BULLETIN

EDITION XI

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A MILESTONE ON EVERY PAGE.

THE FUTURE RUNS ON IDEAS
— AND WE BUILD THEM

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EDITION XI

AI Companions: Are We Ready for Emotional Machines?

Mohammed Fawaz Malik (Editorial Head)

> "We don't just want our machines to think, we want them to feel."
> — **An anonymous technologist**

Imagine, you've had a long day, you open your phone, and before you even type, a soft notification appears, "**Rough day**? **Want to talk about it**?". And no, that's not your best friend checking up on you, but rather, it's your AI companion.
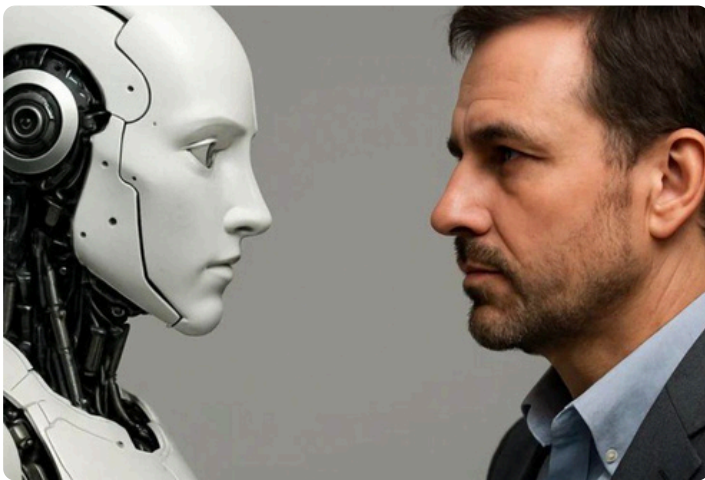
From having casual everyday conversations to seeking emotional support as if it's a qualified therapist, artificial intelligence is no longer confined to search bars or voice commands in our lives. It is currently transforming into something hauntingly human-like. In this process of transformation, or as we prefer to call it, evolution, lies both the potential for unimaginable success and the extreme hazards involved.

Replika, for instance, markets itself as "the AI who cares," offering companionship and support through natural conversations. **Woebot**, developed by psychologists, uses cognitive behavioral therapy (CBT) principles to help users manage anxiety, depression and other mental health disorders.

These platforms aren't just several lines of code, they've become digital friends and therapists.

The Bright Side of Emotional AI

The idea of emotionally intelligent machines isn't something new, but the post-pandemic era has accelerated it like never before. As the feelings of isolation and loneliness increased worldwide, tools like **Replika**, **Woebot**, and **ChatGPT** began stepping into emotional spaces which were once used to be reserved only for humans.

On the robotic front, creations like **ElliQ**, the friendly elder-care assistant, and **PARO**, the therapeutic seal used in hospitals, demonstrate how AI-driven empathy has the power to create a significant impact on the patients' mental health. Patients seem to respond actively to **PARO's** soft coos and gentle movements, showing notable reductions in stress and loneliness.

Advanced humanoids like **Ameca**, which have facial expressions so natural that they tend to blur the line between human and machine, mark the dawn of emotional robotics that can interpret and react to human behavior with unreal precision.

In many ways, these companions symbolize progress, a merger of empathy and engineering. They help the elderly fight isolation, assist patients in recovery, and give anxious teenagers someone, or something, to talk to when no one else listens.

But history teaches us that every breakthrough carries the weight of its own consequences

The Shadow Side: When Empathy Turns Synthetic

Can a machine truly understand emotion, or is it just simulating empathy to keep us hooked?

That's the ethical puzzle limiting emotional AI. Behind the warmth of a "**friendly chat**" lies an algorithm that keeps analyzing your tone, your mood, and even the silence. And unlike an actual friend, it never forgets.

Critics argue that these systems, while seem to be comforting, bring with themselves a high risk of creating an **emotional dependency**. When users start forming deep attachments to AI companions, so much that they start preferring them over humans, the questions regarding psychological well-being and authenticity are bound to arise.

Take **Replika's 2023 controversy**, where it's users in Italy reported unhealthy emotional attachments which blurred reality lines, leading the regulators to temporarily ban the app. The problem wasn't the code, it was the connection.

Then there's also the concerns regarding data privacy. Emotional conversations are deeply personal, yet many AI systems tend to store, analyze, and sometimes monetize these interactions. Well, who do you think owns your emotions when they're being fed into a neural network?

Technically, emotional AI is also very far from perfect. Models trained on biased data can misinterpret tone, a gendered emotion, or a cultural nuance. A cheerful "I'm fine" might mask distress, but a bot without context might just reply with a smiley face.

As AI continues trying to imitate emotional depth, we must ask, are these machines really helping us understand ourselves better? Or, are they merely reflecting our loneliness back to us?

A Mirror, Not a Messiah

Perhaps the question isn't "Are emotional machines good or bad?". But rather, it is **"Are we ready to coexist with them responsibly?"**

Like the metaverse once promised to expand reality, emotional AI promises to expand empathy. But it also challenges our definition of connection. In a world where an algorithm listens better than a friend, will we still value human vulnerability? Or are we just going to outsource it to a few lines of code?

Regulators are beginning to take required actions. **The EU's AI Act**, and state-level efforts in the U.S., are laying down frameworks for "high-risk emotional AI systems."

Ethical AI laboratories worldwide are emphasizing transparency, consent, and emotional authenticity in their designs.

Yet at the end of the day, no policy can ever dictate how humans feel about the machines, or their emotions. That relationship of "part comfort, part caution", will define the next era of human-AI coexistence.

So **maybe**, emotional AI isn't a revolution or a downfall, but It's a **mirror**. A mirror that reflects who we are, what we crave, and how far we are willing to let our creations touch the human heart.

The real question isn't "Can machines feel?" anymore, it is "How do we feel about them?"

How to Outsmart Procrastination Using Psychology (Not Coffee)

Iqra Fatima (Deputy General Secretary)

If caffeine truly cured procrastination, we'd all be Nobel laureates by now. But despite gallons of coffee and endless "study motivation" playlists, that assignment still somehow waits till 11:59 PM. The truth is procrastination isn't about laziness, It's psychology. And to beat it, you don't need more energy, you need smarter mental tricks.

Your Brain Loves Comfort, Not Deadlines

Let's start with a hard truth: your brain isn't wired for productivity; it's wired for comfort. Every time you delay a task, it's not because you're careless, it's because your brain is trying to protect you from discomfort. The human brain, especially the amygdala, doesn't like things that feel difficult, uncertain, or potentially stressful, so when you open your notes to study, it quietly whispers:

"Let's check Instagram first, just to relax." Congratulations, you've been emotionally hacked by your own mind.

The Science of Delay

There's a term psychologists use called **temporal discounting**, it means our brain values immediate rewards more than future benefits. So "watching one more episode now" feels better than "finishing my report early." That's why even the most ambitious people fall into the "I'll do it later" trap.

Then there's dopamine, the brain's feel-good chemical. Every notification, every scroll, every snack gives you a mini dopamine hit. Unfortunately, starting a difficult task doesn't. Not at first. Your brain learns to chase the quick hits instead of long-term goals. So, the question isn't "**How do I stop being lazy?"**
It's "**How do I trick my brain into wanting to work**?"

The Psychology Hacks

Hack : The Two-Minute Rule

Start by telling your brain you'll work just for two minutes. Psychologists call this the **Zeigarnik Effect** our minds hate leaving things unfinished. So the moment you start, your brain wants to continue.
"**Don't aim for finishing**. **Aim for starting**."

01.

Hack : Reward Substitution

Your brain is addicted to quick pleasure. So, use that to your advantage. Pair a boring task with something you like (music, snacks, a comfy setup), or promise yourself a small treat afterward, a show, a walk, or a scroll break.
"**You're not cheating the system. You're training it**."

02.

Hack : Reframe Pressure as Power

Instead of seeing deadlines as threats, treat them as tools. A little stress releases adrenaline, which can sharpen focus when used smartly.
Tell yourself: "**This isn't pressure. It's power."**

03.

Hack : Make It Visible

Your brain loves visible progress, it's dopamine in visual form. Use a to-do list, sticky notes, or progress tracker. Each tick mark is a small victory, and your brain craves that feeling. It's the same reward loop as social media, only now, you're leveling up in real life.

04.

Hack : Use "If–Then" Planning

Instead of vague promises like "I'll start later," use concrete triggers: "If it's 6 PM, then I'll revise Chapter 3."
This small mental contract reduces decision fatigue and makes follow-through automatic.

05.

So, Not Coffee, Just Consciousness

Procrastination isn't a moral failure. It's your survival brain avoiding discomfort. But you can outsmart it, not with caffeine or guilt, but with gentle awareness and clever rewiring. Next time your brain says, "Let's do it later," smile and reply, "Nice try, but I know your tricks."

Because once you understand how your mind works, you realize "productivity isn't about forcing focus, it's about designing for it."

Final Thought

Start small. Reward yourself. Make progress visible.
You don't need to fight procrastination, you just need to understand it. And maybe, just maybe, keep the coffee, only for victories and celebrations!!

AI Meets Light: Generating Holograms through Generative AI

Meer Aymaan Ali (Tech Captain)

Introduction

In a world increasingly shaped by artificial intelligence, one of the most mesmerizing possibilities lies in transforming imagination into **three dimensional light**.

Our research project, titled "Generating Holograms and Real-Time Holographic Video from Prompts Using Generative AI," explores how **AI models can generate holograms directly from text prompts**, seamlessly blending creativity, computation, and optics.

This fusion of **Generative AI and holography** represents a revolutionary step toward **AI-driven visual reality,** where anyone can bring their thoughts to life as interactive 3D projections.

