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October 2025



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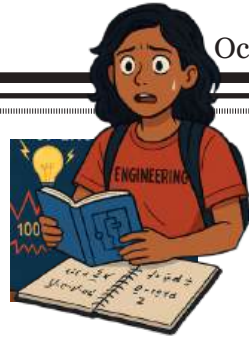
3 A safety solution for Indian Railways



4 Susanth Kurunthil: Leading Kerala's IT Ambitions



7 G. Shankar's Sustainable Architecture



8 Surviving First Sem of Engineering

AN ELECTRIC START

The Story Behind Our Home-Built EV Scooter

The budding engineers of Team Atom United from SSET built their own electric two-wheeler and took it to the National EV Challenge - living out their dream in the process.

Eshan Navas

It didn't begin with the whirr of an electric motor. It began with an idea - one that had lost its spark, its promise dimmed until it became little more than a half-forgotten joke. Then, a handful of engineering students from SSET, calling themselves "The Crew," decided to bring it back to life. Their goal was bold: to build an electric two-wheeler from scratch and take it to the National EV Challenge. Thus was born Team Atom United.

The Crew

The Crew began as a group of misfits- no name, no plan, just big dreams. Slowly, others joined in - students who brought fresh skills, energy, and the kind of laughter that keeps fatigue at bay. With every new member, the old spark began to glow again. Soon, our workspace wasn't just about design precision or fabrication details; it became a place for late-night chai breaks, loud debates, and quiet perseverance when things went wrong.

Then came the Diploma students. They didn't just fill gaps- they brought direction and discipline. Their clarity of thought and commitment helped transform our scattered efforts into a cohesive force. Under their steady hands, The Crew found its rhythm, and the dream took shape.

The Pit Crew

To streamline work, the Pit Crew was formed - a set of dedicated teams working in harmony toward one goal.

The Design Team, led by Krishnapriya, Advaith Deepu, and David Thomas, turned imagination into blueprints. The Fabrication Team, comprising Clement G. N., Aravind A., and Ashwin S. K., transformed those blueprints into steel and motion. Abhinand, as Electronics Head, made sure every wire pulsed with precision. The Finance and Sponsorship Team, led by Nived Babu, Suhail K., and Eshan Navas, handled the numbers, networks, and negotiations that kept the project afloat. Together, they formed the backbone of the Pit Crew's success.

At first, the project existed only on laptop screens - a collection of lines and curves in CAD models, blueprints alive only in

"We aren't just building a scooter- we are building opportunities for everyone." Clement G N



imagination. Hours blurred into nights as we debated tolerances, recalculated weights, and reimagined designs.

Then came the workshop - sparks

flying, steel clanging, grease-stained hands working late into the night. What began as code and calculation turned into the smell of metal, the sound of progress, and the joy of creation.



The engineers of Team Atom United



Sigh of Relief

When the scooter finally rolled out before the college -complete, functional, and gleaming - disbelief turned into pride. The machine that once existed only in sketches now stood as proof of every late night and every near-disaster we'd survived. As the covers came off, Enzo Ferrari's words rang true: "If you can dream it, you can do it."

For us, that first drive wasn't just the start of a machine - it was the moment we realized that all you really need is a dream, a few tools, and a stubborn refusal to give up.

All This for What?

At the National EV Challenge, we didn't come first. We didn't come second. In fact, we weren't anywhere near the top - but we weren't last either.

And that, in itself, was victory.

In a single week, we built something real, something

that worked, and something that taught us more than any classroom ever could. We spoke to seniors, bargained with vendors, solved problems we didn't know existed, and discovered how far grit can take you.

"Classrooms are only 40% of an engineer's college journey; the other 60% is beyond the doors," said Dr. Jenson Joseph, our mentor.

We may not have brought home a trophy, but we brought home something better - experience, friendship, and belief. What began as a lost spark became proof that even a flicker, shared among dreamers, can light the way forward.

