



Information
Science and
Engineering



GOPALAN
COLLEGE OF ENGINEERING
AND MANAGEMENT
Whitefield, Bengaluru



Our Student Clubs

THE ISE TIMES

Version 25.1

BREAKING NEWS

The **Department of Information Science & Engineering** proudly presents its very own newsletter “**The ISE Times**” This is your one-stop window into everything that happens in our department from the latest achievements and events to stories that celebrate our journey together. But that’s not all! Each issue also comes packed with exciting challenges, brain-teasing puzzles, and fun activities to keep your minds sharp. Published quarterly, “**The ISE Times**” is more than just a newsletter, it’s a reflection of our vibrant **ISE** community.



Introduction of a new club

Pixora Vista - Where Every Pixel Tells a Story

A new home for creativity, where students capture moments, tell stories through frames, and showcase their unique perspectives. Every pixel tells a story.



The **Department of Information Science & Engineering (ISE)** is more than just a place of learning—it’s a family where ideas grow, creativity thrives, and dreams take shape. Here, every student is encouraged to think differently, explore new possibilities, and turn challenges into opportunities.

From classrooms to clubs, from projects to events, **ISE** is a space where knowledge meets innovation and friendships turn into lifelong bonds. Together, we don’t just prepare for the future, we create it.

- OUR ACHIEVERS -

4th Semester



Aleena herold Peter

SGPA - 9.5



Prathiksha Joshi

SGPA - 9



Thany Aiyappa T

SGPA - 8.95

2nd Semester



Bindhu Shri M

SGPA - 8.93



Ankitha Shetty V

SGPA - 8.88



Ritkriti J

SGPA - 8.88



Chaitra

SGPA - 8.73

• TIPS TO BECOME AN ACHIEVER •

- ★ **Set Clear Goals** – Define what you want to achieve each semester and work with purpose.
- ★ **Manage Your Time Wisely** – Create a study plan and balance academics with rest.
- ★ **Stay Consistent** – Small daily efforts matter more than last-minute studying.
- ★ **Ask & Explore** – Never hesitate to ask questions and go beyond textbooks.
- ★ **Take Care of Yourself** – Good sleep, exercise, and health fuel better learning.
- ★ **Engage in Group Learning** – Discuss with peers; teaching and learning together sharpens understanding.
- ★ **Keep a Growth Mindset** – Treat failures as lessons and stay motivated to improve.



- HEARTLY WELCOME TO -

Our Beloved Faculty

We are thrilled to have our brilliant mentors guiding us through another exciting quarter at ISE. Your insights, guidance, and support shape the journey of every student, helping us grow not just academically, but as innovators and thinkers.

This newsletter is our way of celebrating the vibrant energy you bring to our classrooms, the creativity you inspire in us, and the wisdom you share so generously. And just so you know, we're watching, learning, and maybe even taking notes... but mostly, we're excited to make you proud this quarter!



Dr. Madhusmita Das

*B.Tech, M.Tech, Ph.D,
Assistant Professor, Dept. ISE*

Madhusmita Das, a **Ph.D. scholar** at NIT Karnataka, Surathkal, focuses on reliability assessment of safety-critical systems using machine learning and bio-optimization algorithms. Formerly an Assistant Professor, she has made notable contributions in software defect prediction, drone system reliability, and formal verification. Recognized with the provisional “**Best Researcher Award**,” her work continues to inspire students and advance practical research solutions.



Ms. Sreelatha M

*B.Tech, M.Tech,
Assistant Professor, Dept. ISE*

Sreelatha says - Engineering is not just about machines and codes, it is about shaping the future with imagination and logic. “**An engineer sees problems as opportunities to create solutions that change lives.**” Innovation begins where curiosity meets engineering. Engineering is the art of turning dreams into reality with precision and passion. The world moves forward because engineers dare to design beyond limits.

“ Education is not the learning of many facts, but
the training of the mind to think ”



- CLOUD COMPUTING -



Cloud computing is the delivery of computing services over the internet ("the cloud"). These services include storage, processing power, databases, networking, software, analytics, and more accessible on demand and pay as you go.

In contrast to traditional on-premises IT (where organizations buy and maintain their own servers and software), cloud computing replaces large upfront investments.

INDUSTRIAL TALK SERIES ..

During the first session of the Industrial talk series, **Mr. Pravin Pannerselvam** was invited to talk about Cloud Computing to the students of ISE and CSE.

Mr. Pravin covered key topics on Cloud Computing and Networking, focusing on his experience with AWS, Google Cloud, and Microsoft Azure. He provided insights into various types of cloud services, such as **Platform as a Service (PaaS)**, **Software as a Service (SaaS)**, and **Infrastructure as a Service (IaaS)**.



Additionally, he discussed cloud security and the different subscription models available on platforms like Amazon. The talk was informative and inspiring for the students, offering them insights into Cloud Computing as a viable and exciting career path in IT

• ANALOGY •

Imagine you have a toy box at home.

You can only play with the toys in your box, and if you want more space, you need a bigger box.

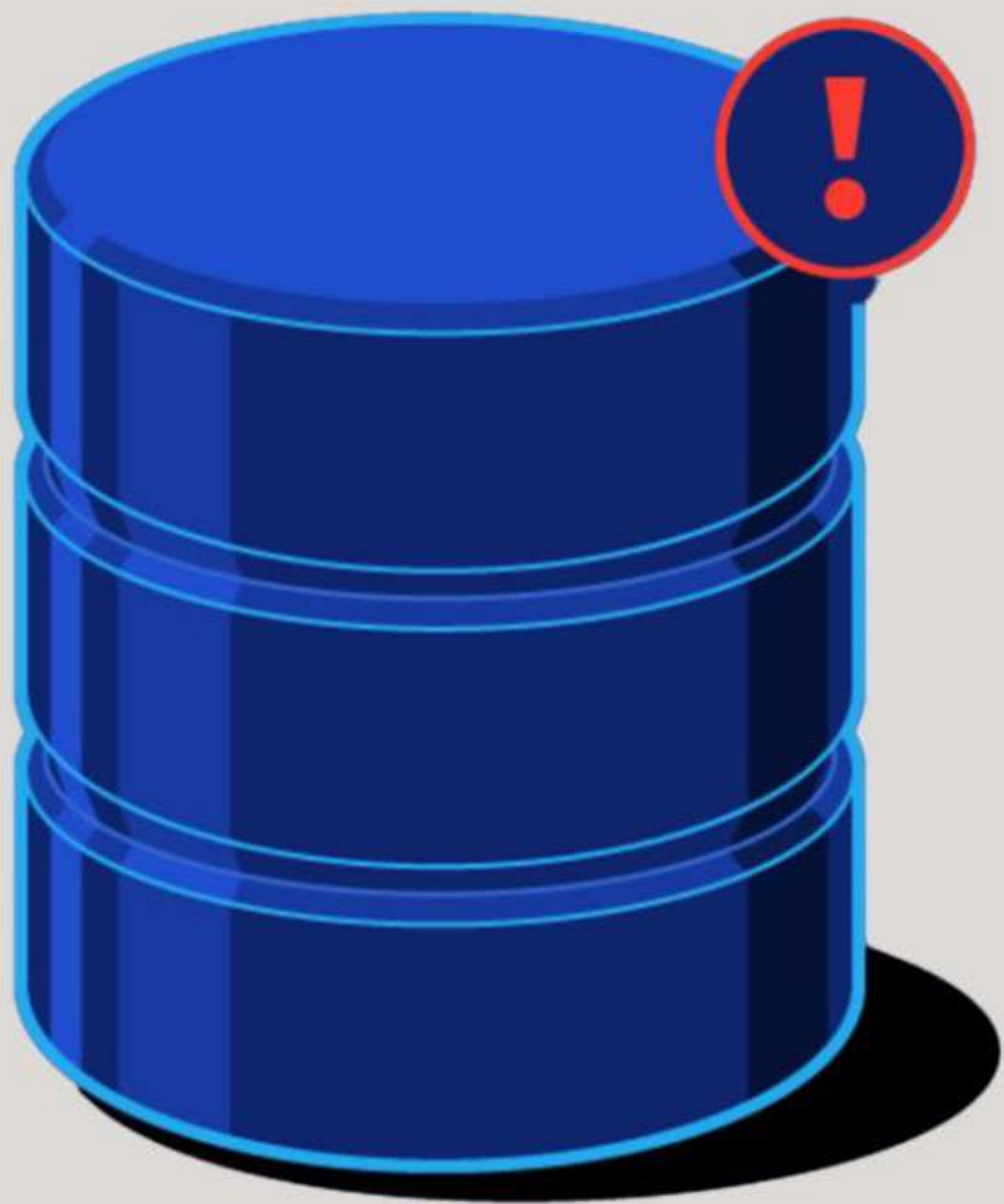
But now, imagine there's a huge toy library in your town. You don't have to keep all the toys at home. You can go to the toy library, borrow any toy you want, and return it when you're done. You can even use their space to play with toys you don't have!

Cloud computing is like that toy library.

Instead of storing all your games, pictures, or files on your personal computer (your toy box), you can use the cloud (the toy library) to store and use them anytime from anywhere, just using the internet.



• TYPES OF CLOUD SERVICES •

 IAAS <i>(Infrastructure as a Service.)</i> The provider supplies raw computing infrastructure 3 virtual machines, networking, and storage 3 which users manage like a data center. Users install their own operating systems and applications on leased servers. IaaS allows businesses to rent computing power and storage without owning hardware, and to scale resources up/down quickly.	 PAAS <i>(Platform as a Service)</i> The provider offers a development platform and environment to build, test, and deploy applications. This includes middleware, development tools, and database management. PaaS abstracts server management so developers can focus on writing code.	 SAAS <i>(Software as a Service)</i> The provider delivers fully functional software applications over the Internet, on a subscription basis. Users run the software via a web browser without installing it locally. SaaS removes all infrastructure and platform responsibilities from users
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• GLOBAL HISTORY •

AWS, Microsoft Azure, and Google Cloud Platform (GCP) are the leading cloud infrastructure providers

In late 2024, AWS held roughly 30% of the worldwide cloud infrastructure market, followed by Azure at ~21% and Google Cloud at ~12%. Combined, these top three accounted for about 68% of the global market.

The global cloud market has been surging: total spending on cloud infrastructure services reached about \$331 billion in 2024, up 22% from 2023.



• CLOUD COMPUTING IN INDIA •

MUMBAI has emerged as a global data center hub, ranking 6th worldwide in terms of under-construction capacity, surpassing traditional centers like London and Dublin.

Navi Mumbai is now the third-largest data center market in the Asia-Pacific region, with a total capacity exceeding 2,337 MW.



MICROSOFT plans to invest \$3 billion over the next two years to enhance its cloud and AI infrastructure in India, including expanding Azure services and establishing new data centers.

