Highlight of the Issue

SPECIAL FEATURE:
Interviews

Silicon University

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SLATE

Silicon Language for Arts Technology & Education

Our Vision: To become a center of excellence in the fields of technical education & research and create responsible citizens

From the Editor's Desk...

Dear Readers:

We Siliconites are proudly celebrating the completion of a 25 year long journey of our cherished organization. It has been a quarter-century of Silicon's journey in dedication to quality education and carving a niche for itself in the field of technical studies, research, innovation and nation-building. From humble beginnings to becoming a University, the journey has been an impactful one achieving some major milestones in the process.

We have created professionals who travelled all over the world traversing the network of the global professional market of engineers and entrepreneurs. Our alumni have worked with some leading global professional houses, have studied abroad and have also been involved with various leading research organizations of the world. We extend our heartfelt admirations to our alumni who are making a difference not only in our nation but also worldwide.

We acknowledge the contributions of our stakeholders, our visionary founders, our pioneering academicians and our committed staff, who have played significant roles in creating this Silicon saga. While we commemorate our Silver Jubilee, we pay a tribute to the entire Silicon Family who have been together in this noble but challenging task of nurturing thousands of young minds in order to build a legacy of academic rigor and intellectual discipline. Together we have weathered challenges and transformed dreams into reality.

Academics at Silicon has always been of prime importance. With a significant rise in research activities through our PhD. programs Silicon University has opened new avenues and has added momentum through the external grant funding. Placement drives at Silicon have also undergone a noteworthy rise. The introduction of Practice School in the 4th year curriculum emphasizes the magnitude and the relevance of the change. A consistent growth across various fields of academics & research signifies a prominent development of the University as a result of its hard work and diligence towards delivering the best practices in the field of technical education.

However, we just do not look back at our accomplishments; rather we look forward to adding more years and achievements to our University's success in cultivating a future of innovation, technology and global impact. Standing on this Silver threshold we look forward with fresh enthusiasm and a robust drive to achieve new milestones and create a golden future. Join us all in this journey of imparting education and lighting a fire in the young minds. Happy Reading!

"Education is not the filling of a pail, but rather the lighting of a fire" – W. B. Yeats

Ms. Ananya Roychoudhury
Asst. Professor, BSH

EDUCATING US

The Smart Bulb Switch: How Your Phone Knows to Turn Off the Screen

Have you ever observed that brief moment of smartphone efficiency when you're on a call, and as you raise the device to your ear, the screen instantly dims! Once you move it away, the display immediately illuminates again. This transition is smooth, seamless, and almost gives the impression of intelligent responsiveness.

However, your phone isn't anticipating your actions or reading your thoughts. Instead, it's relying on a sophisticated piece of engineering grounded in basic physics—specifically, a tiny yet crucial component known as the proximity sensor.

The Secret Duo: Invisible Light in Action

The proximity sensor is discreetly positioned beside your phone's earpiece, often unnoticed. Though compact, it comprises two key components that function in harmony to achieve the desired effect:

1. The Emitter (The Sender): This is a miniature light source that emits infrared (IR) light, which is invisible to the human eye. IR light sits just beyond the visible spectrum, making it ideal for undetectable detection. You can think of it as a tiny, invisible flashlight that activates during calls.
2. The Receiver (The Listener): This is the photodiode, a sensor specifically designed to detect the IR light emitted by the sender. When the photodiode receives the IR beam reflected back, it generates a small electrical current—a signal it sends to the phone's processor.

The Physics of Peek-a-Boo

The entire mechanism operates in a straight

forward manner, akin to a game of catch. When the phone is away from your face: The IR light radiates outward into open space. With nothing close enough to reflect the light, the photodiode detects no return signal, resulting in no electrical current. In this case, the phone's processor receives the message: "All clear—keep the screen on."

When the phone is near your ear: Your skin, hair, or even the shape of your ear acts as a reflective surface. The IR beam strikes it and bounces back toward the photodiode. This return of light generates a stronger electrical signal, prompting the phone to instruct: "Object detected—turn the display off."

This simple yet effective interaction serves multiple purposes: it prevents accidental screen touches, conserves battery, and enhances the user's comfort during calls. It's an example of how subtle yet remarkable engineering can seamlessly integrate into our daily lives, often going unnoticed yet consistently reliable.

Tamanna Nirajkumar Jaiswal
4th Sem., ECE
(Excerpted from multiple web sources)

HEALTH WATCH

Diabetes – A Silent Fight

Imagine someone who wakes up tired, even after a full night's sleep, who reaches for a glass of water again and again. They don't look sick, they don't complain, but their bodies are fighting a quiet battle every single day. Diabetes, a condition that does not shout, it whispers.

Diabetes is not something you catch, and it is not simply caused by eating sweets. It happens when the body struggles to manage glucose, the sugar that keeps us alive. For some, the body stops producing insulin. For others, the body resists it. Either way, sugar stays in the bloodstream, and life becomes a little more difficult.

There are different forms of diabetes. Type 1 usually shows up early and requires lifelong insulin. Type 2, the most common type, often develops slowly over time. There is also Gestational Diabetes, which appears during pregnancy. Each type has its own challenges, but with the right care, people can still live long, meaningful, beautiful lives.