The Roadblocks

And then came the challenges. Parts delayed. Components that wouldn't fit. Budgets stretched thin. Deadlines closing in like storm clouds. "There were nights when we thought it was over. But I found another way every single time," said Ashwin. Their faculty advisor, Koshy P. Joseph, encouraged us by saying, "Tomorrow is shaped by those who are still ready to put in the hard work." It changed us. Every setback forced us to adapt, rethink, and keep going.

"Classrooms are only 40% of an engineer's college journey; the other 60% is beyond the doors,"

Dr. Jenson Joseph

The Cost of a Dream

Electric vehicles don't come cheap. Motors, batteries, and materials stretched far beyond what our student budget could handle. Without sponsors in the early stages, we decided to finance the project ourselves. It was tough - but it taught us the true cost of a dream.

Giving up was never an option. We learned that sometimes, you have to carry the weight first to prove that your dream is worth believing in. The next time, we'll walk in better prepared - and perhaps, with sponsors who believe in us too.

"We aren't just building an Electric Scooter - we are building opportunities for everyone else," said Clement, looking at the bigger picture of our efforts.

(The writer is a fifth-semester student of Automobile Engineering)

From the EDITOR'S DESK

Dear Readers,

Our previous edition, *Jab We Met Ratan Tata*, showed how storytelling can open real doors. One student, purely on the strength of her interview, earned an internship with the TCS Group; two others secured placements in another Tata company. That's the kind of impact our tabloid can create.

Building on that momentum, we're now inviting each SCMS institute to curate its own edition—and celebrate its success. We begin this issue with SCMS School of Engineering and Technology (SSET).

Our cover story traces the making of a homegrown electric scooter, built from scratch on the SSET campus—complete with setbacks, "Eureka!" moments, and the thrill of ignition.

This edition also features compelling conversations with industry leaders: Infopark CEO Susanth Kurunthil, the People's Architect G. Shankar, and AI innovators Sunil Haridas of

The SCMS Spirit in Motion

Pradjna Intellisys and Shyam Achuthan of TunerLabs.

Among the highlights by SSET are a cloud-based safety solution for Indian Railways - an innovation born from a national challenge. Equally inspiring is an energy audit with 20 women entrepreneurs in Vypin, proving that every unit of energy saved can light up lives.

And of course, engineers at SSET know how to have fun experimenting with Arduino-based canteen ID checks, smart classrooms, and e-waste solutions. From one creative spark to another, this issue brims with energy and innovation.

We close with a lively feature: *How I Survived My First Semester in Engineering*—a candid, humorous take on student life.

Kudos to Team SSET for bringing this edition to life and heartfelt thanks to everyone who made it possible.

Happy Reading!

Charged Minds of SSET

Engineering Inclusion: Adaptive Sports Equipment



A flagship initiative of the Department of Mechanical Engineering at SCMS School of Engineering & Technology (SSET) is redefining the boundaries of socially responsible innovation. The department recently unveiled adaptive sports equipment for children with disabilities, a project that beautifully blends creativity, compassion, and sustainability.

Crafted from recycled materials sourced from SSET, the equipment is more than an engineering achievement—it's a symbol of empowerment. Designed to encourage physical activity, inclusion, and self-confidence among differently-abled children, it reflects the department's belief that true innovation must serve society.

The initiative was inaugurated by Dr. R. Bindu, Minister for Higher Education, Government of Kerala,

who lauded the project as a model of how education and empathy can unite for social transformation.

A key partner in this mission is the National Institute of Physical Medicine and Rehabilitation (NIPMR), Kerala's leading centre for rehabilitation and care. Together, SSET and NIPMR are pioneering projects that bring real-world relevance and empathy into the engineering classroom.

At the heart of these initiatives lies the principle of co-production—a participatory approach that unites engineers, caregivers, and users in the design process. The result: solutions that are not just technically advanced, but deeply human and user-centric.