AWS has announced a significant investment of \$12.7 billion into its cloud computing segment in India by 2030, aiming to contribute \$23.3 billion to India's GDP and create over 131,000 full-time jobs annually.



RBI plans to launch a pilot program in 2025 to provide affordable local cloud data storage to financial firms, aiming to enhance data sovereignty and offer cost-effective solutions to smaller banking and financial services firms.

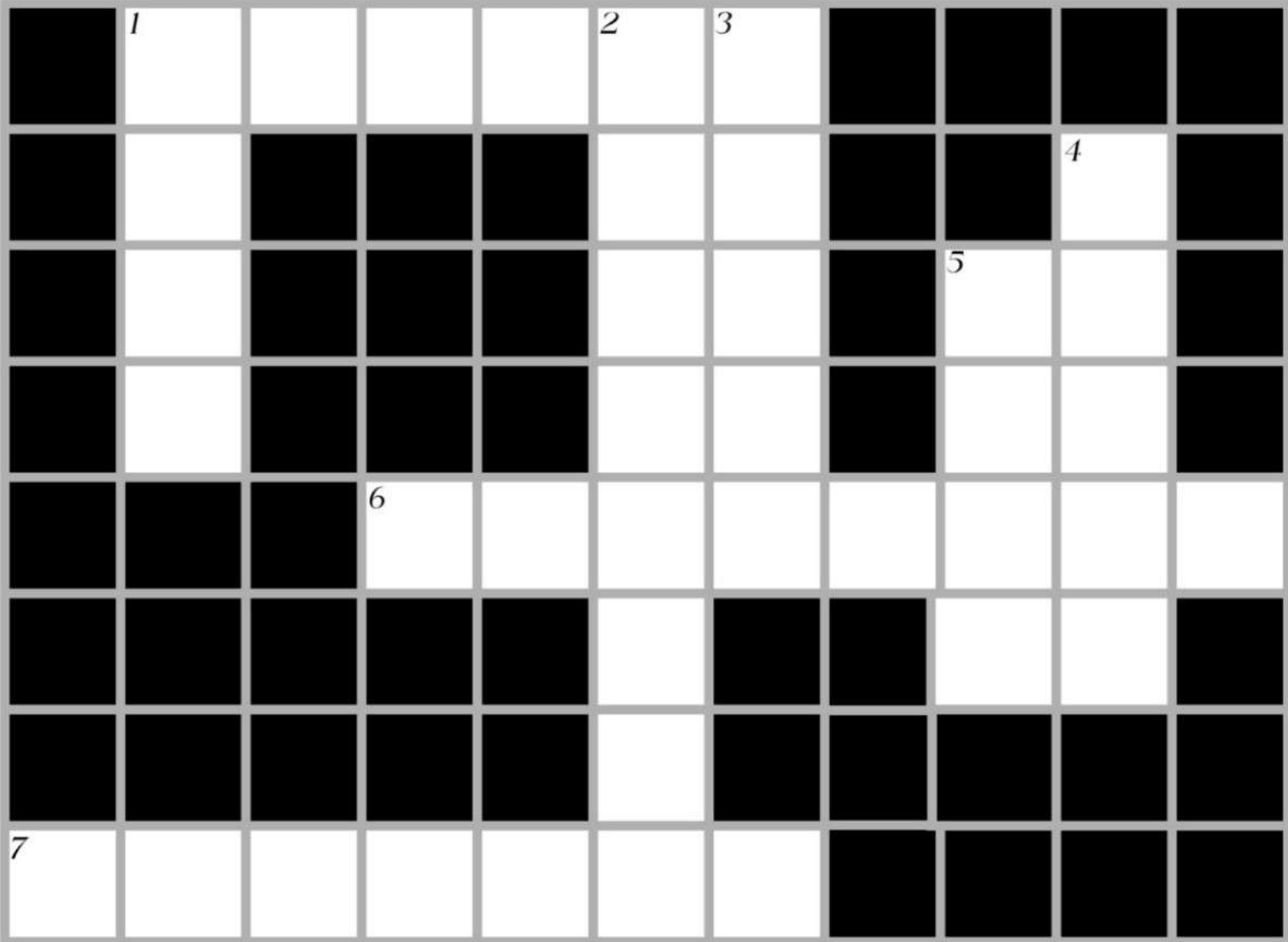
• CLOUD-BASED JOB ROLES •

- 1. **Cloud Solutions Architect** – Designs and plans cloud infrastructure, ensuring scalability, reliability, and cost-efficiency.
- 2. **Cloud Developer / Cloud Application Developer** – Builds and deploys applications specifically for cloud platforms.
- 3. **DevOps Engineer / Cloud DevOps Engineer** – Automates deployments, manages CI/CD pipelines, and ensures smooth cloud operations.
- 4. **Cloud Security Engineer** – Protects cloud systems, manages access, and ensures data security and compliance.
- 5. **Cloud Data Engineer** – Manages cloud-based data pipelines, storage, and ETL processes for analytics and AI/ML.



- ACTIVITIES -

CROSSWORD



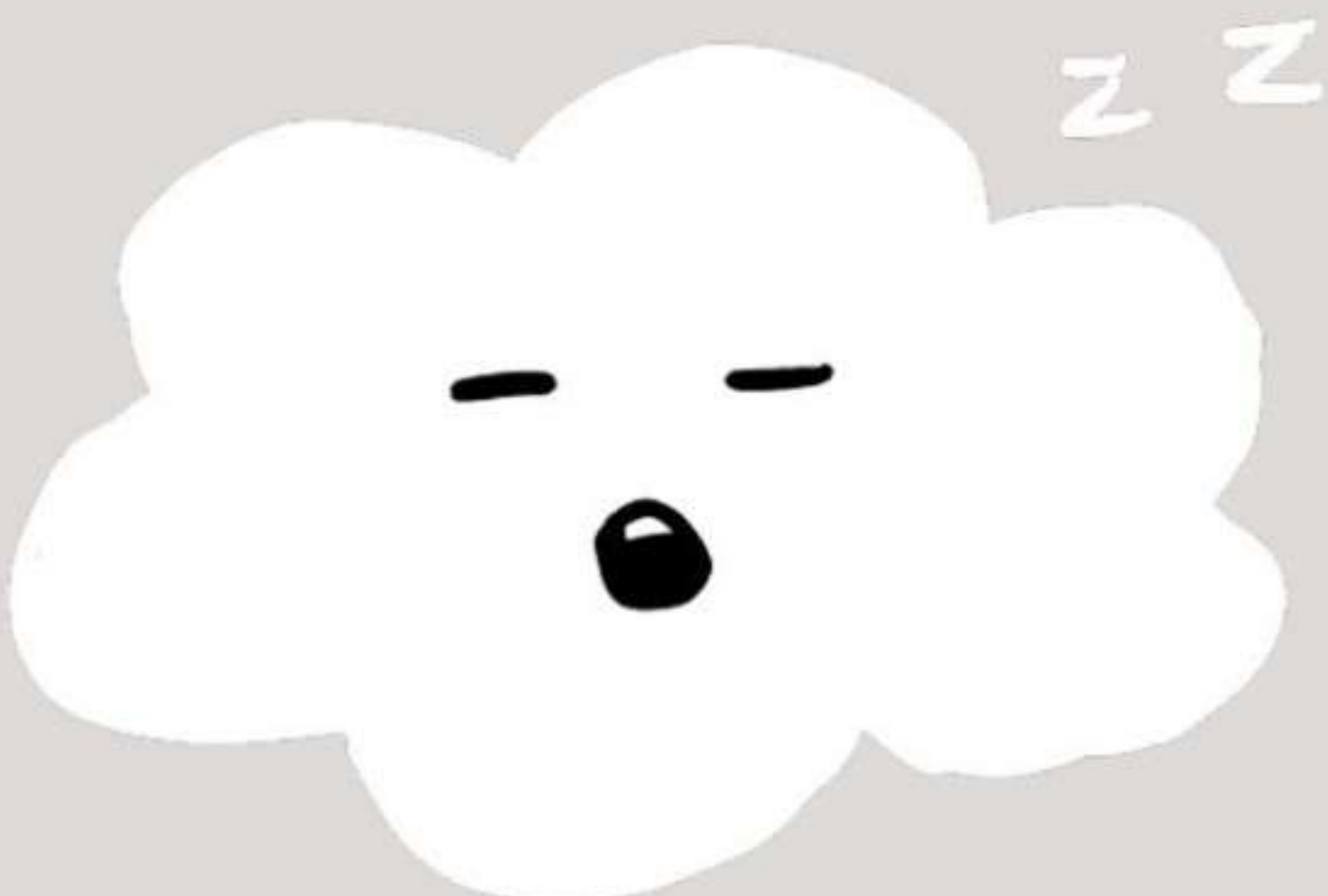
ACROSS

- 1. A cloud service model that provides a ready-made environment for app development
- 6. Cloud computing saves money because it doesn't require this
- 7. Cloud model used by one organization