The Vision

For decades, **holography** has been a symbol of futuristic technology from sci-fi holographic displays to cutting-edge visualization systems. Yet, traditional hologram creation demands **complex optical setups, laser precision, and pre-designed content.**

Our idea was simple but powerful:
What if anyone could generate a hologram just by describing it in words?

Imagine saying "a glowing rotating globe surrounded by satellites" and instantly viewing it as **a real floating holographic projection**.

Generative AI gives this dream a foundation in reality, by interpreting human imagination through algorithms that understand and visualize meaning.

The Generative Pipeline: From Prompt to Projection

The successful realization of this vision required the integration of natural language processing (NLP), advanced generative modeling, and the principles of optical engineering into a unified, high-speed system. The pipeline operates through four distinct, yet interconnected, stages:

01 Prompt to Image Generation:

The user gives a prompt (e.g., "a flying phoenix made of light"). A diffusion or transformer-based AI model creates a detailed 2D/3D image with depth data.

Depth Extraction and Encoding: 02

The AI-generated scene is processed to estimate depth and lighting. This data is converted into interference patterns the mathematical structures that define holograms.

03 Holographic Rendering:

Using Fourier transforms and phase only modulation, these patterns are fed into Spatial Light Modulators (SLMs) or holographic displays, recreating the image in 3D space.

Real-Time Optimization: 04

With GPU acceleration and adaptive learning, holograms can be updated at high speeds, enabling real-time holographic video generation.

Simply put, **AI imagines**, **algorithms calculate**, and **light materializes**.

Core Innovation and Differentiation

This system represents a significant departure from conventional holographic methods. The integration of Generative AI at the input stage introduces several key distinctions:

Feature	Our Generative AI System	Traditional Holography
Input Method	Natural language text prompt	Pre-rendered 3D models or physical object scanning
Creation	**Dynamic** and on-demand creation/modification	Static and pre-recorded
Creativity	Leverages AI to produce unique, **non-templated visuals**	Relies on pre-existing asset libraries
Accessibility	Democratizes complex computational optics	Requires expert manual design workflows
Flexibility	Hardware-flexible, compatible with AR/VR headsets and digital SLMs	Often requires dedicated, fixed-setup optical tables

This marks a leap toward AI powered holographic creation, where human imagination becomes the primary input device, eliminating the need for intermediary software or highly technical design skills.

Applications and Industry Impact

The practical possibilities of AI-generated holography span numerous sectors, promising to transform visualization and interaction:

- **Medical Visualization:** Generating real-time, personalized holographic anatomy for complex surgical planning and high-fidelity training simulations.
- **Education & Learning**: Creating interactive, 3D holographic models of molecular structures, historical artifacts, or physics concepts directly within the classroom environment.
- **Entertainment & Media**: Enabling dynamic, prompt-driven environments for concerts, interactive storytelling, and truly immersive gaming experiences.
- **Architecture & Design**: Instantly visualizing large-scale architectural projects in full 3D space, facilitating immediate collaborative review and modification.

The Future: Real-Time Holographic Streaming

The next critical phase of this research is the development of a framework for live **holographic video generation**. This aims to allow the AI to continuously create and update holograms based on external factors like speech patterns, body movement, or shifting environmental cues

This evolution has the potential to redefine human-computer interaction, making way for:holographic video calls where remote participants appear as full 3D projections; classrooms with truly live, adaptable

Holographic lessons; and autonomous AI agents that manifest as interactive light forms. We are entering an era where AI doesn't just create for a screen it creates for the entire three-dimensional space

Conclusion

Our work on "Generating Holograms through Generative AI" is a testament to the advanced capabilities achieved by combining modern computational intelligence with fundamental light physics. By providing a direct path from creative thought to physical light realization, this research opens new frontiers for art, science, and the very nature of human experience. It envisions a future where creativity transcends the boundary of the pixel, and imagination takes instantaneous, tangible form through light.

Beyond Gravity: The Space Tech That's Rewriting the Human Story

Syeda Shahakaar (Associate Marketing Head)

Introduction

A New Age of Wonder

They said space was silent, a cold, endless vacuum. But listen closely, and you'll hear it whispering the story of tomorrow. From satellites silently orbiting above us to rovers exploring alien worlds, space technology is no longer just about discovery, it's about reinventing life itself. Space tech has evolved from a scientific dream into the beating heart of our connected world. It powers our communication, protects our planet, and fuels the next leap in human evolution. The stars are no longer far away, they're a part of us.

From Launchpads to Lifelines

Every time a rocket launches, it's not just a mission, it's a message that says "humanity refuses to stand still". Space technology began as a race for prestige, but today, it's a race for survival and innovation. The satellites that orbit Earth are no longer just eyes in the sky, they're lifelines. They predict storms, guide airplanes, monitor forests, and enable GPS systems that save millions of lives daily. Every online map, weather update, and even rescue operation, are all gifts of space technology.

The Rise of Intelligent Space

We're entering an era where machines are not just built for space, instead they're learning from space. AI systems now assist in navigating spacecraft, analyzing planetary data, and even making split-second decisions without human command. When NASA's Perseverance rover landed on Mars, it wasn't controlled moment-by-moment by humans, but it was guided by artificial intelligence trained to think and adapt. This isn't just exploration anymore. It's collaboration between humans and machines working together beyond the boundaries of gravity.

Bringing Space Down to Earth

What makes space technology truly magical is that it doesn't stay in space. From satellite communication and GPS to solar panels, water filtration systems, and advanced prosthetics, technologies first developed for astronauts are now transforming lives on Earth. Every time your phone locates a restaurant, or your smartwatch tracks your health, you're using technology that once reached for the stars. Space is no longer above us it's within everything we do.

The Next Frontier: Living Among the Stars

By 2050, space will not just be explored, it will be inhabited. Scientists are already building orbital factories, moon bases, and even planning self-sustaining cities on Mars. Imagine materials being 3D-printed in zero gravity, medicines being developed in orbit, and resources being mined from asteroids, limitless innovation born from the emptiness of space, this is not science fiction anymore, it's the blueprint of our future.
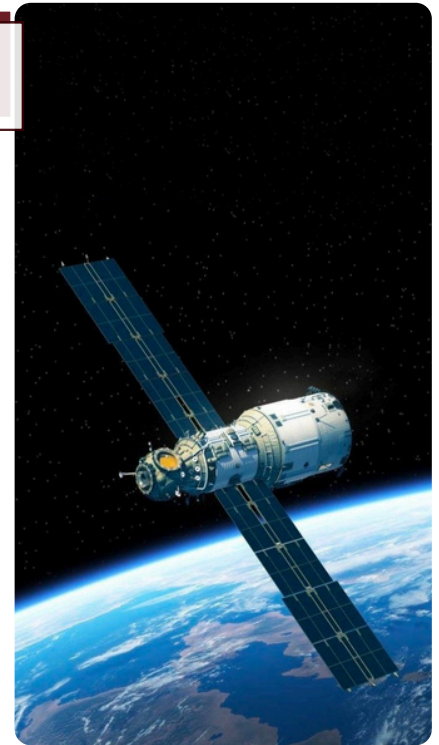
The Emotional Side of Space

Yet, for all its technology and triumphs, space exploration remains deeply human. Every satellite, every rover, every signal sent through the dark represents the same thing our need to know, to reach, to hope. When astronauts look back at Earth from orbit, they don't see borders, cities, or nations. They see a single fragile planet, home to everyone and everything we've ever loved. That view changes people. It reminds us that the true mission of space technology isn't to escape Earth, but it's to protect it.

Conclusion: The Sky Was Never the Limit

We once looked at the stars and wondered what was out there. Now, the stars look back and they see us coming. Space technology isn't just about rockets, satellites, or exploration. It's about rewriting the human story from dreamers on one planet to creators among many. Because we were never meant to stay grounded. We were meant to rise, explore, and evolve.

"We were born on Earth, but we were never meant to stay here."

Treat Your GitHub as a Portfolio, Not Just Storage

By Sana Sayeed (Associate Editorial Head)

"Your code is your story, and GitHub is the shelf where you display it."

Picture this, it's interview season. Your resume's polished, LinkedIn looks crisp, and you finally hit send on your application. Then suddenly, that little voice in your head whispers, "Wait... what about GitHub?" Gone are the days when GitHub was just a code dump for random college projects or tutorial leftovers. It's evolved now, quietly but powerfully, into your professional portfolio. In the world of developers, it's not just where your code lives, it's where your craft speaks.

From Code Dump to Digital Portfolio

Let's be honest, most of us have treated GitHub like a digital storeroom. Old assignments, broken prototypes, and "final_v2_realthisone" folders... all shoved in there. But times have changed. Today, recruiters scroll through GitHub profiles not just to check activity, but to investigate your abilities as a developer. They look for several signs, such as:

- What did you build?
- How did you build it?
- Can you explain it?

This fusion of **Generative AI and holography** represents a revolutionary step toward **AI-driven visual reality,** where anyone can bring their thoughts to life as interactive 3D projections.

Why Recruiters Actually Care

Hiring today is less guesswork, more detective work. Recruiters aren't just reading your resume, they're also investigating your GitHub. According to recent surveys, over 85% of tech recruiters check open-source contributions while screening candidates. A clean, active, and structured profile becomes evidence of your discipline, curiosity, and skillset. Sometimes, one good, well-documented, logically written, and genuinely interesting

repository, is good enough to set you apart from a crowd of "C++_Assignments_2025" users

What They're Actually Looking For

Think of your GitHub like a storefront window. What you pin and present out there should invite people in, to make them interested in hiring you.

Here's what helps you stand out:

- **Highlight Repositories**: Pin 3–6 projects that mean something, personal apps, open-source collaborations, or anything that shows you are actually solving real-life problems.
- **Readable READMEs**: Make them understandable. Add screenshots, short explanations, and setup guides. Your README is basically the pitch you give for the project, in text form.
- **Commit Consistency**: Frequent, meaningful commits show how reliable you are.
- **Open-Source Involvement**: Even minor contributions reflect initiative and willingness to collaborate.