Implications and Risks

- Constant Fatigue: When the body can't use sugar for energy, it feels like carrying a weight around all day — your mind and body slow down.
- Slow Healing: Even small cuts or bruises take longer to heal, making everyday injuries feel more frustrating than they should.
- Vision Troubles: High sugar levels can blur eyesight or cause long-term eye problems if ignored.
- Heart & Kidney Strain: Over time, uncontrolled diabetes can quietly stress major organs, affecting the heart, kidneys, and nerves.
- Frequent Thirst & Urination: The body keeps trying to push out extra sugar, causing constant bathroom trips and never-ending thirst.

- Emotional Impact: Living with diabetes can feel overwhelming — stress, fear, frustration, and loneliness often accompany the condition more than people admit.

How to Deal?

- Medical Care: Regular sugar checks, doctor visits, medications, or insulin can make life much easier and safer.
- Healthy Lifestyle: Eating mindfully, moving a little each day, staying hydrated, and avoiding excessive junk foods make a big difference.
- Emotional Support: Talking to loved ones, joining support groups, or simply sharing the struggles can lighten the emotional burden.
- Awareness & Prevention: Early screening and lifestyle changes can prevent many cases of Type 2 diabetes, especially in families with a history of it.

Living with diabetes isn't easy — but it isn't the end of joy or freedom. With the right care, support, and awareness, people with diabetes can live full, happy, and powerful lives.

Rashika Das
5th Sem, EEE

FOOD FOR THOUGHT

Belonging over Buying: Why Modern Brands Sell Communities, Not Just Products

We live in an age where a simple purchase is no longer just a transaction. Walk down any street, scroll through any app, or walk into any café, you'll notice something interesting. People aren't just buying products anymore. They're buying identities, communities, and a sense of belonging. In today's hyper-connected world, brands have become more than logos or price tags. They've become tribes. And consumers, especially Gen Z and young millennials, are searching less for discounts and more for connection, recognition, and shared culture.

The Power of Belonging

Humans have always lived in communities, so it's natural that brands now lean into this instinct. The brands we connect with most don't just advertise to us , they speak like us, behave like us, and mirror our lifestyle. They make us feel part of something bigger than a coffee cup, a bike, or an app.

1. Starbucks

Sure, it sells coffee, but what people return for is the comfort, routine, and personalization. Your name on the cup, your stored favorites, your rewards tier — it all signals that you belong there.

2. Peloton

Beyond exercise bikes, Peloton created a global fitness tribe. Riders celebrate milestones, cheer each other on, and feel part of a shared lifestyle.

3. Zomato & Swiggy

These Indian platforms infused their brand with humor, memes, and relatability. They didn't just build users, they built a culture around everyday moments and wit.

4. Boat

Boat turned earphones into a youth identity. Their "BoAtheads" community reflects confidence, hustle, and a proudly Indian vibe. These brands don't just serve or sell. They connect.

The Secret Sauce

In this world, where social media is practically another language, micro-interactions like quizzes, polls, relatable memes, and user-generated content create lasting bonds. Whether it's Sephora's Beauty Insider or homegrown brands like Boat and Nykaa creating communities, customers don't just buy products, they adopt a vibe, a feeling, and a tribe. Brands that thrive now aren't the loudest; they're the most consistent. It's no longer about selling, it's about staying.

Loyalty today isn't transactional, it's emotional. We forget most products we buy, but we remember the café that felt warm, the app that made us laugh, the brand that made us feel seen. When brands shift from chasing customers to building communities, they become unforgettable. For students, creators, and future entrepreneurs, the message is simple: Build communities, not just businesses because belonging is the new brand.

Priyambada Dash
3rd Sem, CSE

MY CYBERSPACE

Supply Chain Attacks and Cybersecurity

A supply chain attack in cybersecurity occurs when attackers compromise a trusted third party — such as a software vendor, cloud provider, hardware manufacturer, or service partner — to infiltrate the actual target organization. Rather than directly attacking a well-secured system, adversaries exploit implicit trust in suppliers, shared components, updates, or services, making these attacks particularly stealthy and damaging.

Supply chain attacks are mainly of three types. Software supply chain attacks involve injecting malicious code into legitimate software updates, open-source libraries, or development tools. Hardware supply chain attacks focus on tampering with chips, firmware, or devices during manufacturing, shipping, or installation. Third-party vendor attacks exploit contractors or service providers that have privileged network access to the target organization.

Attackers first identify the weakest link in the supply chain. They compromise this entity using malware, credential theft, or vulnerability exploitation. Once compromised, the trusted relationship allows attackers to move laterally into the main organization, bypassing perimeter defenses and enabling data theft, ransomware deployment, espionage, or large-scale disruption.

Well-known incidents include the Target breach (2013) via an HVAC vendor and the SolarWinds attack (2020), where malicious code embedded in software updates impacted government agencies and enterprises worldwide. In 2025, supply chain attacks intensified, particularly targeting open-source ecosystems (npm, GitHub Actions), cloud service providers, firmware, and AI/ML pipelines. Attackers increasingly compromise maintainer accounts, steal API tokens, poison machine-learning models, and exploit CI/CD automation, allowing rapid, large-scale propagation across thousands of downstream users.

Defending against supply chain attacks requires strong vendor risk management, adoption of Software Bills of Materials (SBOMs), code signing and verification, software composition analysis, least-privilege access controls, continuous monitoring, and secure development practices. Together, these measures reduce blind trust, improve visibility, and strengthen organizational resilience against evolving supply chain threats.

Dr. Sushree Samita Rout
Associate Professor, CSE Dept.