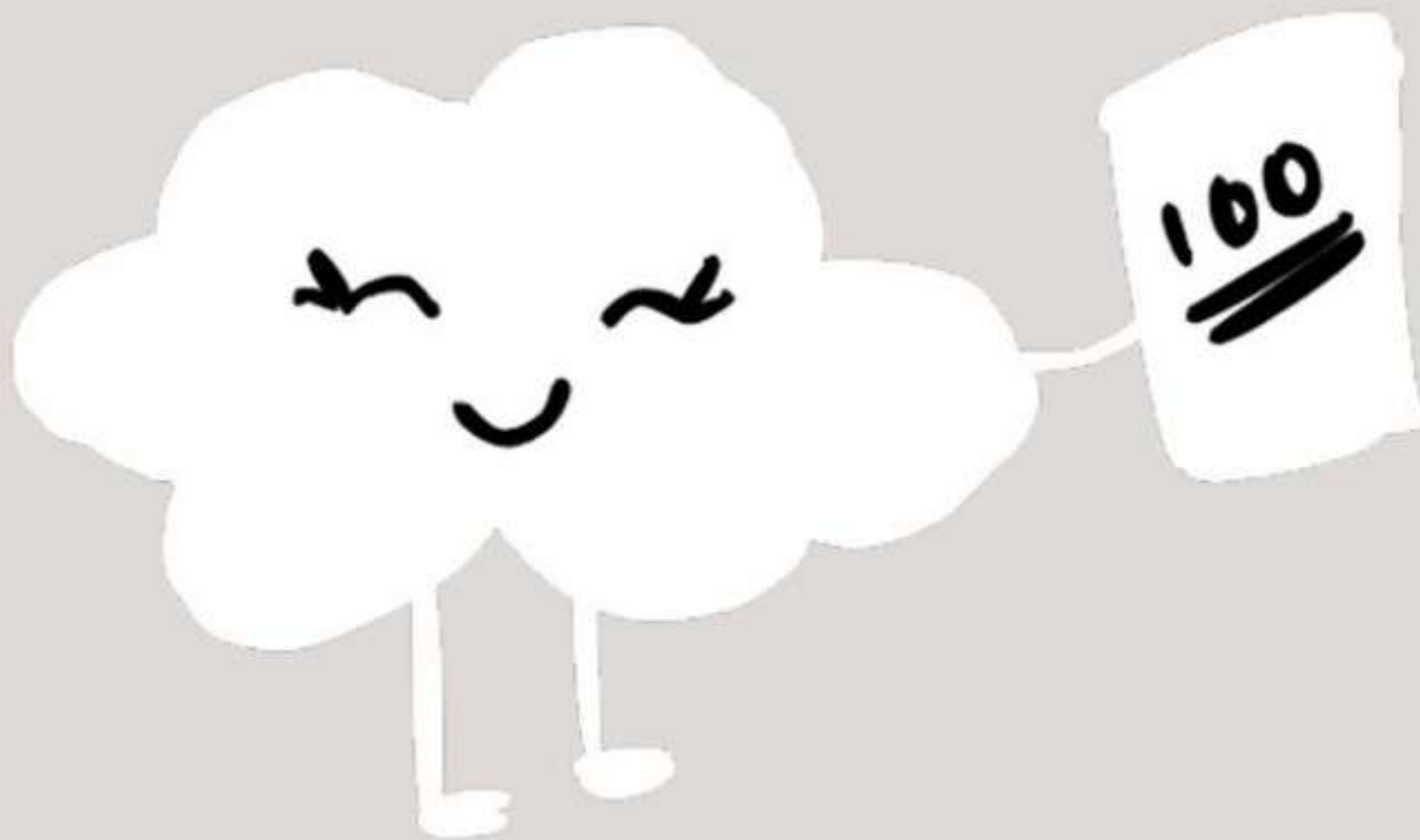
DOWN

- 1. Type of cloud that is open to everyone
- 2. Used to connect to the cloud
- 3. Storing and accessing data over the Internet
- 4. Microsoft's cloud platform
- 5. A service model that provides ready to use applications

What do you call a lazy cloud server?
A Slacker-as-a-Service



Why did the cloud carry the umbrella?
In case of a data storm



Why did the cloud student ace the test?
Because it had everything cached!

ROOM FOR THOUGHT

Write down a thought you'd like to save in your memory Cloud!



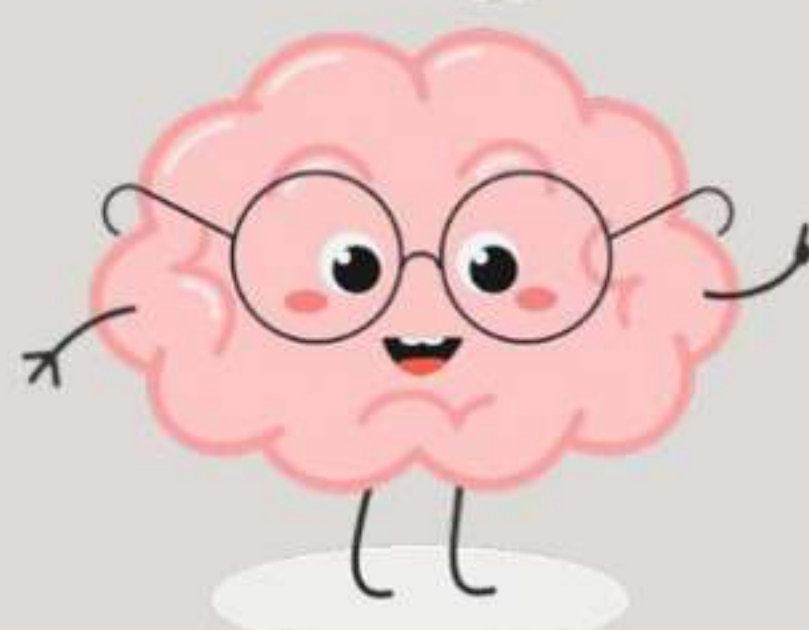
SCRAMBLE

Unscramble the given words and using the bubbled letters, unscramble the word to the quote.

- ASSBETAAD
- UODLC
- NSLAIGC
- ISURTYEC

“

one cloud obliterate the whole sky.”
(4, 3)



- GENERATIVE AI -

Shaping the Future of Work and Innovation

What is Generative AI?

Generative AI (GenAI) is the technology behind tools like ChatGPT, DALL-E, and MidJourney, which can create text, images, music, and even code with minimal human input. Unlike traditional AI, which only analyzes data, GenAI learns patterns and generates brand-new content—making it one of the most disruptive technologies of our time.

Opportunities vs. Challenges

Opportunities: Startups and freelancers are making money using AI-powered tools for design, content creation, and automation. Productivity has never been higher.

Challenges: Routine jobs like basic content writing, entry-level coding, and design are at risk. Many fear replacement, but the truth is, AI is more likely to change jobs than completely remove them.

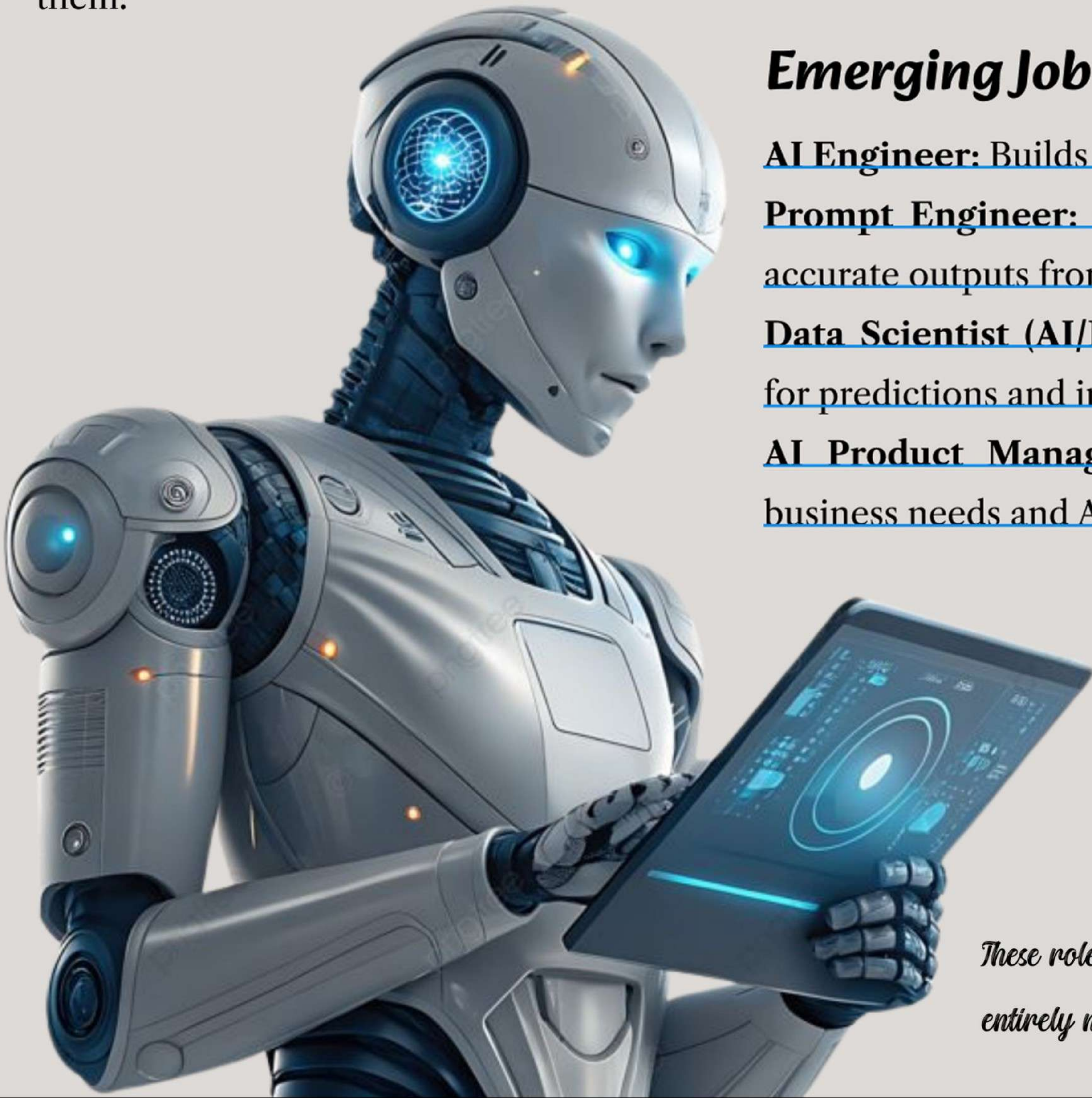
How GenAI is Transforming Industries

- Healthcare:** AI models are accelerating drug discovery, improving diagnostics, and personalizing treatment plans.
- Education:** AI tutors, smart content creation, and interactive learning platforms are reshaping classrooms.
- Business & Marketing:** From AI-driven chatbots to instant content creation and design, GenAI is boosting efficiency and reducing costs.
- Entertainment & Media:** Entire artworks, films, and even songs are being produced with AI collaboration.

Emerging Job Roles in GenAI

- AI Engineer:** Builds and deploys GenAI models.
- Prompt Engineer:** Crafts effective prompts to get accurate outputs from AI tools.
- Data Scientist (AI/ML):** Uses advanced algorithms for predictions and insights.
- AI Product Manager:** Bridges the gap between business needs and AI solutions.
- AI Trainer/Annotator:** Improves AI accuracy by training datasets.
- AI Ethics Specialist:** Ensures fairness, transparency, and responsible use of AI.

These roles show that while some jobs are changing, entirely new career paths are emerging.