In every sense, SSET's Department of Mechanical Engineering is building a future where technology serves humanity—with innovation that includes, empowers, and inspires.

When Technology Meets Track

A Cloud-Based Safety Solution for Indian Railways by the SSET team

Aadinath R., Shaba Tharengan, Edwin Joy

On June 2, 2023, a devastating train collision in Balasore District, Odisha, claimed 296 lives and injured more than 1,200 passengers. The tragedy shook India's vast railway network—one of the largest globally—and exposed deep gaps in the system's modernisation. While other nations advance with AI-powered transit and bullet trains, Indian Railways still relies on manual operations and legacy infrastructure.

The Balasore disaster-caused by speeding, human error, and lack of intelligent safety controls—highlighted India's urgent need for an integrated, technology-driven railway safety system.

In response, the Bharat Tech Foundation (BTF)—an initiative under the Global Alliance of Indian Engineers—launched a national challenge, inviting engineering colleges to contribute ideas for a foolproof safety framework for Indian Railways.

Answering the call was a dynamic team from the Department of Computer Science and Engineering at SCMS School of Engineering and Technology (SSET), comprising Anirudh V Kumar, Santheri Bhat, Rishikesh R, Anandjith T J, Dhibi Pradeep, and Christopher Joy, guided by Ms. Josna Philomina, Assistant Professor, and Dr. Varun G Menon, Deputy Dean of R&D.

Turning Insight into Innovation

Collaborating with BTF, the team immersed themselves in fieldwork, uncovering operational challenges. These insights drove the creation of a cloud-based dashboard to modernize railway safety and operations.

The dashboard offers a real-time map of train movements, hazards, and conditions, enabling operators to proactively prevent accidents and respond swiftly to threats.

Mentorship from Mr. Sunil Haridas (CEO, Pradjna Intellisys Pvt. Ltd.), Dr. Ajith Chandran M C (Director – Technical, TNC; Honorary Director – Digital Intelligence & Innovation, CAG Solutions), and Mr. Surendra Kumar (Managing Director, V6 Stars Projects Pvt. Ltd.) helped sharpen the team's approach and technical direction.



Engineering Tomorrow's Railways

At the heart of the system is the Future Railway Mobile Communication System (FRMCS), which is a next-generation improvement over the current Global System for Mobile Communications–Railways (GSM-R) standard. Built with LTE-R (Long-Term Evolution for Railways) and 5G capabilities and using Ultra High Frequency (UHF) bands, FRMCS delivers low-latency, high-speed communication between trains, control centres, and signalling systems—even at top speeds. This enables real-time synchronization, which is crucial during emergencies.

Smart Systems That Anticipate

The system isn't just faster—it's smarter. Equipped with GPS, onboard sensors, and predictive algorithms, it continuously

A key feature is its seamless integration with Kavachh 4.0, India's indigenous anti-collision system.

monitors train activity, identifying risks such as overspeeding, signal violations, or wrong track entries. When danger is detected, it triggers automated safety responses and sends alerts, reducing the margin for error.

A key feature is its seamless integration with Kavachh 4.0, India's indigenous anti-collision system. This integration enables emergency braking, real-time rerouting, and automatic safeguards that could prevent accidents altogether.

Ready for India

By integrating OpenRail wayMap APIs and 5G/LTE-R, the new system unites trains, tracks, control rooms, and personnel

into a scalable, affordable digital network, practical for India's diverse rail infrastructure.

Simulations run by the team—mimicking real-world scenarios like signal breaches and overspeeding—demonstrated the system's reliability and resilience under pressure.

The Road Ahead

Combining technical expertise, field insight, and vision, the SSET team created a practical blueprint for a safer Indian Railway, demonstrating transformation through technology.

This is not just innovation.

It's a blueprint for the future of rail travel.

(The writers are Seventh Semester Students, Department of Computer Science and Engineering, SSET.)