MENTAL HEALTH:

You are not Alone: Go Beyond Stigma

The 21st century has seen a growing awareness of human dignity and privacy, alongside a striving for excellence. This has led to an expanding sense of individuality, which is essential for making an impact in a highly competitive world. The benefits are many: recognition of one's calibre, greater opportunities, and an expanding sphere of influence. However, it must be understood that such benefits come with an associated cost. That cost is a threat to mental health.

'Health' has been defined not merely as the absence of disease or infirmity, but as complete physical, mental, and social well-being, as per the WHO (1948). It is clear that mental health has always been an integral part of overall health, though it has often been neglected. While physical well-being has been emphasized in daily life, mental health refers to our psychological state and, to some extent, our social well-being. It influences how we think, feel, and act, and shapes our outlook on life. Therefore, it is vital to understand past constraints, handle immediate demands, and plan for a better future environment.

Good mental health allows one to enjoy life and think logically, while poor mental health can negatively impact one's emotions, thinking, and behavior, leading to mental health issues.

There are many reasons why people develop mental health issues. Some are genetic or biological, while others may result from childhood trauma or overwhelming stress at work. Environmental factors, such as injustice or violence, can also contribute. Unfortunately, mental health issues lack independent diagnostic evaluations; they are mostly manifested through behavior. As a result of behavioral issues, mental health conditions are often wrongly associated with malingering, overreacting, or buffering, and are frequently misidentified as genetic predispositions.

Possibly the biggest threat to the remediation of mental health conditions is the stigma attached to them. For many people, mental illness is seen as a sign of weakness. Self-stigma refers to the negative attitudes, including internalized shame, that prevent individuals from seeking help. Mental health-related stigma in India is a significant issue, with an estimated 70% - 92% of people with mental health issues not receiving therapy, largely due to social stigma and self-stigma. This stigma is fueled by a lack of awareness, a shortage of mental health professionals, and structural issues in understanding mental health care.

This brings us to the issue of seeking help and therapy. It's time we recognize and appreciate that mental health truly defines humanity. There is a pressing need to improve mental health literacy on a global scale.

If you are struggling or supporting someone dealing with mental health issues, remember that YOU ARE NOT ALONE, and it is important to ask for help. By seeking support, a person can learn to love their body, accept their personality, and respect their social status. The stigma surrounding mental health support and seeking help as a sign of weakness must end.

Ms. Rupanwita Mohapatra
Counselling Psychologist

IN CONVERSATION WITH ...

Prof. Ramprasad Panda

This interview with Prof. Ramprasad Panda, Dean (Student Affairs) at Silicon University, highlights the institution's strong commitment to student welfare, inclusivity, and holistic development. Conducted by Krishnamayee Pathy, a fifth-semester Electronics and Communication Engineering, the interaction highlights the university's proactive efforts to create a safe, supportive, and inclusive campus environment while encouraging student engagement beyond academics.

Krishnamayee: Welcome to the interview, Sir. Can you describe your role as the Dean (Student Affairs) at Silicon University?

Prof. Panda: My primary responsibility is to ensure the overall well-being of students across all aspects of campus life. This includes overseeing hostel facilities, maintaining discipline, managing counseling services, supporting student-led activities, and addressing student grievances to ensure that every student feels safe, supported, respected, and genuinely heard within the university campus.

Krishnamayee: What measures does the university take to promote inclusivity and discourage discrimination among students?

Prof. Panda: Silicon University strictly adheres to anti-discrimination policies and actively promotes the values of respect, equality, and mutual understanding among students from diverse backgrounds. Additionally, comprehensive security measures, including CCTV surveillance and continuous campus monitoring systems, are implemented to ensure a safe, secure, and inclusive campus environment for all.

Krishnamayee: What non-academic opportunities does the university offer to students?

Prof. Panda: Students are encouraged to actively engage in a wide range of clubs and extracurricular activities, including arts, culture, sports, technology, and social service. These platforms provide valuable opportunities for students to develop leadership qualities, enhance teamwork and communication skills, and build self-confidence, thereby contributing significantly to their overall personality and holistic development.

Krishnamayee: How does the university encourage social responsibility among students?

Prof. Panda: The university actively engages students in a wide range of community outreach initiatives, including blood donation camps, cleanliness drives, and awareness programs aimed at addressing social issues. We look forward to more students actively participating in these.

Krishnamayee: Thank you sir for sparing your valuable time for the interview.

IN CONVERSATION WITH ...

Ananya Dash

College life is often described as a blend of learning, challenges, and unforgettable moments — but for many students, it becomes much more than that. It becomes a space for self-discovery, discipline, and growth. In this interview, we speak with Ananya Dash, a student known for her clarity, determination, and thoughtful approach to academics. She shares her thoughts with Priyambada Dash of 4th sem. CSE branch how setting intentions and trusting the process helped her stay grounded throughout her journey.

Priyambada : How did you set academic goals, and how did you keep yourself accountable?

Ananya : From the beginning, I was very clear about what I wanted academically — what I expected from myself and where I wanted to reach. Whether it was short-term goals like university exams or long-term plans such as placement tests and competitive exams, I always kept the bigger picture in mind. This clarity made goal-setting easier. It helped me divide my time more effectively and stay focused on what mattered.

When it comes to accountability, I believe that once you have a well-defined plan, it naturally pushes you forward. It's not always about motivation — motivation fades. What truly keeps you going is discipline. Discipline helped me stay consistent, and because of that, I never felt overwhelmed or burdened. That doesn't mean I never had low phases; everyone does. But I learned to overcome those dips. The moment you step out of your comfort zone and choose to stay committed, you start polishing yourself — slowly but surely.