- GENERATIVE AI -

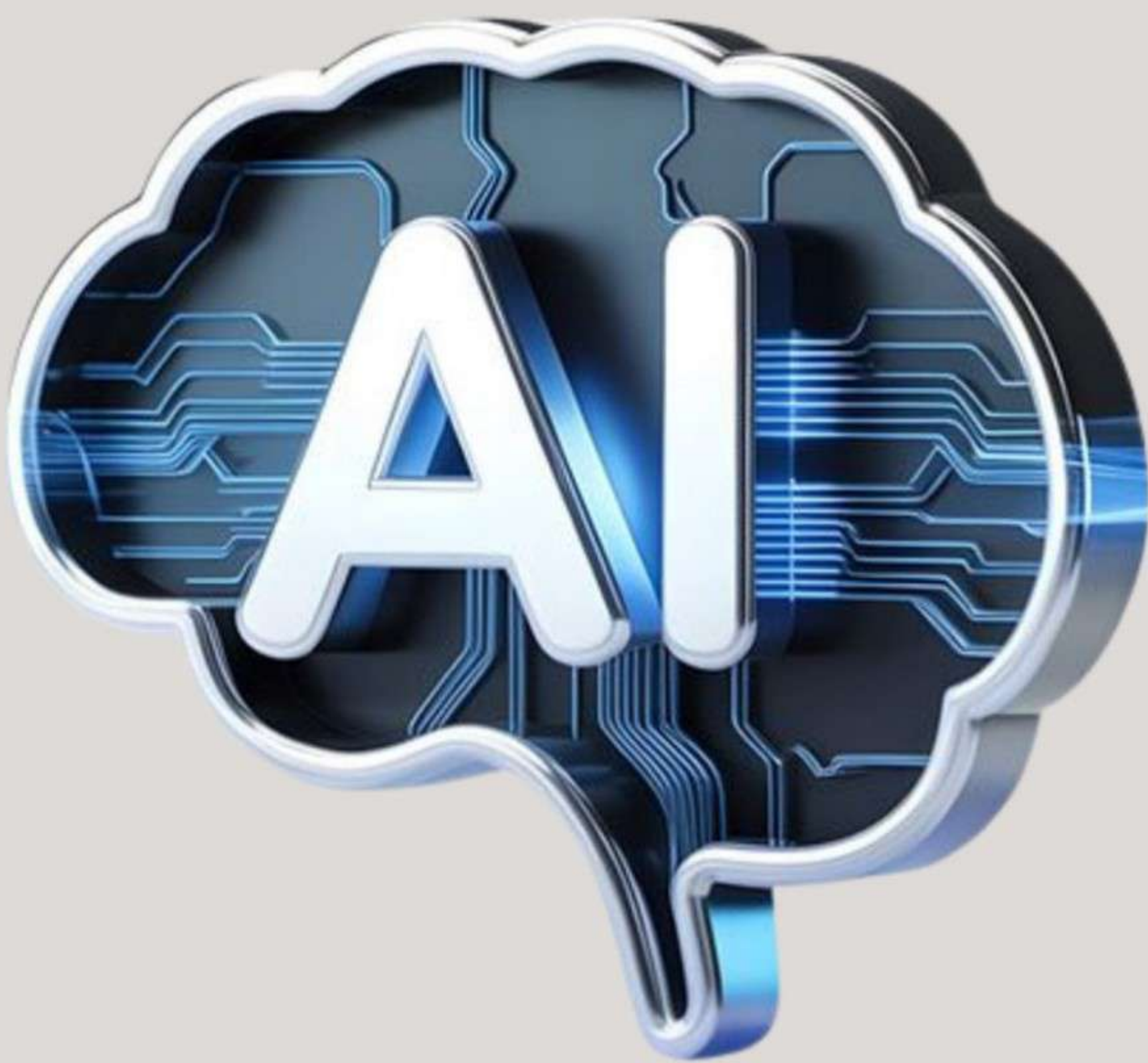
Shaping the Future of Work and Innovation

The Future of GenAI

The scope of GenAI is massive. Future careers will include AI auditors, explainability experts, AI security specialists, and AI policy makers. Industries from healthcare to space exploration will see explosive growth powered by this technology.

For students and young professionals, learning AI tools, data analysis, and prompt engineering today can open doors to tomorrow’s most in-demand jobs.

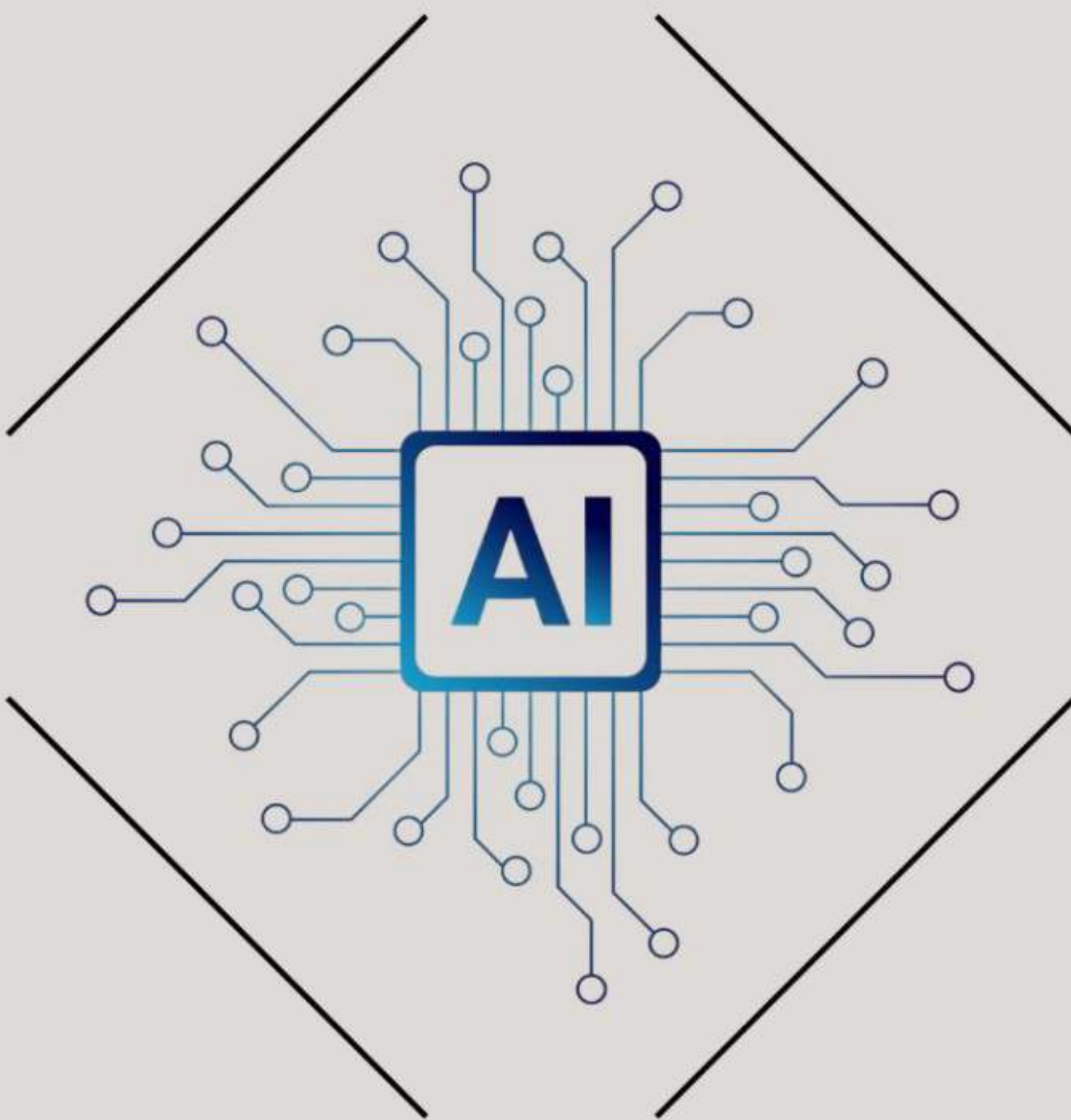
Generative AI is not just changing how we work it’s redefining what work itself means.



• HUMAN VS AI •

Human

- Brings imagination, emotions, and cultural context.
- Works with limits of time and focus.
- Learns from experience, adapts to new environments, and understands ethics.
- Considers logic, intuition, and moral values.
- Faces challenges of replacement in repetitive tasks.



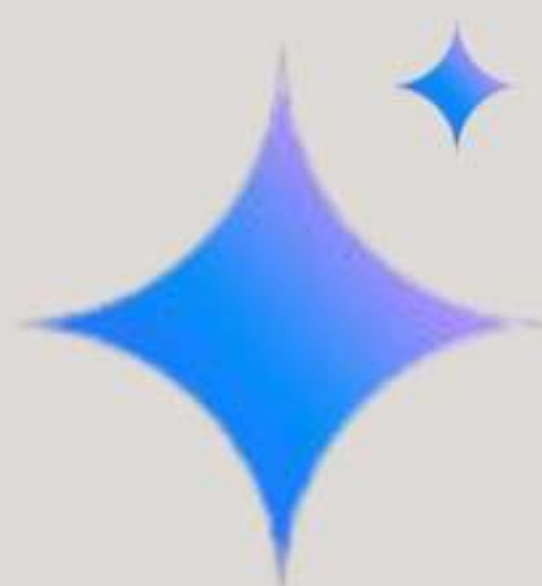
AI

- Generates endless variations but lacks originality and true emotion.
- Produces text, images, and code in seconds.
- Adapts only within the data it is trained on.
- Relies purely on data patterns—fast but not always ethical.
- Creates new roles but also disrupts traditional careers.

Generative AI in Big Companies: A Game-Changer

Generative AI is no longer just a tech buzzword it’s transforming the way global companies work. Big names like Google, Microsoft, Amazon, and Adobe have already integrated AI into their core products. Microsoft, for instance, has revolutionized productivity with Copilot in Word, Excel, and Teams, allowing employees to automate reports, summarize meetings, and even generate presentations in seconds. Google has added AI-powered tools into Gmail and Google Docs, reducing hours of manual work.

In the creative world, Adobe introduced Firefly, helping designers generate images, templates, and even marketing campaigns at lightning speed. Meanwhile, Amazon uses AI to optimize its logistics and customer support, cutting costs while improving efficiency.



- RECENT BIG TECH & INDUSTRY NEWS -

OpenAI  databricks Databricks & OpenAI Partnership: Databricks is partnering with OpenAI to bring OpenAI’s models (including the upcoming GPT-5) into its cloud platform Agent Bricks, targeting enterprise applications. This puts Databricks in stronger competition with other cloud/AI platforms.		 Alibaba Releases Qwen3-Max: Alibaba launched its new AI model, Qwen3-Max, which has over 1 trillion parameters. It shows strong performance on tasks like code generation and autonomous agent capabilities.	 Nvidia’s Huge Investment into OpenAI: Nvidia is planning to invest around \$100 billion into OpenAI, including supplying AI chips and building large scale AI datacenter infrastructure. This positions Nvidia very strongly in the AI infrastructure space.
 TCS Layoffs Signal AI Restructuring: Tata Consultancy Services (TCS) in India announced cuts of about 12,000 employees the biggest for the company so far. While they say some of it is due to skill mismatches, many see this as part of a larger shift in the outsourcing/IT sector driven by AI automation and changing client demand.		 AWS Urged to Speed Up Product Rollouts: Amazon Web Services’ CEO Matt Garman expressed concerns about slow product rollouts ahead of their major conference (Re:Invent 2025), emphasizing that delay in developing and launching full featured products can dampen customer interest. Also, AWS is under pressure to accelerate its generative AI capabilities.	
 Google Facing EU Antitrust Action: Google is likely to receive a fine under the EU’s Digital Markets Act (DMA) for allegedly favoring its own services (like Shopping, Hotels, etc.) in search results over competitors, which is being seen as violating new competition law.			
 Samsung Brings AI-Home to India: Samsung has launched its “AI Home: Future Living, Now” ecosystem in India, which aims to integrate its appliances, devices, and services into one smart, connected living system.		 Nothing’s Sub-brand Becomes Independent: The startup Nothing has made its affordable devices sub-brand “CMF” into an independent subsidiary, based in India, to scale globally in the budget/tech segment.	