From Left: Ms. Josna Philomina (Assistant Professor, SSET), Mr. Anirudh V. Kumar, Mr. Christopher Joy, Mr. Dhibi Pradeep, Dr. Varun G Menon (Deputy Dean-R&D, SSET), Mr. Surendra Kumar - Director of V6 Stars Projects Pvt. Ltd, Mr. Sunil Haridas-CEO of Pradjna Intellisys Pvt. Ltd, Dr. Ajith Chandran M.C., Director- Digital Intelligence and Innovation at CAG Solutions, Mr. Rishikesh R., Ms. Santheri Bhat, Mr. Anandjith T. J.

“Infopark Will Be the Go-To Destination for...”

“Our long-term vision is clear—we want to make Kerala an integral part of the global economy. We need to begin in the right place, at the right time—and that’s why we’re focusing on Kochi and the Infopark ecosystem,” says Mr. Susanth Kurunthil, CEO of Infopark, one of Kerala’s key IT hubs. Tasked with positioning Infopark—and through it, Kerala—on the global technology map, he is driving its transformation into a thriving economic powerhouse. As he leads Kerala’s IT ambitions into a new era, Mr. Kurunthil shares his journey, insights, and vision for the future.

Edited excerpts from an interview by Ms. Shaba Tharengan and Mr. Karthik S. | Photos by Mr. Edwin Joy.

Tell us about your journey so far ?

To start with, being a computer science student in the late '80s was not easy. At that time, hardly anyone really knew what computer science or software engineering meant. We faced major challenges—there weren't enough qualified faculty, and even textbooks were hard to find locally. We had to order them from the United States, paying in dollars. There was no internet, and resources were scarce.

Learning under those circumstances was tough, but it taught us something invaluable—the ability to learn on our own. Once you cultivate that, the world truly becomes your oyster. Most of my classmates and I developed this self-learning mindset, which later helped us grasp concepts more deeply when we entered the workforce and saw how they applied in real life.

Getting a job wasn't easy either, but opportunities gradually opened up, especially in the US. I

was among the early ones to move there and work with American corporates. That exposure taught me values like timeliness, accountability, and commitment. For instance, if you say you'll be somewhere at 10, you show up at 10—and if something goes wrong, you communicate immediately. It's about valuing others' time and setting the right expectations.

Eventually, I returned to India and set up the India Development Center of a New York-based software company in Bengaluru, growing it to about a hundred people. That's when the entrepreneurial bug bit me. I started my first company during the 2008 financial crisis - not the best time to take that leap- but we survived and exited successfully after four and a half years. Later, I built another company, sold it, and continued consulting.

Then the COVID-19 pandemic struck, disrupting decision-making for many of my clients, mostly in the Middle East. After years of 16-hour workdays, I felt



it was time to pause—and that's when the opportunity at Infopark came along. It was a completely different domain—real estate and government, compared to my software background—but again, that same ability to learn and adapt helped me settle in quickly.

With rapid shifts in technology how do you envision Infopark staying ahead and continuing to create meaningful opportunities in the coming decade?”

Traditionally, our role has been to bring companies to Kochi and support their growth. But over time, we faced a major challenge—Infopark had reached full capacity, with no land or built-up space left. That forced us to think out of the box.

I'm happy to say that effort has paid off. The Government of

Kerala has recently approved the creation of Infopark Phase 3, which will be developed as an AI City—a first-of-its-kind project in the state. It's a major milestone, and I'm genuinely excited about what lies ahead.

The very concept of IT parks is evolving. Traditional models are giving way to tech-integrated, AI-driven ecosystems, and that's exactly what we are envisioning for Infopark Phases 3 and 4. Phase 3, for instance, will be built as a smart urban environment where technology seamlessly powers every aspect of daily life—traffic signals, roads, waste management, transport systems, and beyond. The goal is not merely to build office spaces, but to create complete, connected urban communities.