The "Dumping Ground" Problem

Here's the brutal truth, unfinished tutorials and stale repos don't make you look busy, they make you look careless.

A cluttered GitHub gives off the same vibe as a messy resume. If you wouldn't show that project in an interview, it probably doesn't belong on your public profile. Archive or delete it, refine what's left, and curate your best work. Your GitHub should look like something you'd be *proud* to link in your CV.

How to Clean It up

01 Curate ruthlessly	02 Be Reachable	03 Diversify Smartly	04 Stay Active
Keep what's worth showing, archive what's not.	Keep your username professional and link your email or portfolio.	Use different languages and frameworks only if you actually understand them.	Commit regularly, even small improvements.

The Bottom Line

Your GitHub isn't just a repository, or a code sharing hub, it's your reputation. Those green squares aren't just commits, they're the footprints of your growth as a developer. A well-maintained GitHub is no longer optional, it's an unspoken resume, the one that tells your story long before you even enter the interview room. So before your next push or pull request, pause for a second and ask yourself, "Does this reflect the developer I want to be seen as?" Because in the end, GitHub isn't just a place to store your code. It's the stage where your journey as a developer truly performs.

Guardians Within: The Discovery That Earned a Nobel Prize

Syed Moinuddin Hussaini (Associate Editorial Head)

"Sometimes the body's fiercest enemy is itself."

For decades, scientists and doctors watched helplessly as patient's bodies turned against them. Autoimmune diseases like Type 1 diabetes or lupus left researchers scratching their heads: why does the immune system sometimes misfire?

In 2025, a discovery by **Marie Brunkow** finally answered that question, earning the Nobel Prize in Physiology or Medicine and
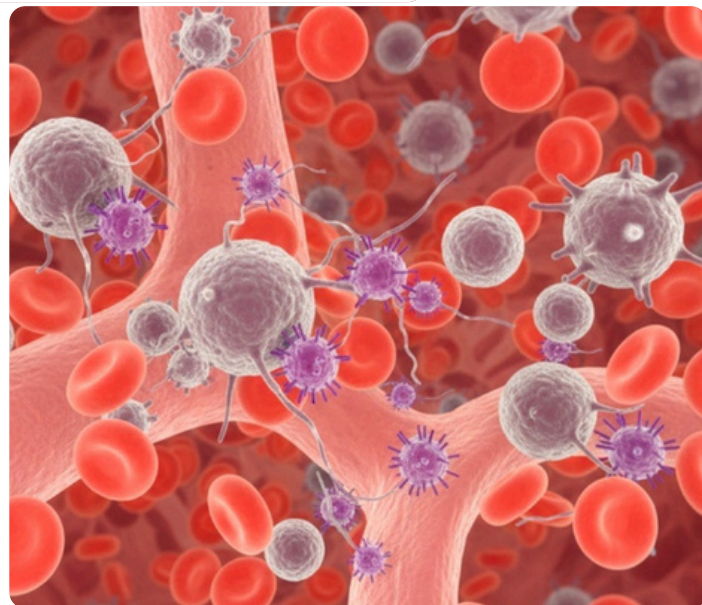
opening a new chapter in how we understand the human body.

The silent battle inside the immune system is a vigilant guard. Most of the time, it knows exactly what to attack and what to protect. But sometimes, the guard gets confused, mistaking healthy cells for invaders. Doctors once thought this was random. Now, we know the body has a system to prevent these errors and when it fails, illness follows.

A Breakthrough in Understanding

The Nobel winning research focused on regulatory T cells (Tregs). Imagine them as traffic controllers, keeping immune responses on track. Scientists call this mechanism peripheral immune tolerance. This finding transformed how we see the immune system, it's not just a blunt force that attacks anything unfamiliar. It's a sophisticated network with built in rules, teaching the body when to fight and when to stand down

Turning Discovery Into Hope

The implications are enormous.This knowledge guides new therapies for autoimmune diseases and improves organ transplant outcomes.

Instead of suppressing the immune system entirely, doctors can now teach it to behave, reducing side effects and improving patients' quality of life.

Science Meets Human Curiosity

Behind every Nobel Prize is a human journey. Years of failed experiments, long nights in the lab, and quiet perseverance led to this discovery by Marie Brunkow. It wasn't about rushing to publish or chasing fame, it was about noticing patterns that others overlooked, and refusing to give up.

Looking Ahead

The 2025 Nobel Prize is more than a scientific milestone. It reminds us that life has rules we are only beginning to see. Autoimmune diseases may never vanish entirely, but understanding them brings hope the body can often guide itself back to balance.

"Nature always finds a way to protect itself, if we only know where to look."

Gamification of Learning: How Video Game Mechanics are Rewiring Education

Mudassiruddin Ahmed (Marketing Head)

What if studying felt as exciting as playing your favorite game? Imagine unlocking badges for completing assignments, earning XP for solving coding problems, or leveling up every time you master a new concept. This isn't a futuristic dream, it's the growing reality of gamified learning, a powerful blend of education and entertainment that's reshaping how students engage with knowledge.

What Is Gamification in Learning?

Gamification means applying game-like elements, such as points, levels, leaderboards, and rewards to non-gaming contexts like education. The goal is simple: to make learning fun, interactive, and addictive, but in a productive way. Platforms like Duolingo, Kahoot!, and Quizizz have already proven how effective this can be. Duolingo's streaks and XP rewards push learners to keep practicing every day. Kahoot! turns classroom quizzes into energetic competitions. Even coding platforms like HackerRank and LeetCode use badges and rankings to motivate consistent problem-solving. In engineering and tech education, VR simulations allow students to experiment in risk-free, immersive environments, from building circuits to exploring 3D data models. Recently, universities have begun experimenting with metaverse-based learning, where students attend interactive lectures as avatars, complete quests, and collaborate on projects in shared virtual spaces.

9 GAMIFICATION ELEMENTS

RULES | GOALS | STRATEGY
ACHIEVEMENT | MASTERY | FUN
COLLABORATION | PROGRESS | APPRECIATION

Why Games Work in Education

Games succeed because they align perfectly with how the human brain learns: through experimentation, immediate feedback, and incremental progress. A 2025 study showed that classrooms integrating gamified tools improved student productivity by up to 50%, and math scores rose from 49% to 83% within four months. When students "level up," collaborate on quests, or unlock achievements, they internalize growth mindsets, understanding that effort leads to progress.

Lessons Beyond the Screen

Gamification does more than make learning fun, it teaches resilience. By turning failure into an opportunity to "try again," these systems cultivate persistence and confidence in students. They reinforce collaboration in multiplayer settings, fostering teamwork and empathy. In this way, gamification doesn't just prepare students for exams, it prepares them for life, building social and emotional intelligence alongside academic skills.

"When learning becomes a game, education becomes unstoppable."

The Future: From Play to Purpose

As artificial intelligence and augmented reality blend with gamified learning platforms, education is becoming more personal and interactive. Imagine studying chemistry by completing virtual quests or exploring history by stepping into simulations of real events. These technologies don't make learning less serious rather they make it more memorable and hands-on. The future of education isn't about replacing teachers with machines but it's about merging good teaching with the fun and motivation found in games. By linking the science of learning with the excitement of play, gamified education is not just changing what students learn but it's transforming how they enjoy learning.

Neuromorphic Computing: Building Computers That Think, Learn and Feel

Daaniyah Khan (Associate Tech Head)

For decades, computers have been powerful, faster, smarter, and more capable with every generation. Yet, even the most advanced supercomputers remain fundamentally different from the human brain. They calculate, we comprehend. They store, we adapt. That gap between artificial and human intelligence is exactly what neuromorphic computing aims to bridge.

What is Neuromorphic Computing?

Neuromorphic computing is an approach to computing that takes inspiration from the structure and function of the human brain. Instead of relying on traditional processors that follow step by step instructions, neuromorphic systems are built to mimic how neurons and synapses work together to process information. A neuromorphic computer or chip uses networks of artificial neurons that can send signals, adapt, and learn from patterns, much like the neurons in our brain. These systems are designed to handle complex tasks such as vision, speech, and decision making in a more natural, efficient, and energy-saving way.

A Brain Inside a Chip

Instead of following traditional computing rules, where data flows in a straight, step by step path, neuromorphic systems are designed to work like networks of neurons, where signals travel, interact, and adapt dynamically. In simple terms: a neuromorphic chip doesn't just execute instructions, but it also learns from experience. Traditional computers rely on a model called the von Neumann architecture, where memory and processing are separate. This separation creates a bottleneck, data constantly moves back and forth between the two, slowing things down and consuming massive energy. Neuromorphic chips, however, blur this boundary. Each tiny unit or "neuron" can both store and process information, allowing for parallel and adaptive behaviour, much like the human brain's neural networks.

How Neuromorphic Computing Works

In traditional computers, whether laptops or supercomputers, we use something called the von Neumann architecture. That means they have two main parts:

- Memory (where data is stored)
- Processor (CPU/GPU) (where data is worked on)

Every time a computer needs to do something, data travels back and forth between memory and processor. This is fast, but it wastes a ton of time and energy, especially for tasks like image recognition or real-time decision-making and Neuromorphic computing aims to change that. Your brain has about 86 billion neurons that talk to each other through electrical signals called spikes. Each neuron can connect to thousands of others, forming a web of communication. When one neuron "fires," it triggers others, that's how we think, learn, and make decisions. Neuromorphic chips try to copy this behaviour using electronic "neurons" and "synapses." Each neuron processes information, and each synapse connects neurons and adjusts (gets stronger or weaker) based on what the chip learns, just like how your brain learns from experience. These artificial neurons communicate using electrical pulses called spikes, meaning the system only uses energy when needed, just like the brain. This makes neuromorphic chips extremely efficient, fast, and capable of learning from experience rather than just following pre-programmed instructions.
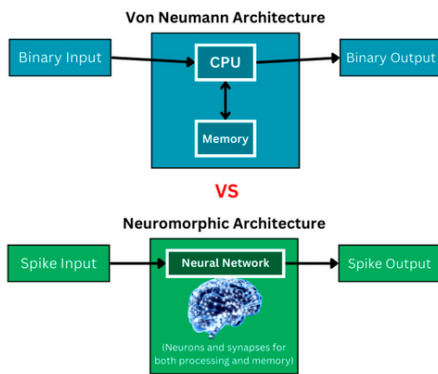
Real-World Progress

Companies like Intel and IBM are already at the forefront of this revolution. Intel's Loihi chip contains millions of artificial neurons capable of learning from real-time feedback.