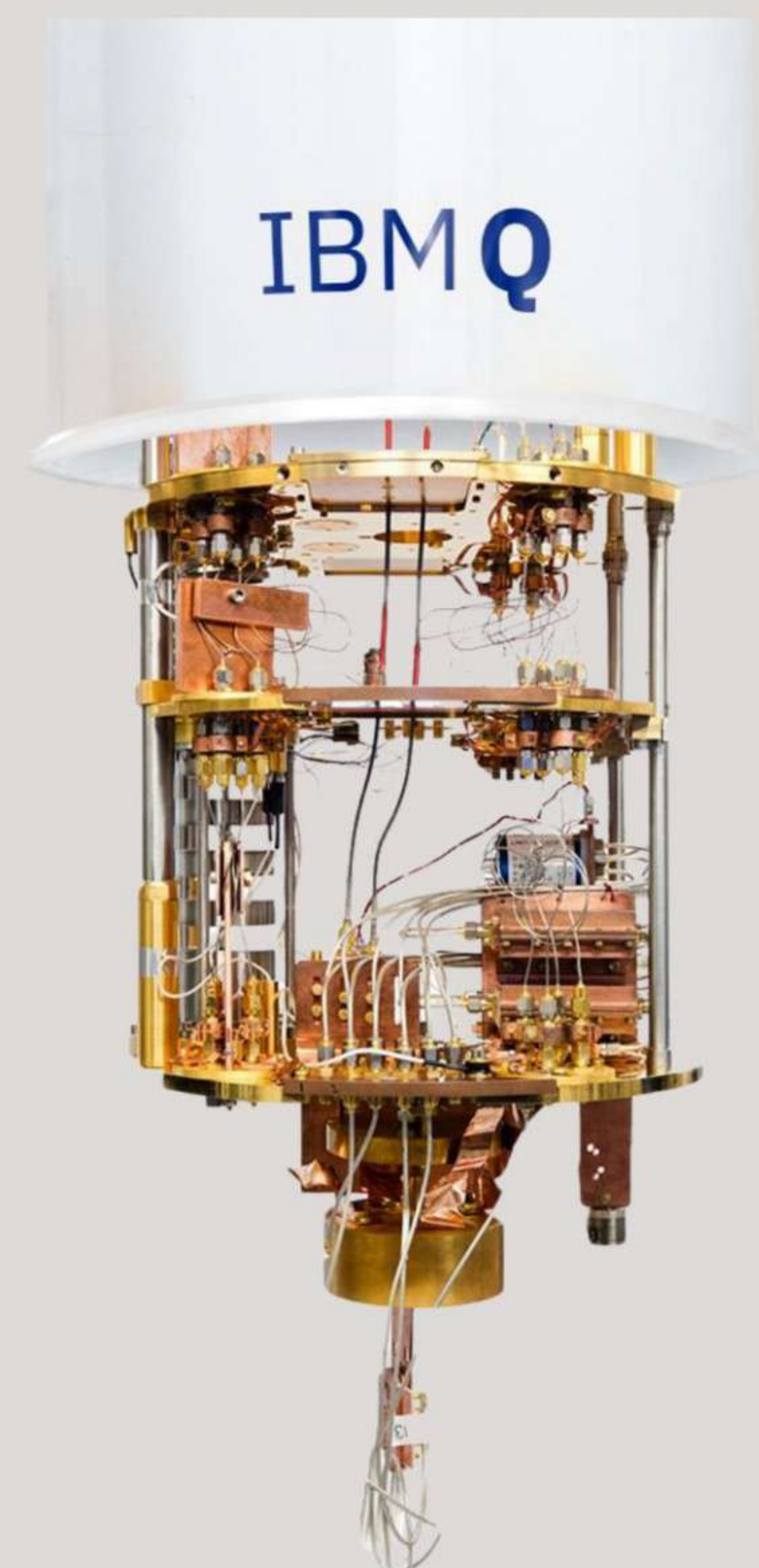
- TECH TRENDS 2025 -

Shaping the Future

Quantum Computing

Quantum computing uses quantum bits (qubits) instead of traditional bits, enabling calculations at unimaginable speeds. Industries like pharmaceuticals, finance, and logistics are already experimenting with quantum solutions to solve problems that classical computers can't. For example, quantum algorithms can optimize supply chains, model complex molecules for drug discovery, and break traditional cryptography. Companies like IBM, Google, and Rigetti are investing heavily, and India is also advancing its own quantum computing research programs.

Career Angle: Quantum algorithm developers, quantum hardware engineers, quantum software developers, and quantum cryptography experts.



Extended Reality (XR: AR + VR + MR)

Extended Reality combines Augmented Reality (AR), Virtual Reality (VR), and Mixed Reality (MR) to create immersive experiences. Beyond gaming, XR is revolutionizing:



- Healthcare: VR surgical simulations, AR-guided procedures
- Education: Virtual labs and interactive learning experiences
- Industry & Manufacturing: Training workers safely in hazardous environments
- Retail & Marketing: AR try-ons for products or virtual showrooms

The rise of the Metaverse is pushing XR into daily life, combining work, socializing, and entertainment in one digital ecosystem.

Career Angle: XR/VR developer, 3D modeler, UX designer for immersive environments, AR/VR hardware engineer





5G & Beyond (6G on the horizon)

5G networks are changing connectivity, offering ultra fast speeds, low latency, and massive device connectivity. This enables real time IoT, autonomous vehicles, and smart cities. Meanwhile, 6G research promises even faster speeds, AI integrated networks, and fully connected ecosystems with almost no delay.

Applications:

- Smart factories with AI-driven automation
- Telemedicine and remote surgeries
- Autonomous drones and smart vehicles

Career Angle: Network engineers, IoT specialists, 5G/6G protocol developers, wireless system architects.

Green Tech & Sustainable Computing

Technology is moving toward sustainability. Companies are investing in green data centers, AI models optimized for energy efficiency, and renewable powered cloud services. Reducing the carbon footprint of tech is not just ethical, it's becoming a business necessity.

Career Angle: Sustainable IT consultant, energy-efficient software developer, green data center engineer, climate-focused AI researcher.



Examples:

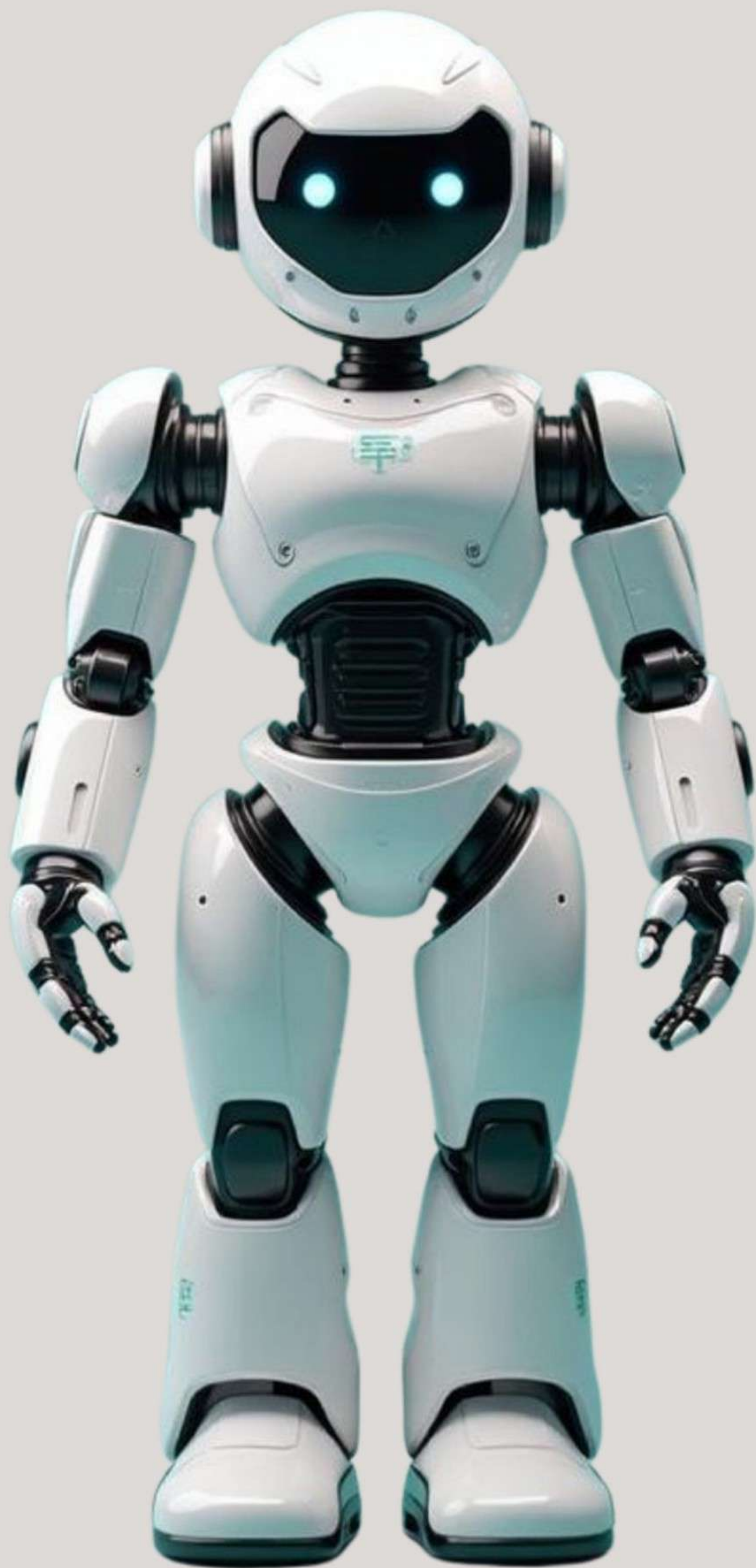
- Microsoft aims to be carbon negative by 2030
- Google powers its data centers with renewable energy
- AI is being used to optimize energy consumption across industries



Cybersecurity with AI

As cyber threats grow more sophisticated, AI-powered cybersecurity helps detect vulnerabilities, prevent fraud, and respond in real time. AI analyzes massive datasets, predicts attacks, and automatically counters threats faster than humans could.

Career Angle: AI security analyst, ethical hacker, threat intelligence analyst, cybersecurity automation engineer.



Robotics & Automation

The Future of Work and Industry

Robotics and automation are no longer confined to factories they're transforming almost every industry. By combining artificial intelligence, machine learning, and smart sensors, robots are now capable of performing tasks with precision, speed, and reliability that humans cannot match.