These new campuses will integrate spaces for work, living,

“When electricity fails us, our courage and will power take charge”



An energy audit with women entrepreneurs in Vypin reinforced the truth that every unit of energy saved through smart engineering can light up not just homes but lives.

Adya Harikumar

“Power interruption does make our work difficult. Yes, the machines stop, fans take a break, and even lights give up — but we never do!” said one of the 20 spirited women entrepreneurs in Vypin, voicing the frustration caused by frequent power cuts at their processing units.

We, a team of 30 students from the Energy Club of SSET, in

collaboration with EQUINOCT under the IEEE Smart Village Project, conducted a two-day energy audit in the Paravur-Vypin area in April 2025.

And what an eye-opening experience it was!

Electricity is the lifeline for these 20 small-scale manufacturing and processing units, all led by women. Most rely on single-phase or three-phase connections and use a mix of conventional and energy-efficient appliances. The industries span fish drying, food manufacturing, and dairy production - incorporating tools like solar dryers, solar heaters, and mixing machines.

At the rice production units, we observed a range of machines including double-head double-stage pulverizers, dryers, freezers, bottle sealers, and sealing machines. Interestingly, the unit

with fewer machines reported higher profits - a valuable insight. Both units, however, struggled with frequent power outages, which disrupted their typical 2–3 hour production cycles.

The Nanma Rice Addition Unit in Alangad operates out of a rented shop at Rs. 5,000 per month, and their monthly electricity bill remains a concern.

At the fish processing unit, working conditions were challenging, yet the women remained resilient. Saritha, a member of Njarackal Seashore, uses a solar dryer - an innovative machine that, unfortunately, wasn't functioning at the time of our visit.

Meanwhile, the women at the Kerala Foods unit in Nayarambalam have demonstrated impressive entrepreneurial skills by successfully marketing their products abroad.



For High-Value Talent”: Susanth Kurunthil



“Building a company is straightforward; nurturing an entire ecosystem is a challenge that can impact thousands of lives.”

and recreation, making “walk to work” and “play at work” everyday realities. It’s an entirely new model of urban development, and Phase 3 will serve as the pilot for this vision.

Looking ahead, our focus will be on attracting talent—from across India and around the world—because wherever people converge, economic activity follows. That’s the common thread you see in global hubs like Dubai, London, New York, Bengaluru, and Mumbai.

Our goal is to make Kochi a magnet for such talent, and Infopark will play a pivotal role in that transformation—building new ecosystems and next-generation campuses that define the future of Kerala’s digital economy.

What is your long-term strategic vision for Infopark?

Our long-term vision is clear—to make Kerala an integral part of the global economy. But this transformation must begin in the right place, at the right time—and that’s why our immediate focus is on Kochi, through the Infopark ecosystem.

Today, Infopark contributes about USD 1–1.5 billion in software exports annually. Over the next decade, we aim to scale this exponentially by moving beyond traditional IT and IT-enabled services, embracing emerging technologies, and opening new pathways for sustainable economic growth.

Our upcoming campuses—Infopark Phase 3 and Phase 4—are central to this plan. They are being designed to attract future-facing industries while upholding Kerala’s strong environmental ethos. Sustainability is non-negotiable; we are committed to fostering only clean, green, and knowledge-driven enterprises.

In the next five years, our mission

is to position Infopark as the preferred destination for cutting-edge tech and top-tier talent. Over the longer term, the goal is transformative: to make Kerala an economic powerhouse where people come to seek opportunities, not leave to find them.

We want to raise per capita income, enhance health and livability indices, and prove that this development model works—so it can be replicated across the state. That’s the vision driving Infopark’s next decade.

Your advice to budding engineers in Kerala ?

The first thing is - make sure you won’t have regrets. Don’t limit yourself or your vision. Whatever your field, strive to be the best. If you’re an engineer, aim to become the best data scientist or software professional—but remember, being the best isn’t just about coding skills. It’s about using your knowledge to solve real-world problems.