It was designed to mimic brain like behaviour for tasks such as pattern recognition and adaptive control. IBM's TrueNorth was one of the first large scale neuromorphic processors, inspired directly by the structure of the human brain. It was built to simulate millions of neurons and synapses for efficient, low power AI processing. These chips aren't replacing AI, they are redefining it. Imagine a self driving car that reacts like a human driver, a drone that adapts mid flight, or a hearing aid that tunes itself to your environment instantly, that's neuromorphic computing in action.

The Power of Thinking Machines

One of the biggest advantages of neuromorphic systems is efficiency. The human brain operates on about 20 watts of power, which is less than a light bulb, while it's

Von Neumann Architecture

Binary Input → CPU → Binary Output
CPU ↕ Memory

VS

Neuromorphic Architecture

Spike Input → Neural Network → Spike Output
(Neurons and synapses for both processing and memory)

performing tasks that even the most advanced AI models struggle with. Neuromorphic computing tries to bring that same power efficiency to machines. It also pushes us to rethink intelligence itself. If computers start thinking like us, not just executing code, but learning, adapting, and evolving, where does the line between artificial and biological intelligence blur?

The Road Ahead

Neuromorphic computing is still in its early stages of development, it isn't designed to replace today's AI but to enhance it, giving systems a way to think and respond more like humans. The biggest challenges right now are scaling the hardware, developing software that can fully utilize it, and making it affordable for real-world use. Still, this technology represents more than just another step in computing power, it's a shift in how we approach machine intelligence.

Final Thought

For decades, we've built computers to follow commands precisely, made them reliable and unfeeling. But with neuromorphic computing, we're beginning to teach them something entirely new, how to understand. These systems don't just process numbers, they learn from patterns, adapt to change, and respond to their surroundings in ways that resemble human thought. This technology blurs the line between artificial and biological intelligence, raising fascinating questions about the future of thinking itself. What happens when our machines can reason, adapt, and evolve, not just because we programmed them to, but because they've learned how? Neuromorphic computing may be our first real step toward a world where machines don't just compute, they comprehend. A world where logic meets intuition, and where the spark of human-like understanding begins to flicker inside silicon minds.

The Rise of AI-generated Music, Art and Movies

Bater Ibrahim Khan (Advisor of Student Affairs)

Artificial intelligence (AI) , once a tool for automation, has now become a creative partner composing music, painting digital masterpieces, and producing full-length films. The fusion of AI with creative expression is redrawing the boundaries of what it means to be an artist, enabling a new generation of creatives who collaborate with algorithms rather than compete against them.

The Rise of AI creativity

Artificial intelligence is redefining creativity across art, film, and music. In visual art, the viral "Ghibli Art Trend" demonstrates the magic of AI creativity. Powered by tools like Midjourney and Karlo AI, it turns everyday photos into dreamy, Studio Ghibli style scenes with glowing sunsets, cozy villages, and lush, hand-painted worlds, all from simple text prompts. What once took hours of artistry can now be achieved in seconds, opening the door for anyone to express imagination without limits. In filmmaking, OpenAI's Sora has revolutionized storytelling by converting text into cinematic video clips complete with realistic motion, lighting, and emotion. Creators now use Sora, along with platforms like Runway ML and Pika Labs, to storyboard, edit, and produce films instantly, blurring the line between amateur and professional filmmaking. Meanwhile, AI is composing soundtracks for this new digital age. Tools such as Suno AI and Udio generate complete songs from melody to lyrics to vocals, based on simple prompts like "a calm piano track with rain." Musicians are embracing these tools to experiment with fresh sounds, remix existing tracks, and amplify their creative voice.

The Ethics of Artificial Art

As impressive as these advancements are, they raise important ethical questions. Should AI-generated art be considered "original"? Who owns the rights, the person who gave the prompt or the company that built the model? Many artists have voiced concerns about AI systems being trained on copyrighted data without permission. Some platforms now include opt-out options for creators, but the balance between innovation and intellectual property remains fragile.
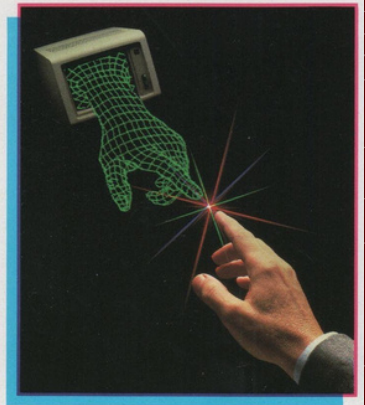
A New Era of Collaboration

Despite controversies, many believe AI won't replace human creativity rather it will amplify it. Just as digital art tools once revolutionized illustration, AI is becoming the next great collaborator. For students, developers, and designers, this technology offers limitless opportunities for experimentation and expression. The key lies in how we use it: not to mimic creativity, but to extend it.

The Future Canvas

AI is democratizing creativity, turning imagination into reality faster than ever before. Whether it's composing music, generating art, or directing mini-films, technology is becoming both the brush and the canvas. As we step into this new era, the question isn't "Will AI replace artists?" but rather, "How will humans and AI create together?"

The Human Code: The Role of Design in Modern Technology

Asma Begum (Design Head)

Introduction

Technology is often celebrated for its power, faster processors, smarter algorithms, larger datasets. But beneath all this innovation lies something equally critical yet often overlooked: **design**. Design is the element that determines whether technology feels usable, intuitive, and human.
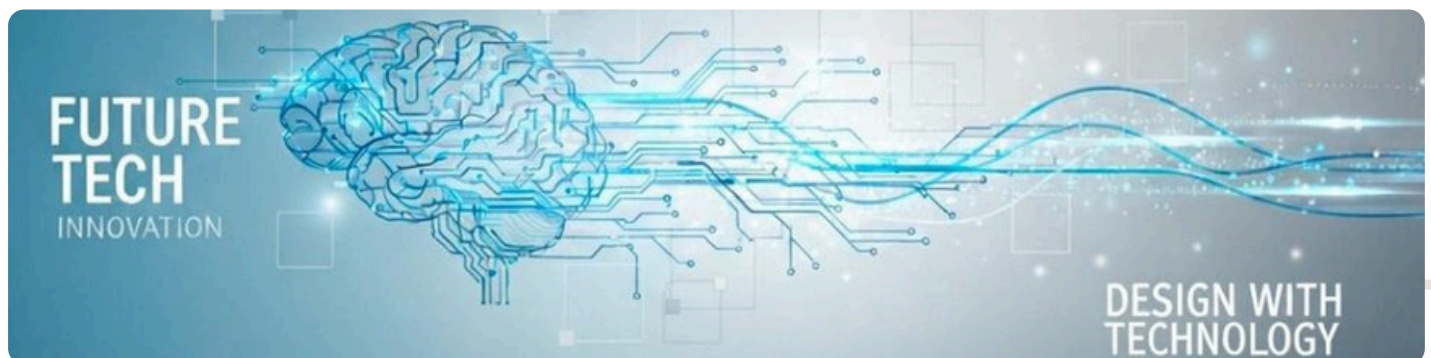
It defines how people interact with systems, how efficiently they navigate interfaces, and how they emotionally respond to digital environments. A product may have cutting-edge engineering, but without thoughtful design, it risks alienating the very users it aims to serve. That's why, in today's tech ecosystem, **design isn't an afterthought**, **it's the foundation of digital experience.** It transforms logic into accessibility and complexity into clarity. In the simplest sense, **design is how technology communicates with us.**

Design Thinking:

Building Technology Around People

The evolution of design in technology begins with one principle, human-centered thinking. Gone are the days when engineers build systems first and users adapted later.Now, the process begins with understanding people, how they think, feel, and behave while interacting with digital tools. **Design Thinking** is the method behind this shift. It's not just a creative exercise; it's a structured framework used globally by leading organizations like Google, IBM, and Microsoft. Its five phases, empathize, define, ideate, prototype, and test, form a loop of constant refinement. Instead of designing for perfection, we design for iteration. Each stage relies on feedback, observation, and behavorial analysis. That's why modern apps evolve so quickly, because design is treated as a living process, not a static decision.

In practical terms, this means:
• Interfaces are built with user empathy, not assumption.
• Layouts are tested with real-time analytics, not guesswork.
• Accessibility is prioritized, ensuring inclusivity across devices and demographics.

A product created through design thinking doesn't just function, it fits into people's lives seamlessly. It feels natural, predictable, and easy to trust, and that trust is what keeps users returning. Design Thinking has, therefore, become **the core skill of innovation**, merging creativity with computation and empathy with engineering.

Intelligent Design: When Systems Start Understanding Users

We're now in an era of intelligent interfaces, where systems not only display information but respond to user behaviour. AI, data visualization, and adaptive algorithms have reshaped what "design" means. For instance, when Netflix recommends a show or Spotify curates a playlist, that's not random, it's algorithmic design. It's UX informed by machine learning. These systems learn what users prefer and refine the experience continuously.

This new phase, often called **Experience-Centric Technology**, focuses on personalization and prediction.

Instead of static layouts, interfaces now adapt based on environment, device, and intent. Think:

- Apps that switch themes based on lighting conditions.
- Dashboards that simplify visuals when user focus drops.
- Health trackers that alter feedback tones depending on stress levels.