Key Areas of Impact:

- **Manufacturing & Industry:** Robotic arms and automated production lines increase efficiency and reduce human error. Factories are increasingly “smart,” using robots to monitor quality, assemble products, and even manage logistics.
 - **Healthcare:** Surgical robots assist doctors with high precision operations, while AI-powered robots monitor patients, dispense medication, and even help with rehabilitation.
 - **Logistics & Warehousing:** Autonomous drones, robotic sorting systems, and delivery bots are optimizing supply chains. Companies like Amazon and DHL are already using warehouse robots to manage inventory and accelerate order fulfillment
-
- **Service Industry:** From automated checkouts in retail stores to cleaning and customer support robots, automation is enhancing service efficiency while cutting operational costs.

Emerging Innovations:

- **Collaborative Robots (Cobots):** Robots working alongside humans safely in shared workspaces.
- **Swarm Robotics:** Coordinated groups of small robots performing complex tasks collectively, inspired by nature (like bees or ants).
- **Soft Robotics:** Flexible, adaptive robots designed for delicate tasks, including handling food, medical samples, or fragile electronics.

Opportunities & Challenges:

While automation boosts productivity and precision, it also raises questions about job displacement in repetitive or manual roles. This shift is driving the need for reskilling and creating new opportunities in robotics design, AI integration, and system maintenance.

Career Opportunities in Robotics & Automation:

- | | |
|--------------------------|--------------------------------|
| • Robotics Engineer | • Industrial IoT Developer |
| • Automation Engineer | • Robotics Software Programmer |
| • AI Robotics Specialist | • Control Systems Engineer |



- CERTIFICATIONS -



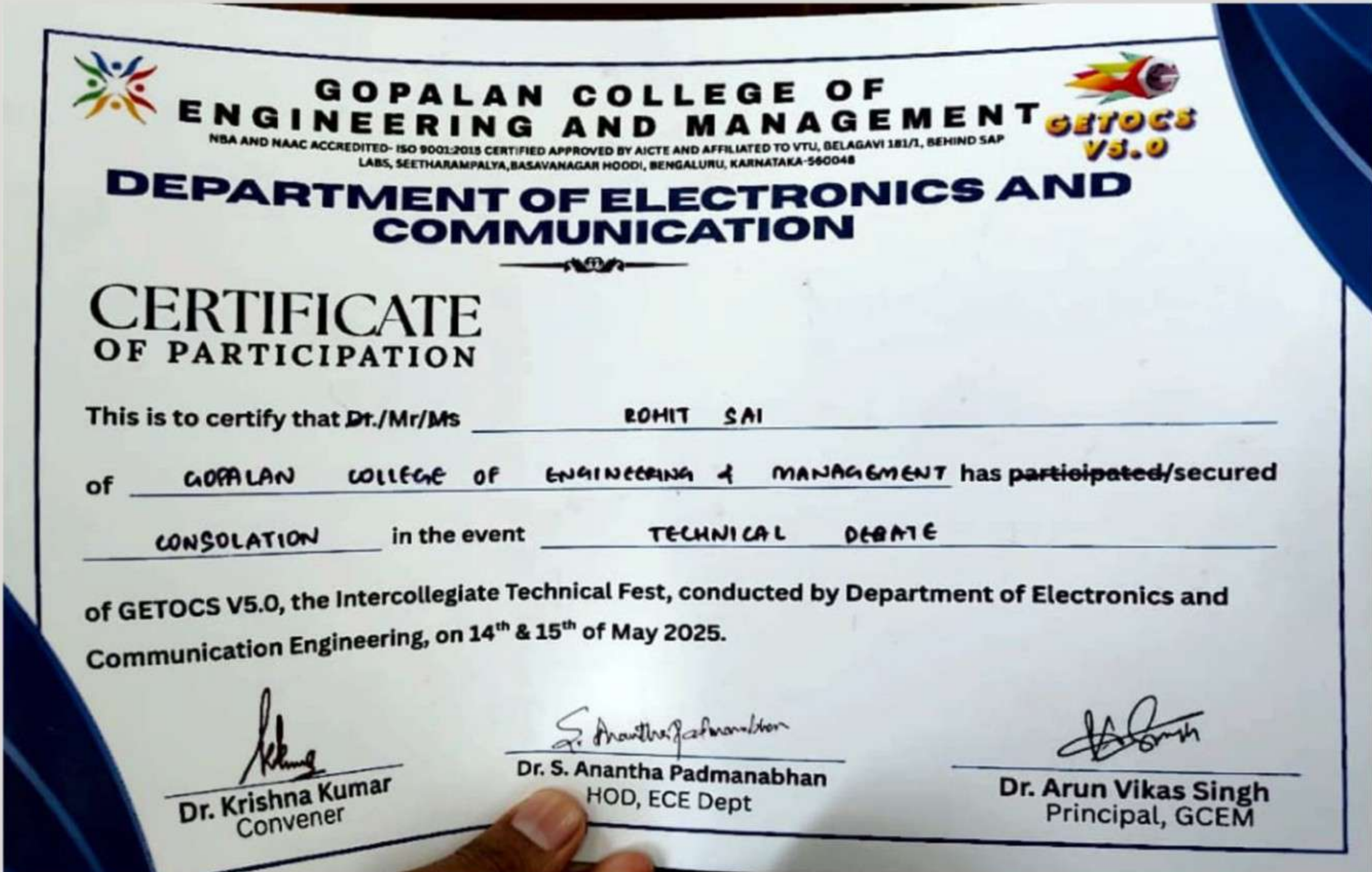
JAIN: Faculty of Engineering and Technology had organized a Hackathon named “Incepatrix” under the theme “Shaping tomorrow’s world through Intelligent Innovation” on the 8th and 9th of May 2025.

Participation - UMA P (4th Semester)

Gopalan College of Engineering and Management

The Dept. of ECE organized an intercollegiate technical fest, “GETOCS V5.0” on the 14th and 15th of May, 2025.

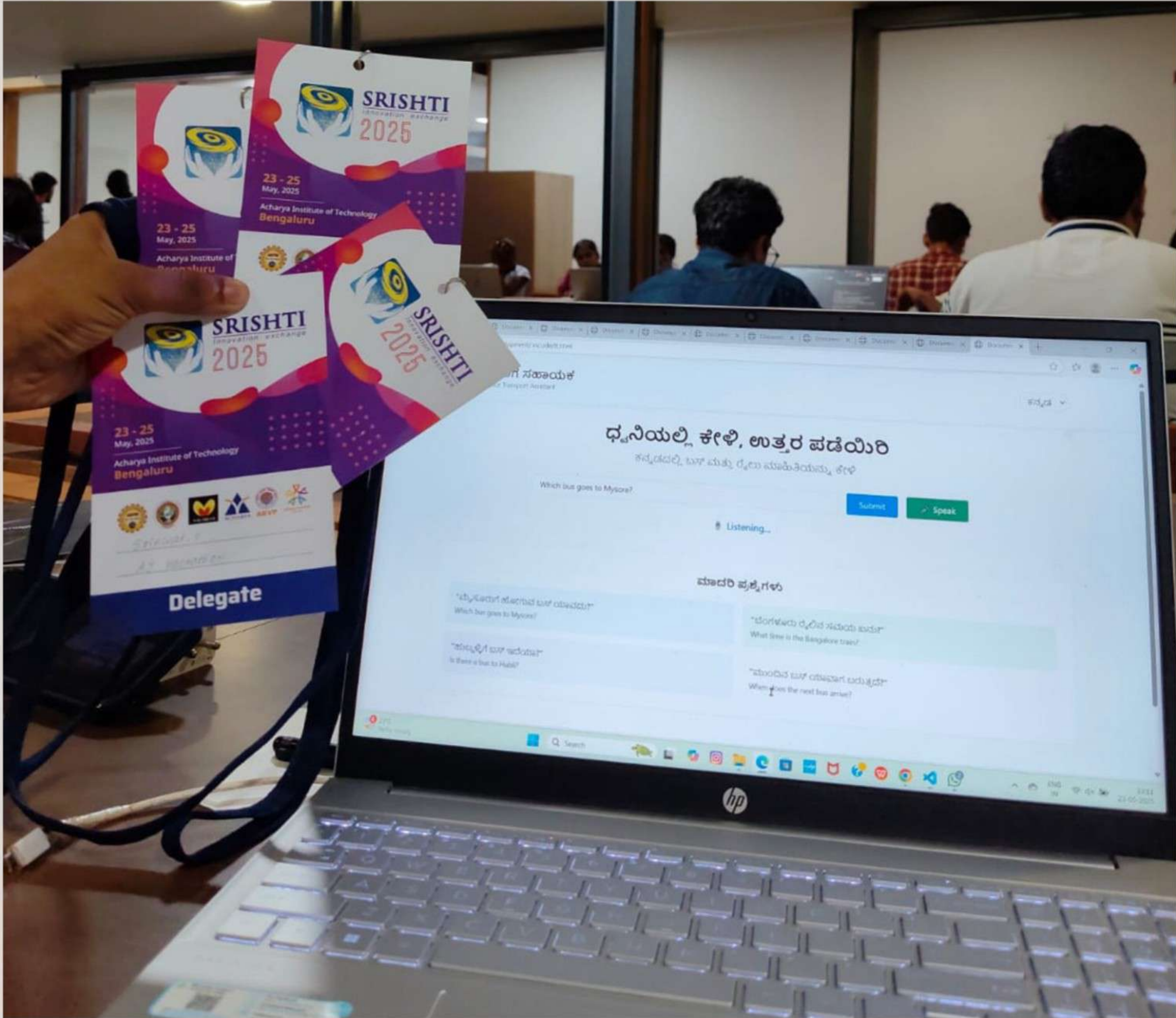
Consolation in the Technical Debate Event - P S ROHIT SAI NAIDU (4th Semester)



NEW HORIZON College of Engineering organized an ideathon named “IIC IDEATHON” an intercollegiate business plan competition, best innovations and deposition in YUKTI innovation repository, organised by the AI/ML Dept. on the 21st - 23rd of May 2025.

