have been possible. I hope that you all enjoy reading this magazine.

Journey from Classroom to Code – My Full Stack Story

- The Beginning: College Days and Learning the Basics

SIES GST is where it all began. The environment pushed me to explore, fail, and try again. Every project, coding contest, and discussion with faculty laid a solid foundation in logic and problem solving. While I didn't have all the answers then, my curiosity and willingness to keep learning carried me forward.

- Entering the Industry: Adapting and Growing

Starting my career as a junior developer, I quickly realized that the learning curve doesn't flatten after graduation—it steepens. I worked on real-world applications, collaborated with cross functional teams, and faced the pressure of deadlines and production bugs. Over time, I grew into a confident full stack developer who could see both the big picture and the tiniest code-level detail.

- Why Java and Spring Frameworks are Invaluable in IT:

- **Stability and Scalability:** Java is a time-tested, robust language that powers enterprise applications, banking systems, and large-scale platforms across the world.
- **Spring Boot simplifies Java development:** It reduces boilerplate code, autoconfigures many settings, and helps developers quickly create production-ready applications.
- **Secure and Reliable:** Spring Security is a powerful module that simplifies implementing authentication and authorization in applications, making Java-based systems highly secure.

- Microservices-ready: With Spring Boot and Spring Cloud, building distributed microservice architectures becomes much more manageable, scalable, and cloud compatible.
- Wide adoption in the industry: Many companies (startups to MNCs) use Java and Spring for backend systems, meaning there are ample job opportunities and community support.
- Ecosystem & Tooling: Java integrates well with tools like Maven, Jenkins, and Docker, making it a go-to choice for building and deploying enterprise software.
- Recently, I've been using GitHub Copilot, which has significantly boosted my productivity. It helps with writing boilerplate code, suggesting logical completions, and even catching potential bugs before I run the code. It's like having a smart coding partner by my side.

- What I've Learned

- Keep asking “why” – Understanding *whys* something works is more valuable than just knowing *how*.
- Use the right tools – Embracing tools like GitHub Copilot shows that leveraging AI can lead to better, faster code.
- Collaboration > Isolation – Software development is a team effort; communication and shared problem-solving are key.

- Advice for Current Students

1. Get your hands dirty: Build, break, fix, and repeat. Experience is the best teacher.
2. Stay updated: The tech world changes fast—follow trends, read blogs, and explore tools like GitHub Copilot early.
3. Master core concepts: Frameworks change, but clean architecture, logic, and debugging remain constant.
4. Document and share your work: Maintain a GitHub profile,

- Final Words

I'm truly thankful to SIES GST for nurturing the early version of who I am today. The learning continues every day, and so does the joy of building solutions that make a difference. To the budding developers out there—embrace curiosity, keep building, and never hesitate to try new things.

Happy coding!



How OpenAI cut short the MetaVerse



Gauri K.

2019-2023

Can you remember the glory days of yoyos and fidget spinners? Interestingly, although both managed to captivate the crowd, it was the impressive spinners who emerged as the leading scorers who got the most acclaim and won the approval of people of all age groups though why is it?

The secret lied in their accessibility and instant gratification. The allure of immediate enjoyment and the ease of use made fidget spinners the preferred choice for many over the yoyos.

While drawing a parallel on this fact of being extensively accessible, let's shed light on another.

ChatGPT achieves a remarkable milestone: Surges to 100 Million Users in merely 2 Months. Quite abuzz, even the Chinese video-making app TikTok took about nine months after its global launch to reach 100 million users.

As we dig deeper into the realm of Open AI thinking, it's important to compare the progress MetaVerse has made in its pursuit.

But despite its early forays into the industry, ChatGPT quickly emerged as a leader, grabbing significant usability and commanding unparalleled popularity like fidget spinners, while delivering a seamless delivery experience use, instant gratification and deep impact on individual lives to unprecedented heights, leaving competitors in with awakening.

It offers a wide range of applications, such as virtual conferences, immersive gaming, remote education, collaboration tools, virtual tourism, digital marketplaces and more. Tech giants like Facebook (now Meta) have committed themselves to its construction, allocating significant resources to its progress.

On the other hand, the need for AI tools stemmed from the desire to automate complex processes, improve decision-making and enhance human capabilities in various fields. With the advent of machine learning, deep learning, and other AI techniques, AI tools have gained unprecedented capabilities in areas such as image and speech recognition, natural language processing, and recommendation systems. Using AI equipment plays a major role in health, finance, transportation, manufacturing and entertainment.