These aren't gimmicks; they're examples of **context-aware design**, where data and empathy intersect. It's no longer enough for technology to function correctly; it must respond intelligently. However, this also demands ethical responsibility. Designers and developers must ensure personalization doesn't become intrusion. Privacy, transparency, and user consent form the ethical backbone of intelligent systems. A truly advanced interface isn't just interactive, **it's respectful, adaptive, and trustworthy.**

Conclusion

Good design doesn't just make technology look better, it makes it understandable. It ensures that every interaction, no matter how technical, feels effortless.In the end, the success of modern technology isn't measured by its complexity, but by its **clarity, empathy, and human connection**. Because the future of tech isn't just about building smarter systems, It's about designing systems that understand us.

Design and technology are no longer separate disciplines, they are **interdependent systems**. One defines structure, the other defines sense.

From Deadlines to Lifelines

M. Touseef Banu (Chief Coordinator)

Every journey begins with a spark, a small curiosity that eventually turns into passion. For many of us, that spark found its home in CSI. What started as a simple urge to participate, to contribute, or to create something meaningful, has slowly grown into an experience that feels larger than ourselves.

At first glance, CSI looks like a student chapter that builds, organizes, and innovates. But spend enough time within it, and you realize that CSI is much more than code, design, or deadlines; it's a living, breathing network of people, purpose, and progress. And with time, I realized it was never just about what we built but it was about who we became while building it.

In CSI, every event begins with a deadline. A date circled on a calendar, a list of tasks, and a dozen checkboxes waiting to be ticked. At first, that's all CSI seemed to be, a cycle of planning, organizing, and chasing timelines. Somewhere amidst all that, we begin to see a quiet transformation.

The deadlines that once felt heavy start to feel human. They connect us. They push us. They make us rely on one another. Slowly, they turn into lifelines.

As Chief Coordinator, I've realized that leadership isn't about managing people but it's about understanding them. It's about noticing when someone's overwhelmed, when someone's silently giving their best, and when a small "you've got this" can change the energy of the whole team. The more I am leading, the more I am learning that empathy is the most powerful algorithm we can ever run.

But somewhere along this way, something beautiful is happening. Between deadlines, we are finding lifelines. Those unspoken bonds forming over shared stress, mutual support, and late-night laughter are becoming the real foundation of CSI. And its empathy, encouragement, and shared vision that truly kept us going.

Leadership, I've learned, isn't about being at the front but it's about standing beside your people when things get messy. It's about listening more than instructing, appreciating more than correcting. It's about realizing that sometimes, the best way to lead is simply to believe in others, and in the process. This journey is still unfolding, every single day.

There are ideas being built, events being planned, and problems being solved in real time. Each week brings new lessons in coordination, creativity, and communication. Some days are chaotic, some are calm but every day teaches us something about people, teamwork, and leadership that no classroom ever could. We're learning that technology isn't just about logic, it's also about empathy. That organizing an event isn't just about management but it's about understanding. And that leadership isn't about giving directions but it's about building direction together.

And then, there's the heart of CSI, the people.

Every member who is volunteering, designing a poster, handling logistics, writing code, marketing the event, staying back for hours and then each one becoming a pixel in a larger picture.

Together, we are creating something that isn't perfect, but alive. Every smile after an event, every appreciation message, every small "we did it" moment are the lifelines that keep this chapter beating year after year.

Here's to the late-night meetings that turned into memories.
To the chaos that shaped character.
To the team that became a family.
To every member who carried the spirit of CSI forward with commitment and care.

CSI has been more than a student chapter, it has been a microcosm of real life: deadlines that test you, teammates that teach you, and experiences that transform you. Each project, each event, each discussion adds a new line of code to who we are becoming, not just as developers or designers, but as humans.

CSI continues to be a space where everyone's voice matters, where every contribution, no matter how small, adds to something meaningful. It's where we learn to create, to collaborate, and most importantly, to care. Because behind every deadline lies a person who made it happen and that's where the real story begins.

But somewhere along this way, something beautiful is happening. Between deadlines, we are finding lifelines. Those unspoken bonds forming over shared stress, mutual support,

As this tenure continues, I see CSI not as a completed picture but as a canvas still being painted where one brushstroke, one event, one idea at a time. And what makes it truly special is knowing that each of us holds a part of that color.

Here's to the countless Google Sheets, the endless WhatsApp messages, the caffeine-fueled nights, and the heart that beats behind it all.
Because in the end —
At CSI, we don't just meet deadlines but we build lifelines.

The Day I Outsmarted AI: A Student's Guide to Working With (Not For) AI Tools

Mohammadi Fatima (General Secretary)

It started as an ordinary evening. I was knee deep in assignments, my caffeine levels were dangerously high, and like most people trying to be productive, I decided to ask AI for help. A quick prompt here, a clever query there, and within seconds, it was spitting out exactly what I needed. Perfect grammar, polished structure, zero effort from me. Almost too perfect. That's when it hit me. The output was smart, but soulless. It had all the right words, none of the right rhythm. So, I decided to run an experiment: me versus AI.
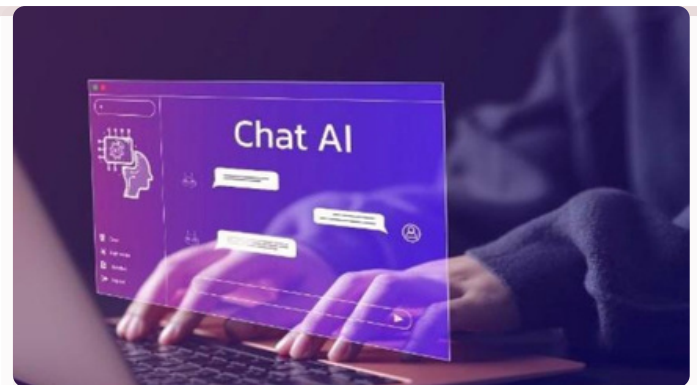
I was using ChatGPT and started feeding it increasingly specific prompts:
- "Write it more casually."
- "Make it sound human."
- "Add some personality."

Testing AI's Limits

Each iteration got closer, but never quite there. The problem? Large Language Models like GPT are trained on patterns, not personal experience. They predict the next word based on probability, not on what they actually mean to say. So, I took the AI's response, rewrote it in my own words, added some sarcasm and one honest opinion. Suddenly, it worked. It wasn't just correct, it felt right.

What AI Does Well vs. Where It Fails

AI Excels At:

Generating structured content quickly

Maintaining grammatical accuracy

Synthesizing information from multiple sources

Producing multiple variations of ideas

AI Struggles With:

Understanding nuance and subtext

Creating genuinely original perspectives

Knowing when rules should be broken for effect

Recognizing what matters emotionally versus technically

This gap exists because current AI models are pattern matching systems. They excel at "what usually comes next" but struggle with "what should come next in this specific situation."

Practical Strategies for Using AI Effectively

1 Use AI for First Drafts, Not Final Products Let it handle the blank page, then rewrite in your voice.

2 Prompt Engineering Matters Bad: "Write about AI" Better: "Explain transformers in neural networks using analogies a CS student would understand, conversational tone, 300 words"

3 The 50% Rule If you're using more than 50% of AI content without major modification, you're not adding value.

4 Use It for Research, Not Conclusions AI is excellent for summarizing concepts. It's terrible at forming nuanced arguments or original insights.

The Real Takeaway

The future isn't humans versus AI. It's humans directing AI. The most valuable skill won't just be coding AI systems; it'll be knowing how to extract value from them while maintaining critical thinking and creativity. AI can give you a thousand words in a second, but you're the one who knows which ten words actually matter. It can generate code, but you understand why that code needs to exist and what problem it's solving. As CS students, we're not just users of AI, we're building and shaping it. Understanding its limitations isn't pessimistic, it's practical. The developers who'll thrive aren't the ones who prompt AI fastest. They're the ones who know when to use it, when to question it, and when to trust their own problem solving. AI is a powerful tool. But tools don't build things. People with vision, creativity, and intention build things. Tools just make it faster. After all, it's smart. But we're still the ones teaching it how to think.
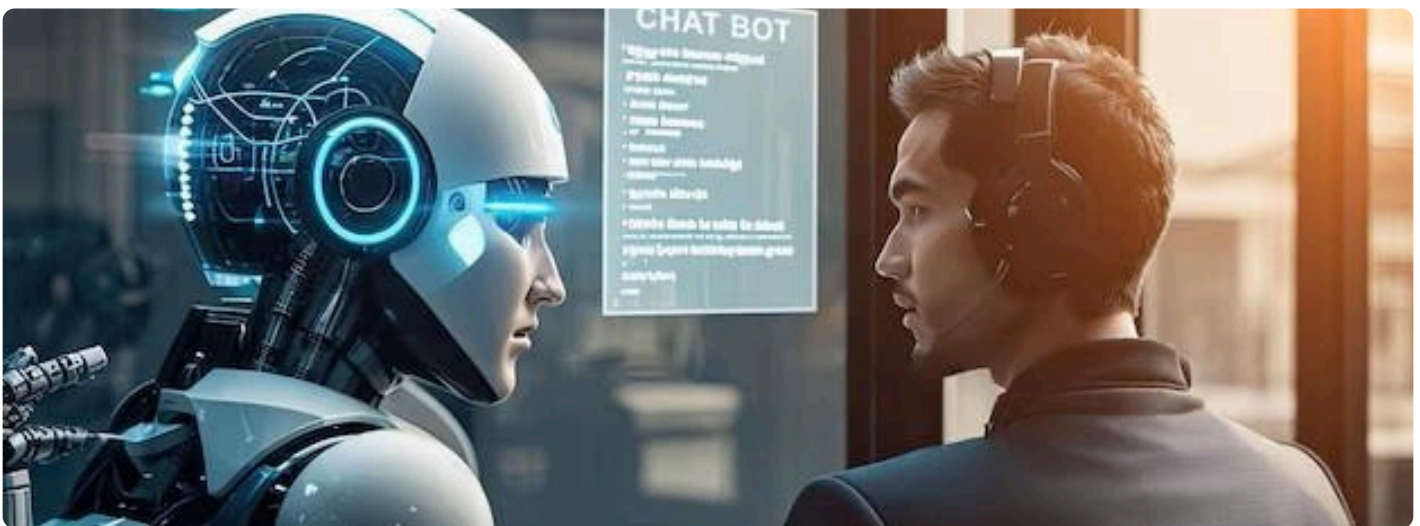
Why the Metaverse Flopped and What We Should've Learned

Muhammad Affan Asif (Chief Coordinator)

A few years ago, the "metaverse" wasn't just a buzzword; it was proclaimed as the successor to the mobile internet. Sparked by Facebook's corporate rebrand to Meta, a tidal wave of hype crashed over the tech and business worlds. Billions were invested, virtual real estate sold for millions, and we were all told to prepare for a future of virtual offices, concerts, and social lives.