Participation - UMA P, PRATHIKSHA N, PRIYA (4th Semester)





ACHARYA INSITUTE OF TECHNOLOGY

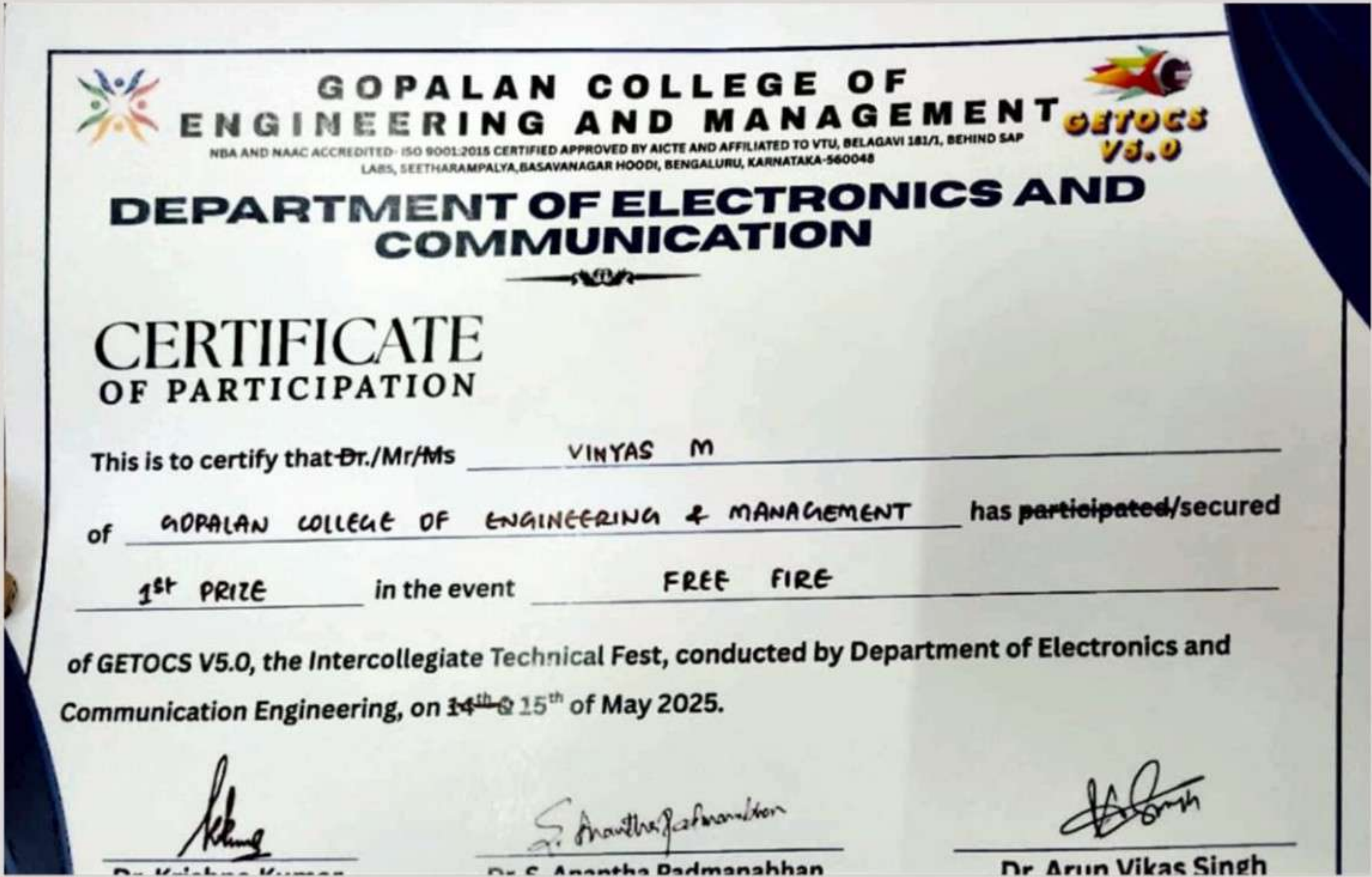
organized, “SRISHTI 2025”, a 36 - hour hackathon starting from 23rd to the 25th May of 2025.

TEAM 41 - DHANUSHIYA S, SRI VAISHANVI S, BHABINA BABU (4th Semester)

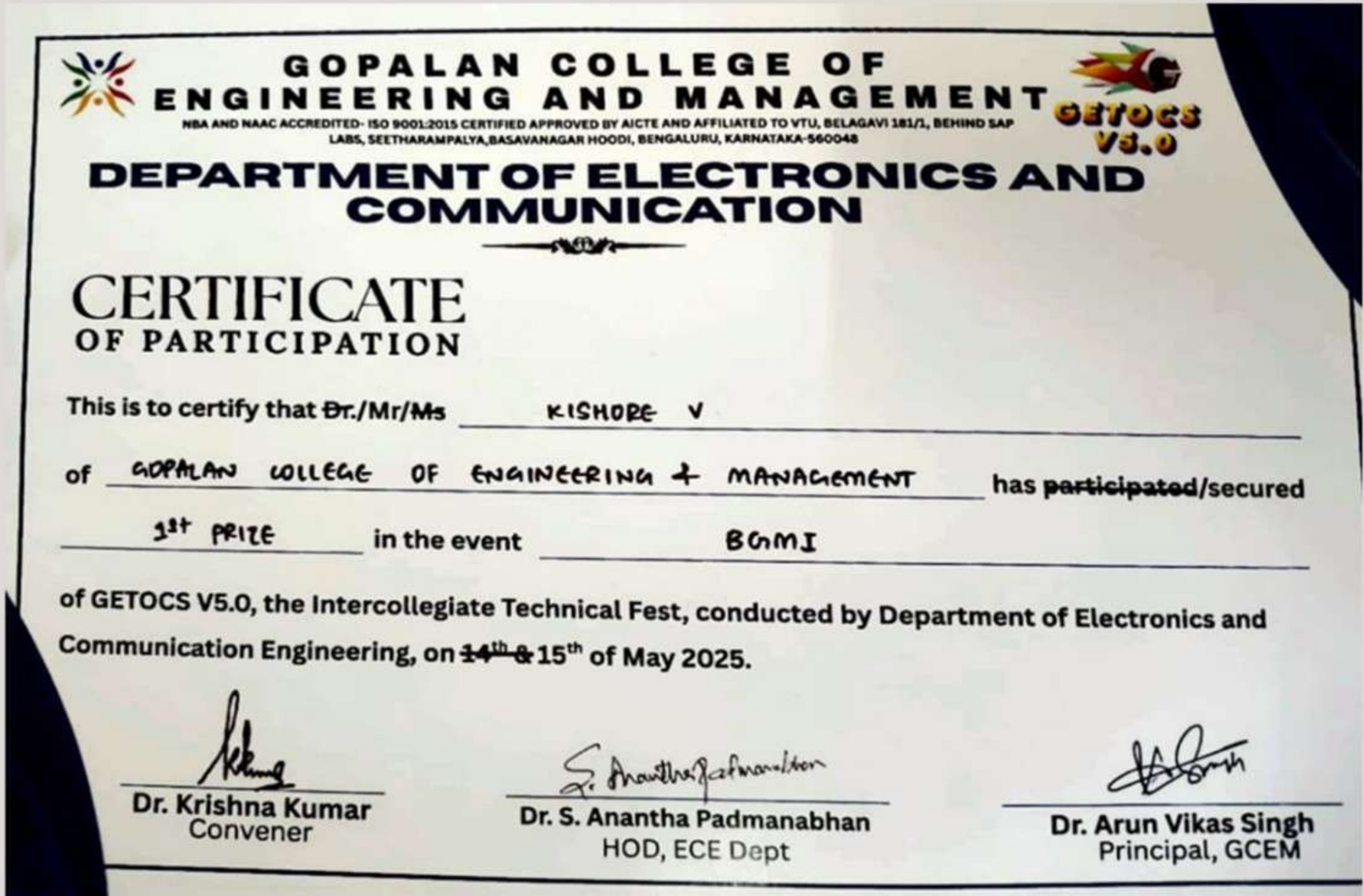
TEAM 85 - THANYA AIYAPPA T, SYEDA HAJIRA MISBAH, SRINIVAS S, PRATIKSHA JOSHI (4th Semester)

Gopalan College of Engineering and Management

The Dept. of ECE organized an Intercollegiate technical fest, “GETOCS V5.0” 14th and 15th of May



1st place in Free Fire Event - VINYAS M (4th Semester)



1st place in BGMI Event - HARI KUMAR REDDY B, KISHORE V (4th Semester)

PARTHASARATHY P
SARAR R
PAVANKUMAR

@everyone
🏆 Weekly Winners – May 19 to May 25
“Success usually comes to those who are too busy to be looking for it.”
🎯 Top 1 user with AX% > 90% and improved score
🥈 Rank 1 – Sagar R (sagargcem)
AX%: 95.67 | Levels Completed: 77 | Prize: IISc Backpack
🎯 Top 2–3 users with AX% > 90% and improved score
🥈 Rank 2 – Pavankumar G A (pavankumar)
AX%: 90.88 | Levels Completed: 72 | Prize: IISc Bottle
🥉 Rank 3 – Partha Sarathy P (Partha)
AX%: 92.57 | Levels Completed: 46 | Prize: IISc Bottle
“Your only limit is the amount of action you take.” (edited)

Urban Vision Hackathon (09-05-25 to 09-06-25)

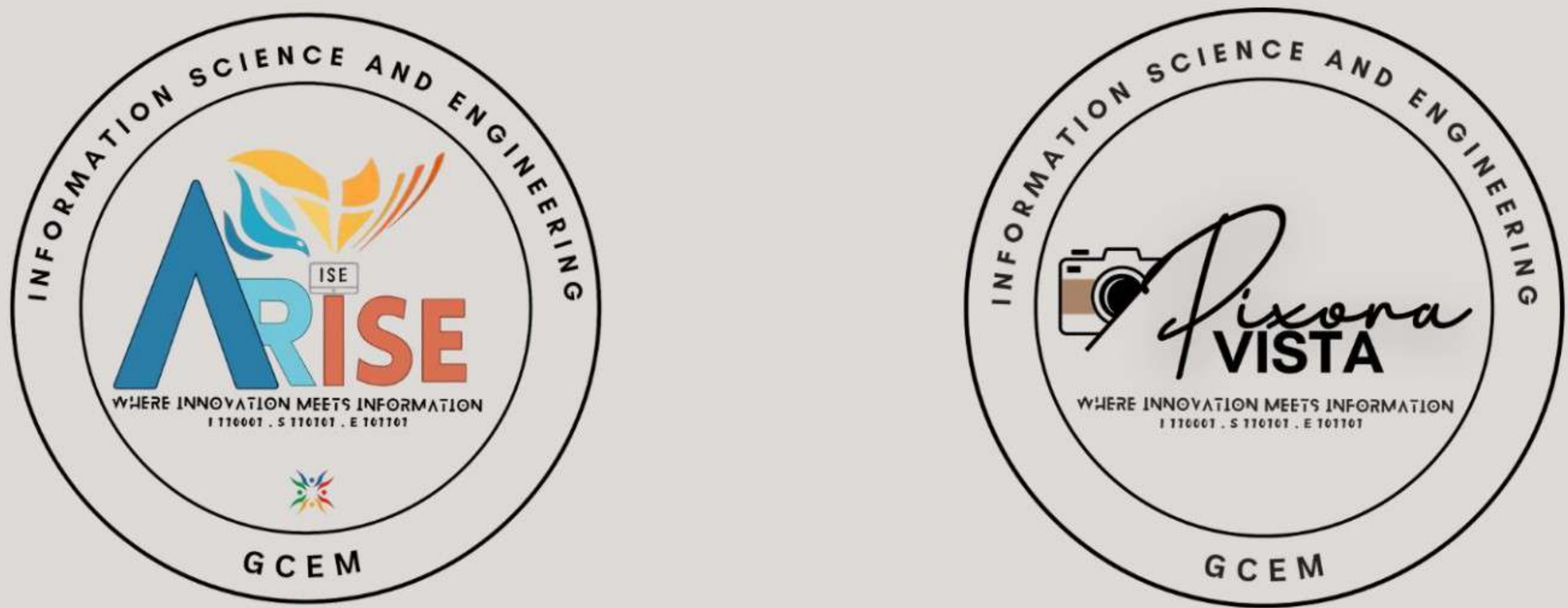
AI-drive challenge to improve Indian traffic mobility, Supported by Ministry of Education, AIRAWAT & Bangalore Traffic Police, Organized by IISc under the AI for Urban Mobility Initiative.