To quote Albert Einstein, “Necessity is the mother of invention”. We saw possibilities in technology. But it only makes sense if it is MEANINGFUL and positively affects aspects of people’s lives and society.

The following qualities are definitely a few highlights of winning technologies over the years as well as driving innovations at Global Logic.

Firstly, these technologies exhibit purposeful functionality, serving a specific purpose and addressing genuine needs or problems. Most importantly, they prioritise the user experience. These technologies are designed to be intuitive, accessible, and inclusive, ensuring that individuals of varying backgrounds and abilities can easily adopt and benefit from them.

For instance, ChatGPT is renowned for its exceptional ease of use due to several key factors. The interaction with ChatGPT feels natural and conversational, resembling a typical conversation with another person, making it accessible to individuals without specialised technical knowledge. Another reason is its ability to understand and generate human-like responses. It can provide informative and relevant answers, offer suggestions, or engage in interactive discussions.

To the contrary, the MetaVerse often requires specialised equipment such as virtual reality (VR) headsets and powerful computing devices, which poses financial barriers. Additionally, it requires a level of technological proficiency that not everyone possesses.

It is quite queer to note that according to reports, only 58% of even Meta's own employees said they understood the company's Metaverse vision.

While MetaVerse can whisk you away to a virtual realm and create your digital doppelganger, ChatGPT can do something as easy as writing poems and jokes for you on the go! MetaVerse may be all about digital adventures, OpenAI is the buddy that's always ready to bring a smile to your face with a witty quip or a delightful rhyme.

But any technology can benefit from time. AI research and applications have been going on for decades, while the Metaverse is a relatively new concept still in its early stages of development. We have many challenges to deal with in the MetaVerse world. But it's misguided to categorise our long-term investment as a loss while we are within our initial phases of development.

As OpenAI's ChatGPT shines with its user-friendly interface and ability to bring smiles through humorous retorts and charming poetry, the MetaVerse continues its journey of development and exploration. However, privacy concerns persist, highlighting the need for responsible data practices and transparent policies for every technology.



THE DARK WEB: UNDERSTANDING THE HIDDEN INTERNET

Suvarna Chaure

The internet we use every day, known as the surface web, represents only a small part of the entire digital world. Beneath the surface lies the deep web and the dark web, lesser-known parts of the internet that are not indexed by search engines like Google or Bing. While the deep web includes harmless content like private databases, the dark web is often associated with secrecy and illegal activities.

- ***What is the Dark Web?***

*The dark web refers to websites and networks that require specific software, configurations, or authorization to access. Unlike the surface web, these sites do not appear in standard search results. Instead, they use encryption tools such as **Tor (The Onion Router)**, which anonymize users' identities and locations, allowing both website owners and visitors to remain anonymous.*

- ***How Does the Dark Web Work?***

The dark web operates on networks like Tor, which routes internet traffic through multiple layers of encryption.

This makes it nearly impossible to trace the origin or location of the traffic.

To access the dark web, users typically need:

1. ***Tor Browser:*** A special browser that allows users to visit onion sites.
2. ***VPNs:*** Virtual Private Networks to enhance privacy and security.

While the anonymity provided by the dark web has legitimate uses, it is also a haven for illegal activities, which is why it has gained a negative reputation.

- ***The Positive Uses of the Dark Web***

Contrary to popular belief, not all activities on the dark web are illegal. Some of its legitimate uses include:

- ***Privacy Protection:*** Journalists, activists, and whistleblowers use the dark web to share information securely in regions where freedom of speech is restricted.
- ***Anonymous Communication:*** Individuals concerned about surveillance can communicate without revealing their identities.
- ***Access to Information:*** Citizens in countries with strict censorship laws can access uncensored news and information.

- ***The Dark Side of the Dark Web***

Unfortunately, the anonymity of the dark web also enables various illegal activities, such as:

- ***Black Markets:*** *Sale of drugs, weapons, counterfeit documents, and stolen data.*
- ***Cybercrime:*** *Hacking services, malware distribution, and data breaches.*
- ***Human Trafficking:*** *Illegal trafficking and exploitation of individuals.*
- ***Illegal Financial Activities:*** *Cryptocurrency-based money laundering and fraudulent schemes.*

- ***Challenges for Law Enforcement***

Law enforcement agencies face significant challenges in monitoring and controlling the dark web due to its encrypted and decentralized nature. However, agencies worldwide are collaborating to take down illegal dark web marketplaces and prosecute offenders.

INNOVATIONS 2024

A National level Project Competition

Innovations is a national-level project competition conducted annually by the CSI Student Chapter of SIES Graduate School of Technology. It serves as a platform for young minds to take this window of opportunity and bring forward their innovative ideas in the form of projects. Every year, teams from various institutes all over India participate in Innovations in large numbers.