Priyambada : What's the best piece of advice you received during your college years that you would like to pass on to the juniors?

Ananya : The most valuable advice I received from my mentor was to remain consistent with my goals, no matter how long the results take to show up. You may see others achieving things earlier — someone getting the job you wanted or reaching milestones faster — but that shouldn't discourage you. Everyone's timeline is different. Starting late doesn't make you any less capable.

The truth is, no knowledge ever goes waste. Everything you learn will serve a purpose someday. Maybe not immediately, but eventually, it will pay off. So don't lose heart if results take time. "Trust the process, stay patient, and keep working. In the long run, consistency will always outweigh speed."

STUDENTS' CORNER

A Plain Tiger

An intruder has entered my cluttered space
that must have looked like an open cage.
An orange butterfly in my room,
another distraction, I sigh.
The continual fluttering,
a habit? I ponder.
Or has it picked up from its human environment,
some kind of restlessness, I wonder.

Fearing it would interrupt the calm of my day,
I decided to lead it away.
It must have sensed my cruel plans
to have hidden itself in a corner quietly.
Still and resting, flaunting its wings
that appeared to have carried radiance
from the flowers it had visited,
as if the petals had bestowed their glow upon it.

I knew it would leave,
there was no question.
Nothing of nature is willing
to stay stuck in the same place forever.
Nature rests, nature moves
and so shall we.
New places to go
and new people to be.

Sarbani Devaprita
3rd Sem, CSE

All Falls Still

Death is a lie,
Beyond those timid walls,
A soul still cries,
That left without fear.
It does not see
The people's grief.

Life is a gift,
Or so it seems,
But the lie appears,
As all falls still,
It leaves behind
No scars.
Such an admirer,
Who feels the existence
Of the soul,
Yet never summons
The pain
Of the beloved.

It waits
For the afterlife,
That may direct
The threads
Left behind.

Priyanka Rath
8th Sem, CST

Sanative Silence

Caught in the silence,
Among the herd of darkness,
I was waiting for optimism,
That could fetch me radiance.

It was a powerless stormy night
Where the city had blacked out.
And the internal turmoil roaring within,
Was wilder than the superficial sight.

Unknowingly, those clutters of exposure,

Which had no source of destructions to escape,
The feeling that kept me going,
Was negotiation of composure that graced.

Gradually form a tempestuous epitome,
I turned into a soul with tranquil mind.
There was no quest of resilience,
I was gleaming bright in this respite time.

Now, neither the outer chaos of turbulence,
Nor the harsh wind through life's frame
Could devastate the sense of serenity,
That was accidently taught by the enlightening silence.

Rashika Das
5th Sem, EEE

Special Feature

Conversation with Mr Gaurav Mohanty

Mr. Gaurav Mohanty, writer, lawyer and stand-up comedian visited Silicon during the LitFest. In this interview taken by Krishnamayee Pathy, 6th Sem. ECE branch, he discusses about blending mythology with imagination, the challenges of reinterpreting epics like the *Mahabharata*, and how his multidisciplinary path evolved from curiosity and discipline. He also reflects on storytelling, audience connection, and developing a unique creative voice.

Krishnamayee : Your novels blend mythology and fantasy. How do you balance research with imagination?

Gaurav : I didn't conduct formal research for my books; years of reading and academic exposure shaped my understanding of mythology. Imagination, however, is a realm without boundaries. My legal background subtly influences my writing — a lawyer's mind analyzes, questions, and constructs arguments. This approach naturally finds its way into my characters, conflicts, and plotlines.

Krishnamayee : What was the most challenging part of building the worlds in *Sons of Darkness* and Dance of Shadows?

Gaurav : The challenge was balancing conservative expectations while reimagining the *Mahabharata*. I didn't consciously try to make characters relatable; I wrote the story I wanted to read. Relatability emerges through the reader's interpretations — it's a shared space between the writer and reader, who bring their own emotional connections.

Krishnamayee : You're a lawyer, writer, and comedian. How did this multidisciplinary journey begin?

Gaurav : I was a complete nerd early on, not participating in extracurricular activities. Later, I explored various hobbies and naturally connected with writing and comedy. All three roles — lawyer, writer, and comedian — revolve around words to convey ideas, emotions, or arguments, which ties my journey together.

Krishnamayee : What's more challenging: making an audience laugh or keeping readers engaged for 400 pages?

Gaurav : Stand-up comedy is more challenging. If a joke doesn't land, you must adapt instantly. Writing, on the other hand, is a slower, reflective process. You have time to revise and refine, and the novel grows with you over time. The stage offers no such luxury.

Krishnamayee : What advice would you offer aspiring writers who wish to develop a unique voice?

Gaurav : Focus on being distinct, not necessarily original. Truly original ideas are rare. What matters is how you reinterpret and personalize what exists. As the saying goes, "Steal like an artist."

Special Feature

Interview with Dr. Gagan B. Rath

Silicon University had the opportunity to invite Dr. Gagan B. Rath, senior scientist at Inter Digital R&I, Rennes, France for a guest lecture on "Video Compression: An Engineer's Perspective". Later he was interviewed by Tamanna Jaiswal of 4th Sem. ECE branch.

Tamanna : Classical video compression methods like H.264 and HEVC have been widely used. What do you think are their main limitations, and how do you see newer methods (like AI-based approaches) addressing those challenges?