Look for meaningful challenges in the world, and apply your skills to address them. Find a purpose in what you do—and make sure that purpose goes beyond money or fame. When your purpose is larger than yourself, that’s when you truly make a difference. And making a difference—that’s the key to leadership.

Infopark Phase 3

A 300-500-acre integrated township with 20 million sq. ft. of office space, over 5,000 residential units, educational institutions, healthcare, retail, global universities, and smart, tech-enabled urban design with underground utility tunnels with Metro connectivity. Sustainability is central.

Infopark Phase 4

A slightly smaller township of 5 million sq. ft. of IT space with commercial and retail zones.

- **Affiliation Program:** Companies outside Infopark-Malappuram, Wayanad, Idukki—can become affiliated, joining the ecosystem and encouraging private IT park growth across Kerala.

- **I by Infopark:** Co-working spaces across Kochi, connected to metro stations, reducing commuting. Multiple centers are planned, including a direct connection to Phase 3 in the future.

(Ms. Shaba Tharengan, Final-Year Computer Science & Engineering, Mr. Karthik S, Final-Year Data Science)

Charged Minds of SSET

Engineering With Empathy

At the heart of the Department of Mechanical Engineering at SCMS School of Engineering & Technology (SSET) lies a pioneering vision—engineering with empathy. A cornerstone of this vision is the adoption of co-production, a participatory model that unites engineers, caregivers, and users in designing solutions that are both technically robust and deeply human-centric.

This philosophy found powerful expression through an international collaboration with Professors Felicia and Ingemar Kareholt from Sweden, renowned experts in co-production and geriatric research. Their visit to NIPMR and SSET opened new avenues for joint research, workshops, and student exchange programs, enriching both institutions with a vibrant exchange of ideas and practices.



Building on this collaborative momentum, the department’s Hands-On Material Testing Workshop for students from the National Institute of Physical Medicine and Rehabilitation (NIPMR) offers practical exposure to real-world engineering applications. Under the mentorship of SSET faculty, students engage with testing equipment, exploring material behavior and mechanical performance—an experience that connects classroom learning to tangible outcomes.

“When electricity fails us, our courage and willpower take charge,” they said with quiet conviction.

Practical suggestions

Bringing together all 20 units under one umbrella proved beneficial for both them and us. We also carried out a household energy audit, surveying monthly electricity usage, appliance count, and consumption patterns. The findings were analyzed and shared with the community, offering practical suggestions for conserving energy.

Our audit uncovered more than just numbers - it gave us insight into how some of these women cope with and adapt to the recurring threat of coastal water flooding in their homes. It revealed gaps in energy awareness, marketing skills, and even self-

confidence. But alongside these gaps, we saw strength, hospitality, and inspiring personal stories - of starting with little, sustaining their ventures, and becoming the economic backbone of their homes. “Every product we make, every skill we hone brings us not just pride, but a paycheck that turns our households into hopeful homes,” they said.

Entrepreneurship, a mission

Entrepreneurship, for these women, isn’t a dream - it’s a mission.

For us, the students, the experience reinforced this truth: every unit of energy saved through smart engineering can light up not just homes, but lives.

(The writer is a student of Semester 3, EEE at SSET)

“AI Won’t Replace You. It Will Enhance You”

Shyam Achuthan, Founder and CTO of TunerLabs

Mr. Shyam Achuthan has two decades of experience in building and scaling SaaS products. He has worked across cloud, mobile, and product innovation. Today, his focus is on using agentic AI and GPT-powered solutions to cut out business bottlenecks and make work simpler, faster, and smarter. Based in Bengaluru, he has led teams, mentored startups, and co-founded ventures in tech and finance. He takes a practical, real-world view of AI—not as a threat, but as a tool to boost efficiency and open new opportunities for the future. Edited excerpts from an interview

What inspired your journey into the world of AI and innovation?