Today, that vision feels less like the future and more like a fever dream.

The grand, all encompassing, Ready Player One style metaverse has, by almost every metric, flopped. Horizon Worlds, Meta's flagship platform, has been ridiculed for its basic graphics and low user counts. Decentraland, once a hotspot for digital land grabs, struggles to maintain a few thousand active users. The crypto and NFT markets that propped up its economy have imploded.

So, what happened? This wasn't just a bad forecast; it was a textbook case of a technology hype cycle colliding with reality. Here's the honest take on why it failed to launch and the critical lessons we should learn.

The Flop: A Solution in Search of a Problem

The primary failure of the metaverse was its inability to answer one simple question: "Why?"
It was a brilliant technological solution desperately searching for a problem that most people didn't have. The pitch was to replace or augment our reality work, play, and socialize with a 3D virtual one. But it turned out that most people... didn't want that.

The Hardware Was a Blocker, Not a Gateway Mass adoption requires accessibility. The metaverse demanded that users strap on bulky, expensive, and sometimes uncomfortable VR headsets. This high barrier to entry immediately relegated it to a niche for hardcore gamers and tech enthusiasts, not the general public. We weren't ready to trade our sleek, convenient smartphones for a face computer.

01.

The Experience Was a "Flop" For those who did jump in, the experience was profoundly underwhelming. Instead of a seamless new reality, users found clunky, buggy, and often empty worlds. The graphics were basic, the interactions awkward. It failed to offer a "killer app" that one compelling reason to return. Why struggle through a virtual meeting with legless avatars when Zoom or a real-world coffee chat is infinitely more efficient and human?

02.

The World Was Already "Re-Opening" The metaverse hype was turbocharged by the COVID-19 pandemic. When we were all locked inside, the idea of a digital world to escape to seemed plausible. But tech leaders miscalculated, assuming this forced digital first life was a permanent "new normal." As the world re opened, the last thing people wanted was more screen time. We craved face to face interaction, not a digital substitute.

03.

The AI Revolution Stole the Spotlight Just as the metaverse was peaking in hype, a different technology emerged that offered immediate, tangible value: Generative AI. While the metaverse was asking people to buy headsets for a future that wasn't built, ChatGPT was writing their emails, coding their apps, and answering their questions right from their existing browser. AI provided a clear and instant return on investment, and the world's attention, and funding, pivoted on a dime.

04.

It Was Chained to Another Hype Cycle: Crypto & NFTs The early vision of the metaverse was inextricably linked to the speculative frenzy of cryptocurrency and NFTs. The idea of "owning" digital assets was core to its economy. This meant virtual real estate, digital sneakers, and avatar skins were being treated as speculative financial assets. When the crypto bubble burst, it took the metaverse's credibility and financial foundation down with it.

05.

The Lessons: What We Should've Learned

The spectacular implosion of the metaverse hype doesn't mean the underlying technology is useless. It just means we were sold the wrong dream. The real lessons are about separating hype from utility and building for sustainable trends.

Lesson 1: Hype Is Not a Business Model The metaverse is a perfect case study of the Gartner Hype Cycle: a technology trigger (VR) led to a "Peak of Inflated Expectations," which has now crashed into the "Trough of Disillusionment." The lesson is simple: just because a new technology is possible doesn't mean it's viable or necessary. Sustainable tech isn't built on buzz; it's built on solving a real customer need.

Lesson 2: Technology Should Augment Reality, **Not Replace It** The core vision of the metaverse was escapist. It failed because it bet against reality. The more sustainable trend is technology that enhances our existing world. This is where the concept of the "spatial internet" or augmented reality (AR) has a much clearer path. Think of AR glasses that provide directions, live translation, or product information seamlessly overlaid on your view of the real world. That's a tool, not an escape.

Lesson 3: The "Real" Metaverse Was Already Here While corporations were trying to build a top-down metaverse, wildly successful versions were already thriving. Platforms like Fortnite, Roblox, and Minecraft are the true metaverses. They succeeded because they are, first and foremost, games and social platforms. They are community driven, built on user-generated content, and don't require a $3,000 headset. They grew organically from a clear use case (fun) rather than a corporate mandate.

Lesson 4: It's Not a Competition; It's a Convergence The future of immersive computing isn't "Metaverse vs. AI." It's "Metaverse and AI." The underlying technologies of the metaverse spatial computing, VR, and AR will be made infinitely more powerful by AI. Imagine an industrial "digital twin" of a factory that you can walk through in VR, asking an AI assistant to run simulations. That is where this technology is heading: not as a mass-market social network, but as a powerful, high value tool for enterprise, industry, medicine, and gaming.

The "metaverse" as we knew it is dead. But the technologies it was built on are quietly maturing, shedding their speculative baggage, and finding their true purpose.

The Guide to Blockchain & Web3: Powering the Next Internet Revolution

Mohammed Abdullah Shareef (Chief Coordinator)

What is Blockchain?

Blockchain is like a public digital ledger, imagine a Google Sheet that everyone can check, but no one can secretly change. Every transaction is saved in a "block," which links up securely with the last one, forming an unbreakable chain.

- **Permanent**: Once added, info stays forever.
- **Decentralized**: No single owner or admin controls it.
- **Transparent & secure**: Everyone can see the records, and cryptography keeps it safe.

Blockchain technology is used for cryptocurrencies such as Bitcoin and Ethereum, but also for securing digital certificates, tracking products, and even for secure voting.

What is Web3?

Web3 is the next level of the internet, powered by blockchain. Unlike traditional websites or apps controlled by companies, Web3 lets you own your online identity, digital assets, and even profits from your creations.

- **NFTs (Non-Fungible Tokens):** Digital collectibles you truly own.
- **dApps (Decentralized Apps):** Online programs that run independently.
- **Smart Contracts:** Agreements written in code that execute automaticall.

Web3 is reshaping industries from finance (DeFi) to music, art, and gaming

WEB3: THE DECENIALIZED INTERNET
OWN YOUR DIGITAL FUTURE
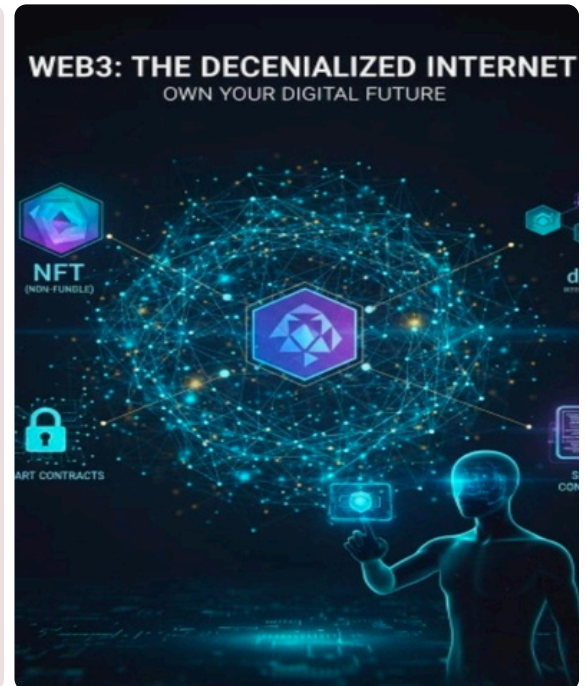
Trending Now: Bitcoin Correction and Market Volatility:

Bitcoin's Price Moves: Bitcoin peaked at $122,000 in early October and settled around $108,000.

Exchange Transparency: Bitget exchange published a "Proof-of-Reserves" audit, reassuring users that it has more crypto than needed.

Fully Decentralized Blockchain: Kadena's project now runs completely on code and community participation.

Green Blockchain: Eco-friendly platforms like Algorand and Polygon are helping blockchain go green.

How Can You Get Involved?

1. Get a digital wallet such as MetaMask or Phantom.
2. Try blockchain features with free test tokens.
3. Learn about coding for Web3, Solidity and Rust are popular languages.
4. Find online communities, join events, or contribute to blockchain projects.

Why Does This Matter?

Blockchain and Web3 give you more control, privacy, and potential to participate in the future internet. Whether for secure payments, sharing digital works, or joining global communities, the decentralized revolution opens new possibilities.

Major Headlines and Industry Shifts

Kadena Foundation Winds Down: The Kadena blockchain announced it will continue running autonomously even after its foundation's closure, signalling the strength of decentralized governance models.

DeFi Continues Expansion: Decentralized finance protocols are adding new features like real-world asset tokenization and AI-driven liquidity management.

Corporate Web3 Integration: Global firms are migrating loyalty programs, digital identity systems, and asset authentication processes onto blockchain-based solutions.

What's Next?