Dr. Rath: Improvements are always possible — there is no final limit. Even with advanced standards like H.264 and HEVC, challenges arise when we move to formats such as 4K and 8K. These require hardware that can support them, and though the methods are complex, they are still supportable. We have already achieved quite a lot, and the field continues to improve.

The true theoretical limit in compression is defined by entropy for lossless compression — you cannot go beyond that. In lossy compression, the challenge is different: to compress further while maintaining the same visual quality. Advanced methods do achieve this, but at the cost of making the decoder more complex. Standardization is also becoming stronger in this space.

AI-based methods bring a new approach. Instead of defining layers step by step as in classical methods, AI can learn directly. For example, it can address individual blocks in an image or video, or compress data without needing predefined structures — you simply provide the photo and get it compressed. This makes AI powerful, but it also introduces high complexity. So while it offers exciting possibilities, the practical challenge lies in managing this complexity.

Tamanna : What message or advice would you like to give to students like us who are aspiring to contribute in the fields of signal processing and communication systems?

Dr. Rath: If you are working in this field, you must know about video and you must know signal processing. These are not optional — they form the base of everything in compression and communication. At the same time, this knowledge will also help you in jobs. Companies look for people who understand the fundamentals, because these skills are useful not just for research but also for real-world applications. So my advice is: focus on building strong fundamentals in video and signal processing — it will benefit you in every way.

Special Feature

Voices that Shaped the Closing Reflections of NIRMAN 2025

As Silicon University's technical fest NIRMAN 2025 reached its conclusion, the focus gradually shifted from competition and display to reflection and dialogue. The final phase of the event offered students an opportunity to engage with industry professionals whose experiences extended learning beyond classrooms and curricula. These interactions provided a measured closure to the fest—one defined not by spectacle, but by perspective.

Across the sessions, speakers addressed questions central to professional growth: how to approach problems, how to remain relevant in evolving industries, and how learning must adapt to real-world contexts. Rather than delivering prescriptive advice, the discussions encouraged students to think critically about their learning processes and long-term development.

Understanding the Value of the Problem (Kabisurjo Choudhary)

Kabisurjo Choudhary, State Head – Odisha, Reliance Jio, addressed students with a focus on how innovation begins. He encouraged them to engage deeply with challenges instead of seeking immediate answers, emphasizing the importance of curiosity and thoughtful analysis.

His message was, "Fall in love with the problem, not the solution."

He spoke about learning as a continuous process that gains relevance through consistent application. Knowledge, he noted, evolves when tested against practical situations rather than confined to academic frameworks. Addressing concerns around failure, he urged students to view it as a constructive phase in the learning journey.

"Failure is not something to fear. Every mistake carries a lesson that shapes you."

His interaction highlighted patience, persistence, and reflective thinking as essential qualities for sustained professional growth.

Creativity as a Professional Competency (Mohar Manohar Mishra)

Emphasizing innovation as a mindset, Mohar Manohar Mishra, Chief Technology Officer and Co-founder of Inovaare Corporation, spoke about the role of creativity in driving progress across domains.

His message was, "Creativity lies at the centre of every meaningful progress."

He observed that learning environments which encourage experimentation and collaboration help students develop adaptability and independent thinking. Such exposure, he noted, plays a critical role in preparing students for professional challenges that extend beyond technical expertise.

His remarks reinforced the importance of cultivating creativity as a skill that supports problem-solving, leadership, and long-term relevance.

Learning with Context and Application (Debakanta Mishra)

Focusing on the transition from academic learning to professional practice, Debakanta Mishra, Segment Delivery Head at Tata Consultancy Services (TCS), spoke about aligning education with real-world demands.

Saying that "Professional studies should prepare you to solve real-world problems." he emphasized the importance of understanding how concepts function within systems across sectors such as finance, healthcare, and media. Encouraging students to question and explore beyond prescribed content, he identified one guiding inquiry:

"How does this really work?"

He also underscored the role of extracurricular engagement—sports, cultural activities, collaborative projects—in developing well-rounded professionals. In an environment where technical knowledge is widely accessible, he noted, holistic development offers a significant advantage.

The interactions conveyed a consistent perspective: effective learning extends beyond technical competence. Curiosity, creativity, contextual understanding, and continuous engagement are equally important in shaping professional readiness.

For students of Silicon University, the closing conversations served as a reminder that education is an evolving process. As the event concluded, the insights shared offered a lasting framework for approaching learning—not as a finite phase, but as a lifelong pursuit shaped by inquiry and application.

Special Feature

Interview with the Winning Hackathon Team

This student interview features the winning team of the One Earth International Hackthon 2025, led by Aayushi Samantsinghar, 8th Sem., ECE branch providing inspiring insights into teamwork, innovation, and problem-solving. The conversation with Ayushi and the members, Debasish Maharana, 8th Sem., ECE branch, Santosh Senapathi, 6th Sem., EIE branch, and Bibhu Prasad Lenka, 6th Sem., EIE branch, highlights the group's collaborative approach, individual contributions, and the lessons they learned throughout the competition. It reflects how hackathons at the university foster creativity, technical skills, and effective collaboration, empowering students to turn ideas into impactful solutions. The interview was taken by Ms. Priyambada Dash, 4th Sem., CSE branch.

Priyambada: How did you balance usability, aesthetics, and technical feasibility? What would you improve with more time?