This year, the **12th edition of INNOVATIONS** was conducted on **23rd March 2024**. This year we received over 80+ abstract submissions out of which 40 abstracts were selected for the competition after carefully analyzing each project based on parameters such as novelty, effectiveness, positive impact on society, and scalability.

The projects were from various domains such as Computer, IT, Electronics, the Internet of Things, and Mechanics.

The chief guest for the Event was Mr. Sachin Rane, who is the President - Software Solutions & Services .

The Judges for the event were as follows:

Panel 1: Mr. Satish Jaiswal: Founder of Satish Foundation
Mr.Sridhar Ravimani: Software Engineer

Panel 2: Mr. Akhilesh Bhagwat: Founder at Graphologymadesimple
Mr. Nikhil Sabe: Software Engineer

This competition provided an opportunity for students to demonstrate their technical prowess and excellence in their respective domains. The participating teams proved that putting quality efforts gives fruitful results.

Winners:

Panel 1 - GST Auditorium

Position	Team Name	Name of Participants	Topic	College Name
Winners	Codecopter	Ayush Vora	Disaster surveillance Drone.	Shree Bhagubhai Mafatlal Polytechnic
		Aditya Hakani		
		Aryan Dandhukiya		
		Neel Parekh		
Runner-ups	Team SurakshaKara	Kanda Kumaran Murugan Thevar	Safeguarding Mines: A Smart Solution for Worker Safety	SIES Graduate School Of Technology
		Sathish Samudra Muthu Nadar		
		Aayush Umashankar Singh		
		Soham Harivijay Pavale		
Special Shout-Out	Neural_Net-Workers	Shruti Dalvi	RealityLens	Fr. C. Rodrigues Institute of Technology, Vashi
		Austin Paul		
		Ananth Balvalli		
		Gauri Jagtap		

Panel 2 - Seminar Hall

Position	Team Name	Name of Participants	Topic	College Name
Winners	S-BUFF	BHARAT RAO	AR Watch Try-On Application	SIES Graduate School Of Technology, Nerul
		KABIR RAO		
		MANAV HIREKURBURE		
		AMEY RANA		
Runner-ups	Sustainable Plastic bricks	Ashish Pandey	Investigating the Properties of Plastic Brick for Sustainable Development	Pillai HOC College of engineering
		Anish sahani		
		Prince singh		
		Nikita Chavan		
Special Shout-Out	Codein	Shridhar Iyer	Safe Yatra – A women's safety application	SIES Graduate School Of Technology, Nerul
		Aahana Bobade		
		Pawan Kamat		

ENIGMA

A National level Poster Presentation Competition

Enigma 2.0, a National Level Poster Presentation Competition organized by CSI Student Chapter of SIES GST was conducted on the 27th of January 2024. The Poster Presentation Competition's main goal is to raise public awareness about digital security and digital security. With increasing use of the Internet, people's lives have taken on a new dimension. People have learned to be robust, self-reliant, and sensitive to the human race throughout these times.

We received over 50 abstract submissions out of which 21 abstracts were selected for the competition after carefully analyzing each abstract idea based on the theme of digital security and the parameters such as Quality of theme/concept selected, Societal Influence, Organization of abstract and Inspiration behind the theme.

We were honored to welcome Dr. Suresh A. Shan, the Chairman of the CSI Mumbai Chapter, as our esteemed chief guest at the event. Alongside him, we were privileged to have Mr. Azhad Shaikh, a Jai Hind college graduate and the owner of Axximum InfoSolutions Pvt. Ltd., and Dr. Mahendra Gupta, the Founder and CEO of ME Educational Technologies and Consultancy Services, as our distinguished judges. Their presence added immense value and expertise to the occasion, enriching our event and contributing to its success.

This competition provided an opportunity for students to demonstrate their technical process and excellence in the domain of Cyber Security. The participating teams proved that putting quality efforts gives fruitful results.

WINNERS

1. Vaishnavi Satyavijay Parab →Winners
2. Shravani Tejrao Mankar & Prathamesh Zingade → Runner-Up

Parent Articles

Self-Discipline

Self-discipline is the ability to push yourself forward, stay motivated, and act, regardless of how you are feeling, physically or emotionally. You are showing it when you intentionally choose to pursue something better for yourself, and you do it in spite of factors such as distractions, hard work.

Self-discipline is different from self-motivation or willpower. Motivation and willpower contribute to it, as do persistence, the ability to follow through on your intentions, and hard work.