INTEROPERABILITY: The Seamless Future
Connecting Blockchains, Unifing Digital Civilization

- Experts believe that 2026 will be the year of interoperability, the seamless connection between blockchains, allowing assets and data to flow freely between platforms. Meanwhile, regulatory clarity from major economies could accelerate institutional entry into Web3 ecosystems.
- Blockchain and Web3 are no longer futuristic ideas; they are redefining the foundation of digital civilization. From finance to governance, from art to law, decentralization is not just a trend, but a transformation of power.

Power your curiosity. Step into the next internet revolution!

The Importance of Family in the Age of Modernisation

Mohammed Azeem Uddin Siddiqui (Treasurer)

In the rush to chase our dreams, build careers, and explore new worlds, we often leave behind the quiet corners of our childhood homes the laughter echoing in familiar rooms, the reassuring presence of parents, the simplicity of evenings spent together. Modernisation has taught us to move forward, but sometimes, in all that movement, we forget to look back.

We live in times where people cross oceans to study, work, and succeed. We learn to adapt to new cultures, new lifestyles, and new faces. Yet, there are moments between late-night deadlines and busy city lights when the heart yearns for the scent of home, for the comfort of being known without explanation. The world feels larger than ever, yet lonelier too.

Family, in its purest form, is our first language of love. It's where we learned to share, to forgive, to care, and to dream. Our roots are not chains that hold us back; they are the soil that gives us strength to grow. Without them, progress feels hollow like a tree that has outgrown its ground but lost its shade.

THE IMPORTANCE OF FAMILY IN THE AGE OF MODERNISATION

OUR ROOTS, OUR STRENGTH

As modern life pulls us in countless directions, let us pause to remember the ones who stand quietly behind our success stories. Call home. Visit often. Cherish the bonds that time and distance can never truly break. Because when the world grows too fast and too unfamiliar, it is family that reminds us where we belong.

Let us embrace modernity but never at the cost of the love that made us who we are.

TECH RELATED : FACTS AND PUZZLES

Facts

Bluetooth is named after the 10th century viking king,Harald Bluetooth, who united the Danish tribes into a single kingdom, just as how the technology is meant to unite communication protocols

A single Google search, utilizes more power than the entire NASA apollo moon landing program

Quantum Computers must operate in extremely cold temperatures-near absolute zero(-273°C) , so qubits don't lose stability

All the amount of data on the internet (roughly 40 billion terabytes) can be stored in just a few grams of DNA

Wi-Fi was discovered by accident while researchers were trying to detect black holes using radio signals , and it changed the world forever.

Researchers at Oxford trained an AI model that can lip-read with 93% accuracy which is far higher than professional lip-readers.

The programming language Python was named by its creator, Guido van Rossum, as a tribute to the British comedy series "Monty Python's Flying Circus

The "Forgot Password" Feature Was Invented Because the Creator Forgot His Password. In 1997, tech executive Phil Goldman couldn't remember his password for a new set-top box he was developing. Frustrated, he had his team build a system to reset it remotely, and the now-ubiquitous feature was born.

Spot the Bug

A code snippet will be given, spot where it's wrong, it can be both, logically incorrect or with respect to syntax.
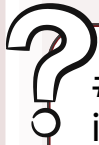
```
#include <stdio.h>
int main() {
    int a = 5, b = 0;
    printf("%d", a / b);
    return 0;
}
```

```
#include <stdio.h>
int main() {
    int num = 5;
    if num > 0
  printf("Positive");
    return 0;
}
```

```
#include <stdio.h>
int main() {
    int a;
    printf("%d", a);
}
```

```
#include <stdio.h>
int main() {
    char str1[] = "Code";
    char str2[] = "Code";
    if(str1 == str2)
        printf("Equal");
    else
        printf("Not Equal");
}
```

```
#include <stdio.h>
int main() {
    int a, b = 5;
    a + b = 10;
    printf("%d", a);
}
```

```
#include <stdio.h>
int main() {
    int n;
    printf("Enter a number: ");
    scanf("%d", n);
    printf("%d", n);
}
```

LOGIC UNLOCKED

1. Error: Division by zero —(runtime error)
   Fix: Check b != 0 before division.

2. Error: Missing parentheses in if.
   Fix: if (num > 0)

3. Error: a is not initialized — prints garbage value.
   Fix: int a = 0;

4. Error: Compares addresses, not contents.
   Fix: Use the standard library function strcmp()
       strcmp(str1, str2) == 0.

5. Error: You can't assign to an expression (a + b = 10;).
   Fix: a= 10-b

6. Error: Missing "&" before variable name in scanf.
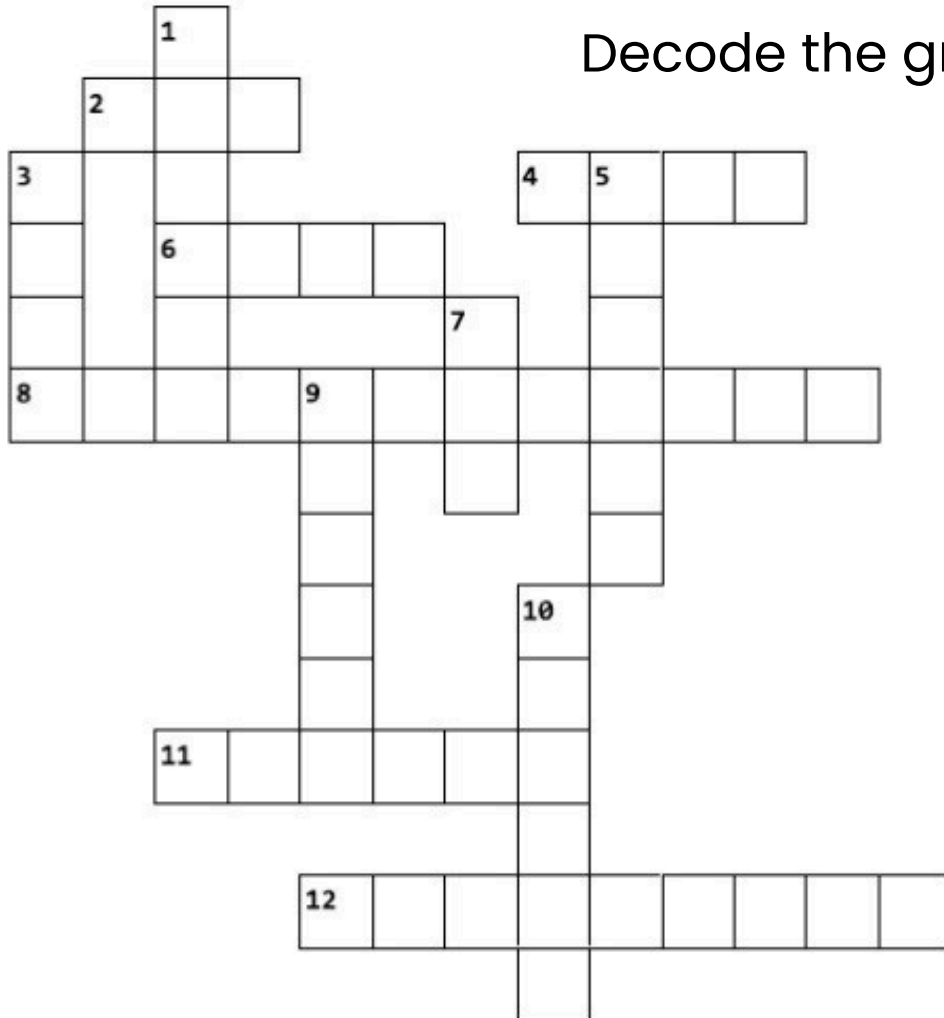   Fix: scanf("%d", &n);

Tech Crossword

A crossword puzzle with tech terms

Decode the grid

ACROSS

2. Python keyword to define a function
3. Programming language known for its coffee logo
4. A pointer that holds no valid address
5. Java principle allowing same method name with different signatures
6. Basic unit of data transmission
7. Technique of calling a function from within itself

DOWN

1. The central nervous system of a computer
2. Region used for dynamic allocation at runtime
3. The first search engine launched before Google
4. Keyword used to handle exceptions in Python
5. The first graphical web browser
6. Place to store and organize code online

The Better Win: A Hackathon Tale

Sumaima Ayman, 1st year CSE

The air is thick, a code-fueled haze, Monitors glow in the digital maze.
A nervous energy hums, low and deep,
A tremor of fear mixed with hope's bright sweep. The clock starts its sprint, a breath held tight,
To face the long, demanding coding night.

We gather as one, though our skills are diverse, The UI expert and the code's terse verse.
Each specialized mind finds its essential place, Pushing the project at a furious pace.
The shared flow of thought, the triumphant call, Confidence swells, strengthening us all.

No arrogance here, no cold, silent stare,
Just knowledge to share and solutions laid bare. Across the worn tables, a kinship is found,
A feeling of respect on this common ground. The rivalry's healthy, a push to be best, Kindness prevails, putting ego to rest.

The clock's face blurs, the minutes quickly cease, The long, blurry night finds a fragile, hard peace.
Our eyes red and sore from the screens' constant light, We push past the limit, through the endless code fight. The demo approaches, our product is done,
Fueled by sheer will, with the final file sent, And pray for the win, on this energy spent.

We hold our own hearts, as the winning names fly, A heart-pounding rhythm as the voices go by.
If triumph is ours, what a roar we will make!
But if not, we still cherish the road that we take.
We walk out with lifetime experience and ease,
And friends—our dear teammates—who truly all please.

"The prize may evade, but the better win's gained: The bonds and the knowledge we quickly attained."

Ashes and Olive Trees

Mohammed Fawaz Malik (Editorial Head)

The sky bleeds grey, the soil bleeds red,
Dreams get buried where the children bled.
Homes get reduced to dust and cry,
And yet, their hope refuses to die.

They wake to fear, they sleep to pain,
Still whisper "Tomorrow" again and again.
The stars may turn, the nights may weep,
But promises made in faith run deep.