Aayushi: We prioritized the user by keeping the interface simple and easy to understand, with soil carbon insights for farmers, while using technically reliable components. Design elements were minimal and purposeful. With an extra 24 hours, we would add a personalized recommendation feature to translate soil carbon data into actionable, crop-specific guidance for farmers, enhancing the core system to have a real-world impact.

Priyambada: A strong presentation can have a significant impact on the outcome. How did your team communicate the value of your solution effectively to the judges?

Debasis: We focused on clearly communicating the problem first—why soil carbon tracking matters to farmers and the environment—we demonstrated how our AI-powered IoT solution addressed it practically. Storytelling played a key role; we guided judges through a farmer's journey, making the solution relatable and impactful, showing both innovation and real-world relevance.

Priyambada: Can you give insights into your problem statement and solution?

Abhijit: Our problem statement emphasized how the EU's carbon credit standards for imports affect farm produce, but measuring soil carbon is

expensive and complex for local farmers. The solution we developed is an AI-powered soil carbon tracking system that uses IoT and embedded systems, delivering real-time, accurate, and accessible data, simplifying what is otherwise a cumbersome process.

Priyambada: Did any assumptions get challenged during the hackathon? Any advice for hesitant students?

Abhijit: I assumed we weren't as prepared as other teams, but our working model proved otherwise. For those hesitant, I'd say participation is the key—failure is temporary, experience is permanent. Being fearless and proactive matters more than worrying about the outcomes.

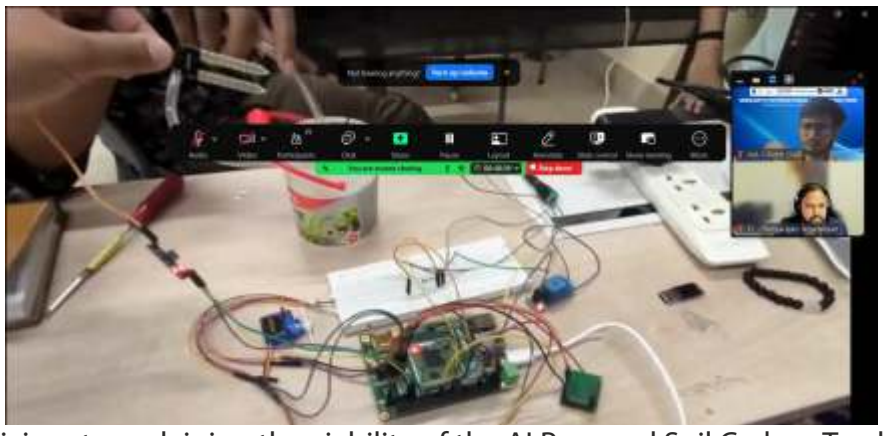
Priyambada: What was the most challenging moment, and how did the team overcome it?

Bibhu Prasad: Managing an intense workload under time constraints was tough. Collective focus, mutual support, and staying engaged with the process helped us overcome challenges, making the experience rewarding. One should stay aware of the events happening around us, because there's more to life beyond academics that's worth noticing and exploring.

Priyambada: How has this experience influenced your perspective on innovation and your future goals?

Santosh Kumar: Winning this hackathon highlighted the importance of practical thinking, teamwork, and rapid problem-solving. It motivated me to apply learning to real-world problems, shaped my interest towards innovation-driven career goals, and improved my time management and task prioritization.

Priyambada: Thank you so much for your time.



Participants explaining the viability of the AI Powered Soil Carbon Tracking

ALUMNI SPEAK

Richa Kumari, Amazon

This interview highlights the vital role alumni play in strengthening the institution's academic and professional ecosystem. Through thoughtful reflections on career progression, interdisciplinary learning, and personal growth, our alumnus, Richa Kumari, shares experiences shaped by her time at the university. The conversation highlights how alumni serve as ambassadors of the institution's values, offering guidance, inspiration, and real-world perspectives that effectively bridge academic learning with professional practice. The interview reaffirms the importance of sustained alumni engagement in nurturing future generations and contributing to the institution's evolving legacy.

The interaction with Richa Kumari sheds light on the importance of hard work, discipline, and consistency across different phases of life. Currently working as a Software Engineer at Amazon, she exemplifies professional excellence and determination. During the interview, Satasha Samanwita Pradhan of ECE, 3rd Sem, asked her about the role Silicon University played in shaping her career, to which Richa Kumari expressed her deep appreciation for the university's strong academic foundation, vibrant coding culture, and the supportive environment it provides—factors that significantly contributed to her personal and professional growth.

She further reflected on her aspiration to become a software engineer at leading organizations such as Amazon as a freshman. Richa Kumari shared that her journey was driven by clarity of purpose and unwavering determination. Even before entering college, she had begun setting clear goals for herself, with coding becoming a central part of her academic journey and helping her gain direction and confidence about her future.

When asked about balancing college life—filled with fests, events, and extracurricular activities—alongside rigorous interview preparation, she offered insightful advice. She emphasized the importance of self-awareness in everything: understanding one's strengths and interests while maintaining academic discipline, attending regular classes, and continuously enhancing technical skill sets.

Reflecting on her journey, she shared her feelings about looking back at her younger self. She expressed a sense of pride and gratitude, acknowledging the challenges she had overcome and the growth she had achieved along the way.

In her closing message to readers, Richa Kumari encouraged students to always believe in themselves. She reaffirmed that perseverance, discipline, and self-belief can turn aspirations into reality and further emphasized that if she could achieve her goals, others can too.