The Benefits of Self-Discipline

Self-discipline can boost your well-being and outcomes in many different areas of your life. It can:

- 1. Help you to achieve goals.** Self-discipline people are more likely to commit to, and reach, important long-term life goals.
- 2. Improve your mental health.** People practicing self-discipline report higher levels of self-confidence, happiness, and independence. Researchers have also found that self-discipline eases anxiety.
- 3. Improve learning and enhance performance.** Studies have shown that students with a high degree of self-discipline retain more knowledge than those without self-discipline. Additionally, researchers discovered that students with strong self-discipline are more careful in their tasks, which improves their performance.

How to Develop Self-Discipline

Self-discipline is like a muscle: the more you work on developing it and using it, the stronger it will become.

However, it is just as important not to start out with goals that are too ambitious. Instead, set small goals, and increase the level of challenge slowly

over time. The more you practice, the better you will become.

1. Choose a Goal

Begin by choosing just one goal that you want to focus on to develop your self-discipline.

Remember, starting small is the best way to start developing your self-discipline. As your discipline gets stronger, you can spread the focus to more areas of your life.

Make sure that the goal you set is SMART – Specific, Measurable, Attainable, Relevant, and Time-bound – and break the goal down into smaller sub-goals, where you can.

2. Find Your Motivation

Once you have chosen a goal, list the reasons why you want to achieve it. Try to express these reasons in a positive way.

When you list the reasons why you want to achieve something, you will find it much easier to get the job done.

3. Identify Obstacles

Now you need to identify the obstacles that you will likely face when working toward your goal, and devise a strategy for overcoming each one.

Often our self-discipline crumbles because we have not identified the obstacles that we will face, and we have not developed strategies to overcome them. When these obstacles show up, we are unprepared to deal with them, and this shakes our resolve. Do not skip this step!

4. Replace Old Habits

When we are developing self-discipline, we are often trying to break a bad habit and replace it with something more productive. However, if that habit is tied into a certain time of day or routine, breaking it can leave a hole. If we do not replace that habit with something else, then its absence becomes even more noticeable.

Once you have resolved to stop, identify a new behaviour that you can engage in when you need a quick break. These behaviours will help to support your goal and strengthen your self-discipline, instead of leaving you with nothing to do on your break.

5. Monitor Your Progress

As you work on your self-discipline, pay attention to how you are feeling as it develops and strengthens. You might feel free, happy, proud, and energized.

Also, think about keeping a journal to write down your self-discipline goals and to track your progress. This reinforces the positive changes that you are implementing in your life, and gives you a record that you can look back on to see the progress that you have made.

Self-discipline is an essential quality, and it is a key differentiator between people who are successful in life and those who are not.

Do not let a fear of failure or an occasional setback discourage you. All of us experience setbacks and failures – they are parts of life! Acknowledge that you slipped up, learn the lesson, and move on.

- SANGEETHA
Parent of SOURISH KANNA SANGEETHA
Batch 2022-26

Student Achievements

SPORTS ACHIEVEMENTS

Sr. No.	Name	Achievement	National/Zonal
1	Purva Ambre	won Badminton	MU zonal
2	Naikar Madhavan	3rd Rank in Elocution	MU zonal
3	Hirekurbure Manav	3rd Place in Chess	Thane Zonal
4	Abiram Nair and Aryan Chalke	3rd Place in Volleyball	MU zonal
5	Akshay Kumar	3rd place in Football	MU zonal

TECHNICAL ACHIEVEMENTS

Sr. No.	Name	Achievement	National/Zonal
1	Devdatta Temgire,Dhruv Shetty,Pranjal Patil	NIC internship	Zonal
2	Aakash Ghadge,Mohak,Fahad Nawaz	Participated	ENIGMA 2.0 National Level Project Presentation Competition
3	Faizan Kalam	Participated	ENIGMA 2.0 National Level Project Presentation Competition
4	Madhavan Naikar	Participated	ENIGMA 2.0 National Level Project Presentation Competition
5	Rohan Wandre	Participated	Rajasthan Zone

Acknowledgement

We would like to extend our sincere gratitude to our management for constant support. We would also like to thank our Principal, Dr. Lakshisudha K. for his constant encouragement.

We would also like to thank our HOD Dr. Aparna Bannore, Faculty Incharge, Prof. Anindita Khade for her support and motivations, shaping Techniz and make this magazine a success.

Lastly we would like to thank all the faculty members, students, alumni and all stakeholders for their valuable inputs and contributing for the final shape of the magazine.

*The Editorial Board
- Techniz*