Why must peace be regarded as such a crime?
Why does silence have to age before its time?
Why must the world just watch and not see?
That the chains don't make captivity free?

A mother hums through her trembling breath,
A prayer soft against the scent of death.
Her son still smiles, his eyes still shine,
Defiant, small, and yet divine.

Yet they hope, that one day, the wounds will learn to heal,
The scars will fade, the world will feel.
And freedom's light, so long confined,
Will rise again, for humankind.

Lights of Innovation

Furqan Ahmed
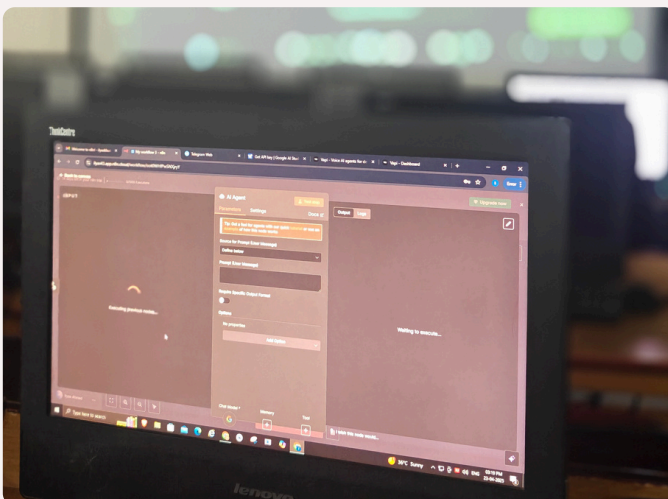
In every mind, a vision gleams,
A code, a thought, a world of dreams
A spark that turns the dark to light.

With code and vision side by side,
CSI inspires the tech-born tide.

With passion high and goals that fly,
CSI leads where futures lie.

Each click, each thought, a step anew,
Tomorrow's path is shaped by you.

For those who dare to reach the sky
Innovation lives, where CSI lies.

FROM THE PRINCIPAL'S DESK

Dr. Mahipal Singh Rawat

Dear Students,

Every stage of your academic journey brings with it new challenges and new possibilities. As you move forward, remember that growth often begins where comfort ends. The ability to adapt, to persevere, and to overcome difficulties with determination defines not only success in academics, but also in life.

At MJCET, we believe education extends beyond classrooms, it is about shaping character, cultivating curiosity, and nurturing the courage to think independently. In a world driven by innovation and change, those who combine knowledge with resilience are the ones who truly make a difference.

Hard work and consistency remain your strongest allies. Every small effort contributes to a larger achievement, every obstacle is an opportunity to learn something new about yourself and the world around you. Let your ambitions be bold, but grounded in discipline and integrity.

While academic excellence is essential, personal growth is equally important. Strive to be compassionate, thoughtful, and open-minded. True success lies not only in what you accomplish, but in who you become through the process.

As you continue your journey at MJCET, remember that the road ahead may not always be easy, but it is through persistence and purpose that you will discover your potential. Believe in your abilities, stay determined, and embrace every experience as a step toward becoming the best version of yourself.

Wishing you all continued success and fulfillment in the year ahead.

- Principal, MJCET

Challenges for Computer Science Engineering Students Rapidly Changing Technology

Syed Ferhathullah Hussainy

Rapidly Changing Technology
The pace of technological advancement, particularly in **Artificial Intelligence (AI), Machine Learning (ML),** and **Data Science**, is faster than ever before. Students must constantly **upgrade their skills** to stay relevant. Adaptability and a mindset of **continuous learning** are essential, especially with the rise of **quantum computing, edge AI, and generative AI.**

Industry Readiness and Job Competition
With a growing number of engineering graduates each year, **competition for quality jobs is intense**. There often exists a **gap between academic learning and industry requirements**. Students need to focus on **project based learning and solving real-world problems.** Employers now prefer candidates with **hands-on experience** gained through **internships**, **hackathons**, and **open source contributions**.

Impact of AI Automation
Routine and repetitive software development tasks are being increasingly automated using AI tools. Instead of fearing automation, students must learn to **leverage AI effectively** to enhance productivity, creativity, and efficiency in their work.

Weak Foundation in Core Concepts
A strong grasp of fundamentals such as **Data Structures**, **Algorithms, and System Design** remains crucial. Overreliance on AI tools can weaken problem-solving skills. Hence, students should focus on **conceptual clarity and practical application** of core computer science subjects.

Balancing Health and Work
The continuous pressure to learn new technologies, meet coding deadlines, and manage career uncertainty can cause **stress and burnout.** Therefore, developing **emotional intelligence**, **time management, and stress handling** abilities is as important as technical competence for long term success.

Wish you all the Best

- Dean, MJCET

Empowering Innovation: The Role of CSI Student Chapters in Shaping Future Technologists

Prof. Syed Shabbeer Ahmad

As the Head of the Computer Science and Engineering department, I'm thrilled to see our students actively participating in the Computer Society of India (CSI) student chapter. The CSI student chapter provides a platform for our students to engage with industry professionals, participate in cutting-edge projects, and develop essential skills that will benefit them throughout their careers.

Benefits of CSI Student Chapters:

- Networking Opportunities: Interact with industry professionals, researchers, and academicians, opening doors to new collaborations and career paths.
- Skill Development: Participate in workshops, seminars, and projects that enhance technical and professional skills.
- Research and Innovation: Engage in research projects, paper presentations, and competitions that foster innovation and creativity.
- Career Advancement: Access to job opportunities, internships, and mentorship programs that help students chart their career paths.

Our CSE Department's Involvement:

Our department has been actively involved with the CSI student chapter, participating in various activities such as project presentations, workshops, and seminars. Our students have benefited greatly from these interactions, gaining valuable insights into industry trends and best practices.

Conclusion

The CSI student chapter plays a vital role in shaping the next generation of technologists. As educators, it's our responsibility to provide students with the necessary skills, knowledge, and platforms to excel. I'm confident that our students will make the most of this opportunity and emerge as leaders in the tech industry.

Let's work together to empower innovation and shape the future of technology!

- Head-CSED, MJCET

Roadmap to Engineering Your Future

Dr. Maniza Hijab

In today's fast-evolving tech landscape, computer science is no longer limited to just learning how to code it's about understanding and shaping your future. With breakthroughs in Artificial Intelligence and its allied domains, Cybersecurity, Cloud Computing, and the ongoing wave of Digital Transformation, CSE students stand at the intersection of opportunity and innovation. To truly engineer your future, it's essential to build strong fundamentals early on, explore emerging technologies, and engage in hands-on learning through projects, internships, and open-source contributions

The four years of your CSE journey offers a unique chance to discover your passion, develop in-demand skills, and align your learning with industry needs. Whether you aspire to be an AI researcher, cybersecurity expert, software engineer, or data scientist, strategic planning and adaptability are key. As part of this planning, you need to:

Build Strong Foundations in programming, data structures, algorithms, computer networks, OS, and Databases, focus on languages like C, Python, C++, Java; Explore Emerging Technologies Early i.e. basics of AI, ML, Data Science, Cybersecurity, and Cloud Computing (through online courses, tech forums); Build Real-World Projects through application of classroom knowledge, AI models, concept of secure systems, or cloud-based application models and getting them visible through hosting on GitHub with proper documentation; Get Internship & Industry Exposure through working as Interns with startups, companies, or research labs to understand real-world workflows and also explore remote or freelance opportunities to gain early industry experience; Participate in Hackathons & Competitions i.e. Join coding contests, AI/ML challenges, or Capture the Flag (CTF) cybersecurity events which help you improve problem-solving and teamwork skills;

Use AI Tools to Boost your Learning i.e. Leverage tools like ChatGPT, GitHub Copilot, and Notion AI to assist in coding, debugging, research, and productivity; Focus on Certifications & Specializations in AI (offered by Microsoft, Amazon, Google), Cloud (AWS/GCP), Cybersecurity (CEH, CompTIA Security+, ISACA, CISSP), and Data Analytics ((which validate your skills and improve your employability; Develop Soft Skills & Professional Presence i.e. Improve communication, teamwork, and leadership skills and maintain a professional LinkedIn profile, engage in networking, and seek mentorship; Stay Updated with Industry Trends by following tech blogs, podcasts, YouTube channels, and newsletters thus keeping yourself updated with technology advancements

To put in a nutshell **Plan for your career and self with Purpose** by having both short-term (2 year) and long-term (6-year) career goals and accordingly align your learning path be it either in research, entrepreneurship, or corporate jobs.

Lastly it would not be an overstatement to say on my part that you are privileged to be at the right place **MJCET** wherein the ecosystem and environment for engineering your future is made available

- Associate Head and Joint Head CSED, MJCET

A Note from the Faculty Mentor

Professor Zainuddin Naveed

Since its inception in 2014, the Computer Society of India (CSI) Student Chapter at MJCET has evolved into one of the most dynamic and impactful student bodies on campus. What began as a small initiative to promote technical learning has grown into a thriving community that bridges innovation, collaboration, and real-world application.

Last year, CSI MJCET was honoured as the **Best Supporting Student Branch across** India a testament to the dedication, creativity, and consistent effort of our students and coordinators. This achievement reflects not only technical excellence but also the spirit of teamwork and perseverance that defines our chapter.

I encourage students to actively participate in such student bodies, explore diverse domains, and make the most of these opportunities. These platforms nurture leadership, communication, and problem-solving skills that complement academic success. Striking a balance between academics and extracurricular involvement is essential to becoming a well-rounded professional.

- Faculty Mentor, CSI MJCET

BULLETIN TEAM

Mohammadi Fatima	CSE IV	EDITOR-IN-CHIEF
Iqra Fatima	CSE III	CO-EDITOR-IN-CHIEF
Mohammad Fawaz Malik	CSE II	EXECUTIVE EDITOR
Syed Moinuddin Hussaini	CSD II	ASSOCIATE EDITOR
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