THE INDIAN START-UP SCENE

SIIC, IIT Kanpur: Where Ideas Turn into Impact

In the evolving landscape of India's start-up ecosystem, innovation often begins quietly within corridors where ideas are tested, refined, and encouraged. Incubation centres play a crucial role in this journey, offering the space and support needed to transform concepts into meaningful ventures. One such institution that stood out in 2025 was the Start-up Incubation and Innovation Centre (SIIC) at IIT Kanpur.

The year 2025 marked a strong phase of growth for entrepreneurship in India, with innovation expanding beyond metropolitan hubs and into educational institutions. Established with a clear purpose—to support innovators at the earliest stages of their entrepreneurial journey—SIIC has steadily grown into a hub where creativity is encouraged, experimentation is welcomed, and learning continues. In 2025, the centre reached a significant milestone by incubating over 500 start-ups, reflecting its consistent growth and influence within the national innovation ecosystem.

What truly sets SIIC apart is the environment it offers to aspiring entrepreneurs. Being closely associated with IIT Kanpur, start-ups benefit from mentorship provided by experienced faculty members, industry experts, and successful founders. This blend of academic depth and practical guidance enables innovators to refine their ideas and develop sustainable business models. Access to advanced research facilities, laboratories, and technical resources further strengthens their capacity to innovate effectively.

Many start-ups incubated at SIIC in 2025 went on to secure funding and expand their operations, highlighting the strength of the ecosystem the centre has built.

Beyond business development, SIIC has demonstrated a strong commitment to inclusivity and social responsibility. The centre actively supported student-led and women-led start-ups, encouraging broader participation in entrepreneurship. Several ventures focused on addressing real-world challenges in areas such as healthcare, clean energy, agriculture, and rural development—reinforcing the idea that innovation achieves its greatest impact when it serves the greater good of society.

In 2025, SIIC also broadened its global outlook by establishing international partnerships, enabling start-ups to explore overseas markets and gain exposure beyond India. These initiatives helped young founders understand global standards and prepared them to compete on an international stage.

The journey of SIIC in 2025 highlights the vital role incubation centres play in shaping the future of innovation. By nurturing talent, encouraging experimentation, and supporting purpose-driven ideas, SIIC has contributed to technological progress, job creation, and entrepreneurial confidence.

In conclusion, the Start-up Incubation and Innovation Centre, IIT Kanpur, stands as a strong example of how the right guidance and ecosystem can turn ideas into lasting impact. Its growth in 2025 reflects the promise of a more innovative, inclusive, and future-ready India.

TRAVEL DIARY

Kolkata: The City That Feels Like a Poem

There are places you simply visit—Kolkata, you experience. Any time of the year brings its own charm, but Christmas adds a layer of warmth that feels almost magical. I had always heard that December in the city carries a different energy, yet nothing prepared me for the rush of colour and joy that greeted me the moment I stepped off the plane.

As my journey began, I kept looking out for the iconic Howrah Bridge. Under the winter sun, it shimmered lightly, as if dressed for the season. The air felt cooler, softer, and distant carols drifted in, blending seamlessly with the city's natural buzz. Even the river seemed calmer, as though Kolkata itself was taking a deep, gentle breath before slipping fully into festive mode.

By evening, I headed toward the glowing heart of Christmas—Park Street. The entire stretch looked like a grand festival: arches lit with fairy lights, stars and bells hanging overhead, colours bursting from every corner. Music spilled out of cafés, crowds moved with cheerful energy, and the aroma of plum cake and hot chocolate wrapped the street in warmth. For a moment, it truly felt like stepping into a Christmas movie.

I stopped by the legendary Flurys, where people waited patiently for their festive treats. The soft pink glow, the smell of fresh pastries, and the lively chatter created the perfect evening pause.

The next morning brought a gentle contrast at the serene Victoria Memorial. The winter sun made the white marble glow softly, while people strolled across the lawns, took photos, or simply enjoyed the quiet. The scene felt peaceful—an ideal reset after the vibrant chaos of Park Street.

Later, I made my way to College Street, a place where Kolkata's everyday life comes alive. Towers of books filled every corner, vendors called out confidently, and people bargained with familiar ease. At the historic Indian Coffee House, I watched students joke over notes as older regulars discussed politics with passion. It was lively, honest, and unmistakably Kolkata.

By the day's end, I realized something simple yet profound: Kolkata isn't just seen—it's felt. The lights of Park Street, the stillness of Victoria Memorial, the chaos of College Street, and the warmth of strangers stay long after you leave. In the soft winter sun, the scent of pastries, and the hum of conversations, the city quietly finds its way into your heart.

M. Zuhayer Labeeb
3rd Sem, ECE

MOVIE REVIEW
WALL-E

Pixar's WALL-E is one of those rare films that speaks softly yet leaves a deep echo, almost like it's reminding us of something we already knew about life but forgot along the way. On the surface, it's the story of a lonely little robot cleaning up an abandoned Earth, but beneath that simplicity lies a tender exploration of friendship, longing, and the choices that shape our future.

The film begins on an Earth that feels eerily familiar yet frighteningly empty. Mountains of trash stand where cities once thrived, the sky is hazy, and signs of life have faded. And right there in the middle of this abandoned world is WALL-E, doing the job he was built for long after everyone else has left. What makes him so compelling is the quiet humanity in his routines. He collects small treasures, watches old musicals, and longs for connection in a world that has forgotten what connection even means. There's something tender in the way he saves a simple lighter or admires a diamond ring but keeps the empty box, proving that meaning often lies in the things we choose to love.