@everyone
🏆 Daily Winners – May 24
Top 3 users with AX% > 90% and completed most levels in a single day
🥈 Rank 2 – Sagar R (sagargcem)
AX%: 94.49 | Levels Completed: 19 | Prize: IISc Key Chain

@everyone
🏆 Weekly Winners – May 26 to June 1
“Opportunities don't happen. You create them.” – Chris Grosser
🥈 Partha Sarathy P (Partha)
AX%: 91.35 | Levels Completed: 64
🎁 Prize: IISc Bottle

🏆 Daily Winners – May 27
Top 3 users with AX% > 90% and completed most levels in a single day
🥈 Rank 2 – Pavankumar G A (pavankumar)
AX%: 90.40 | Levels Completed: 4 | Prize: IISc Key Chain

🏆 Daily Winners – May 28
“Success is the sum of small efforts, repeated day in and day out.”
🥈 Rank 2 – sagar R sagar R (sagargcem)
AX%: 94.36 | Levels Completed: 4 | Prize: IISc Key Chain



FEW WORDS BY OUR HOD:

Dr. R.G.Sakthivelan,
Professor & Hod of Dept.ISE

I am delighted to see the very first issue of ISE Times come alive with the energy of our students. This newsletter is your space to showcase creativity, ideas, and achievements. It's a platform to share your journey, inspire peers, and celebrate our ISE family spirit. I encourage every student to contribute and make this initiative lively and meaningful. Wishing ISE Times a wonderful start and many inspiring editions ahead!

EDITORIAL TEAM



LIKITH D T
Dept.ISE, 5th Sem

I believe learning never stops, and every challenge is an opportunity to grow stronger and wiser. Through consistency and curiosity, I strive to push my limits and inspire others to do the same.

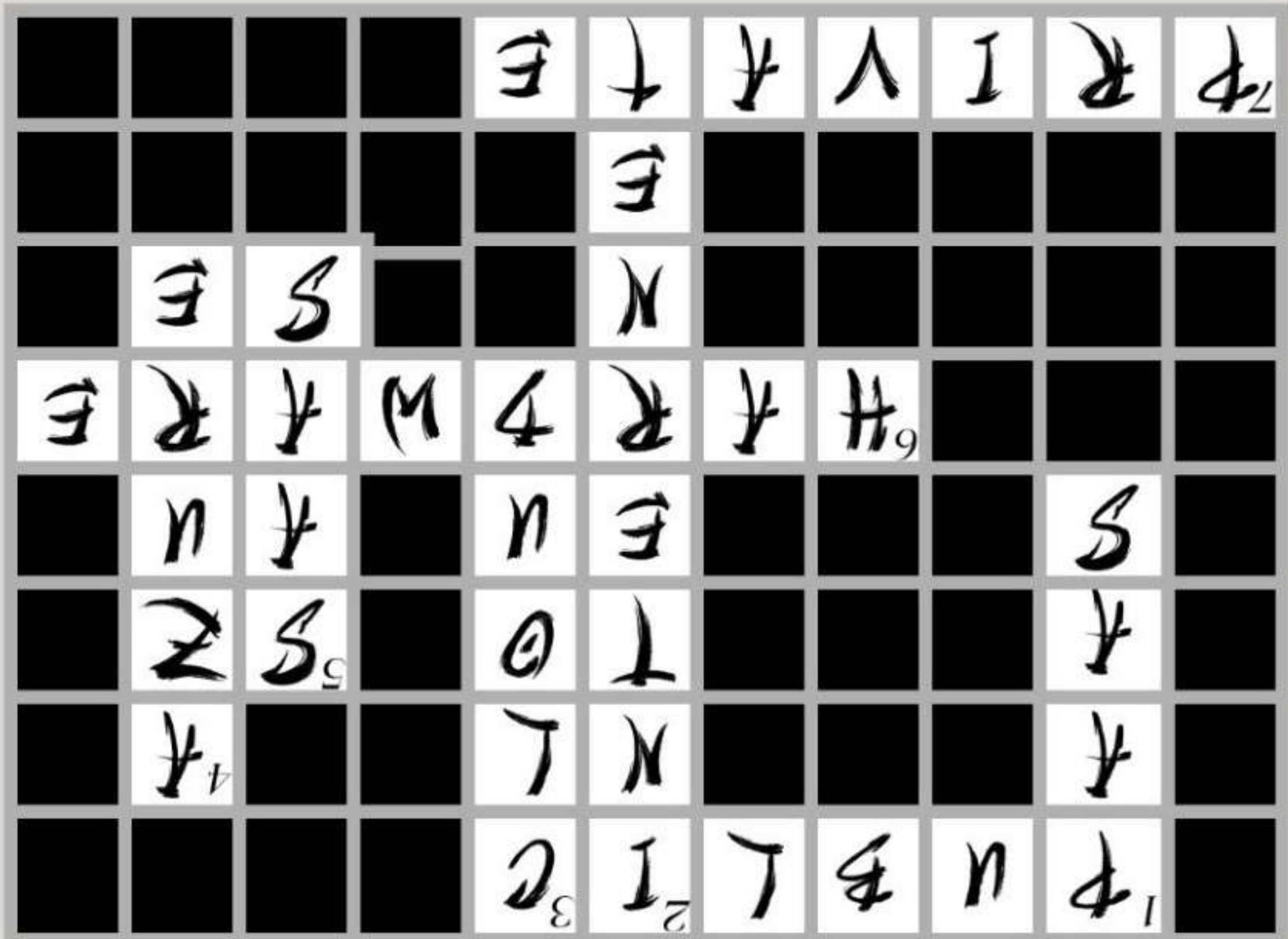
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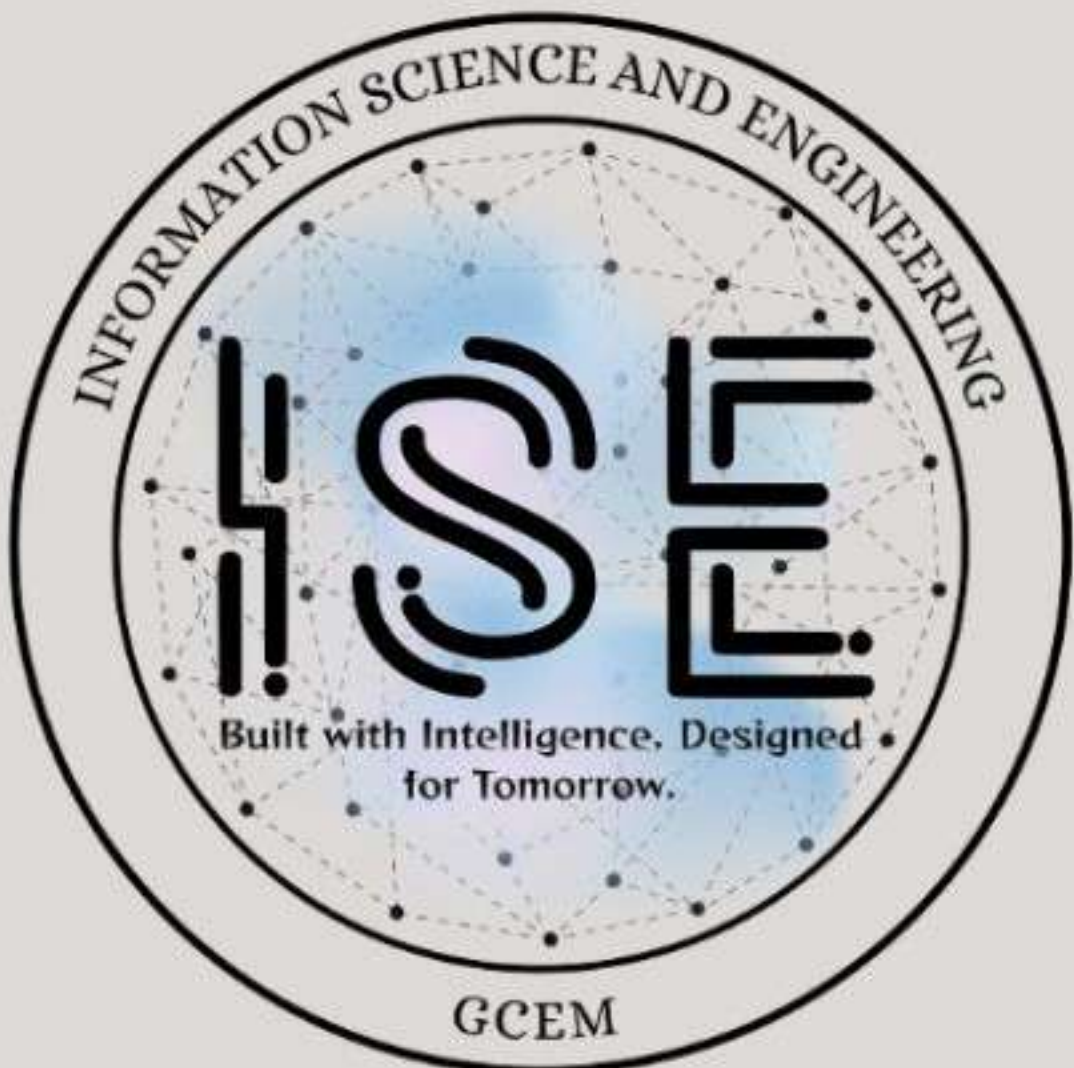
PRIYANKA SURESH
Dept.ISE, 5th Sem

I believe creativity fuels growth, and passion makes the journey worthwhile. With curiosity as my compass, I strive to learn, create, and leave a positive impact.

- Don't let one cloud obliterate the whole sky.
- Database , Cloud , Scaling , Security



ANSWERS :



Department of
Information Science and Engineering