When EVE enters the story—bright and determined—she becomes the spark that changes everything. Their friendship, and eventually their love, is portrayed not through long dialogues but through tiny moments: a held hand, a curious glance, a sacrifice made without hesitation. Through WALL-E and EVE, the film shows that love isn't about grand declarations; it's about showing up, staying, caring, and choosing someone again and again, even in the face of danger. Their bond becomes the emotional anchor of the story, reminding us that

companionship is one of the most fundamental human needs.

Yet WALL-E is equally a mirror reflecting our relationship with the world around us. The abandoned Earth is not just a backdrop; it is a warning. What makes WALL-E unforgettable is the way it speaks to every part of life. It's a love story, an environmental reminder, a reflection on loneliness, and a celebration of persistence. But above all, it feels deeply personal. It nudges us to appreciate small joys, to care for what we have—our planet, our relationships, our time—and to stay awake to the world instead of drifting through it.

In the end, WALL-E leaves you with a quiet ache and a gentle warmth, reminding you that even in the emptiest places, love and hope can still grow… as long as someone chooses to keep holding on.

Pratishya Priyadarshni
7th Sem., EEE

EARTH MATTERS

Bioindicators: Nature's Tools for Environmental Monitoring

Bioindicators are living organisms used to assess the health and quality of the environment. They respond sensitively to changes in environmental conditions such as pollution, climate change, and habitat degradation, making them valuable tools for monitoring ecosystem health. Unlike physical or chemical measurements that provide data at a single point in time, bioindicators reflect the cumulative effects of environmental stressors over long periods. Most sensitive organisms of an ecosystem act as bioindicators. Their increase or decrease in numbers or changes in morphology, anatomy, and behavior indicate the health status of a particular ecosystem. Lichens are widely used as indicators of air quality because they are highly sensitive to sulfur dioxide and heavy metals. Aquatic organisms such as algae, plankton, benthic invertebrates, and fish indicate water quality, as their presence or absence reflects levels of nutrients, oxygen, and toxic substances. Plants and earthworms can signal soil contamination, while amphibians are considered excellent bioindicators due to their permeable skin and dual aquatic–terrestrial life cycle.

The use of bioindicators offers several advantages. They are cost-effective, eco-friendly, and provide biologically relevant information that directly relates to ecosystem functioning and biodiversity. Bioindicators also help in early detection of environmental degradation, enabling timely management and conservation actions. However, their interpretation requires ecological expertise, as biological responses can be influenced by multiple factors. In the face of increasing pollution and climate change, bioindicators play a crucial role in sustainable environmental management. By understanding and monitoring different species, scientists and policymakers can better protect ecosystems and ensure environmental health for future generations.

Excerpted from the article Nature's Sentinels: Harnessing Bioindicators for Environmental Health Assessment: A review, 2025.

Kumari Anamika
Assistant Professor, (BSH)

SILICON'S GREEN CANVAS:

Where Nature, Learning, and Timeless Memories Meet

With climate action taking centre stage in global planning, policy, research, and innovation, university campuses are being seen through a renewed lens. Increasingly recognised as carbon sinks, campuses absorb and store more carbon than they emit through their trees, lawns, and soil—a process known as carbon sequestration. Beyond environmental benefits, these green spaces also support mental well-being by calming the mind, reducing stress, and enhancing focus.

Nestled amidst gentle hills, Silicon University reflects a balance between sustainability and serenity. Its lush green campus hosts over fifty varieties of trees, including bayur, mango, scholar, gulmohar, pistachio, cashew, banyan, terminalia, jackfruit, ashoka, neem, coconut, and palms such as bottle palm and China palm, forming a vibrant canopy. Complementing them are smaller trees and flowering plants such as betel nut, hibiscus, guava, lychee, lemon, gooseberry, cinnamon, and orange jasmine, adding colour and fragrance, while a majestic Christmas tree stands as a cherished landmark that quietly enhances the campus's exquisite charm.

With each changing season, the campus bursts into vibrant hues, as inca marigold, dahlia, salvia, dianthus, phlox, lilium, French marigold, torania, vinca, sunflower, jasmine, and balsam are arranged in striking patterns, with roses, lilies, and zinnias adding further allure. Indoor spaces feature dieffenbachia, aglaonema, aralia, pothos, dracaena, areca palm, croton, peace lily, anthurium, and jade, while lawns and sports fields are covered with broad-leaf and Selection 1 grass. Much of this greenery is sourced from nurseries in Rajahmundry, Kolkata, and parts of Odisha, alongside plants nurtured in the university's own nursery which is centred around a tranquil pond of blooming lotus and water lilies.

Over time, the campus greenery becomes woven into the memories of Siliconites. A precious tree, a cherished flower, fallen autumn leaves, or the first blooms of a new season, each find a quiet place in their hearts. Amid the everyday hustle, these familiar sights offer warmth and comfort, making the arrival of favourite seasons feel like a homecoming. Years later, whether standing beneath those same trees or scrolling past reels of dew-laden leaves, sunlit flowers, or mist-softened monsoon petals, the campus and its moments return vividly, alive with nostalgia and belonging.

Sweta Mohanty
Assistant Professor, (BSH)

Publication Cell
Silicon University
Silicon Hills, Patia, Bhubaneswar, Odisha, India – 751024
Tel: +91 – 9937289499, 731499499
E-Mail: publication@silicon.ac.in

www.silicon.ac.in

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