My journey into AI did not start with a fascination for the technology itself, but with a desire to address real-world inefficiencies in businesses. As I worked on expanding SaaS products, I noticed patterns—manual bottlenecks, inconsistent decision-making, and underutilised data. AI provided a toolkit to tackle these issues at scale. The real realisation was that AI isn’t just about automation; it’s about enhancing human potential.

An AI-based project that intrigued you the most?

One of the most intriguing projects we worked on was with

the largest power distribution company in Australia. They faced challenges in accurately predicting transmission loss due to varying natural factors like temperature, humidity, and terrain. We built a model that ingested data from thousands of IoT sensors deployed across their network. The system could not only forecast transmission loss patterns but also predict usage spikes based on weather conditions, time of day, and historical consumption. This led to significant improvements in energy planning, reduced wastage, and improved grid efficiency. Seeing AI work at the intersection of sustainability and infrastructure was incredibly rewarding.

What criteria do you employ to evaluate a project?

I look at three key factors before taking up any project. First is clarity of the problem—is it clearly defined and worth solving with AI? Next comes data readiness—whether there’s enough usable historical or real-time data to build a reliable model. The third is measurable outcomes—can success be tracked in terms of time saved, improved satisfaction, or return on investment? I also emphasise the importance of long-term maintainability, noting that an AI solution that works today but fails tomorrow is more



of a liability than an asset.

In such an evolving field, how do you stay motivated?

In a fast-changing field like AI, I often draw inspiration from real experiences. I remember when AI agents started getting better at coding—many developers in my IT services unit at TunerLabs grew worried and asked me, “Are we losing our jobs?” My answer was clear: it’s not about feeling threatened, but about embracing AI to multiply what we can achieve. To me, it’s not a question of AI replacing nine out of ten jobs—it’s about how ten people, empowered by AI, can deliver a hundred times more. I truly believe that if we, as a nation, adopt this mindset and combine our human talent with AI, India has the potential to rise as a global superpower.

The one key message about the future of AI that you would like to share

The one key message would be this: the future of AI isn’t about replacing humans—it’s about enhancing us. Think of AI as your fastest teammate, not your competitor. When used with the right intent and applied ethically, it won’t just help us stay relevant, it will enable us to truly thrive. And the best way to understand its power is to start small—try building something simple, like a calendar assistant or a reminder bot. Once you see AI in action, the possibilities open up endlessly, and there’s no turning back.

(Karthik S. and Sneha Sunil are seventh-semester students of Computer Science at SSET)

SSET’s AI Portal for Research

The **IndiaAI Mission**, launched by the Government of India, has been encouraging initiatives to build foundational AI models tailored to India’s unique needs—multilingual, inclusive, and accessible—comparable in ambition to **ChatGPT in the U.S.** and emerging models like **DeepSeek in China**. A proposal was submitted under this mission, and as a first step, a pilot project was initiated to validate the concept. In response, the **Tech Indica Research Hub: AI-Enabled Intelligent Tech Research Paper Submission Portal of India** is being developed by students of **SCMS School of Engineering and Technology (Department of CSE, AI & DS)** in collaboration with Bharat Tech Foundation (BTF). This platform facilitates the exchange and dissemination of technological knowledge among Indian technocrats for societal benefit.

At the forefront of this effort is **Mr. Sunil Haridas**, Founder &



CEO of **Pradjna Intellisys**, an innovative technology company that provides AI-driven platforms for objective performance and skill assessment, he has been actively mentoring SSET students on this project.

Ms. Shaba Tharengan, (Final year student, Department of Computer Science and Engineering) spoke with Mr. Haridas. Edited excerpts from the conversation.

“Through this portal, users will be able to publish research papers, gain international visibility, and potentially convert their work into patents.”

What led your organisation to associate with the Tech Indica Research Hub?

“This initiative grew out of a collaboration between industry, academia, and research institutions—one of the stated goals of BTF. As part of that mission, we have been mentoring and training professional college students, especially engineering students, to upgrade their skills, make them job-ready, and expose

them to real-world practices. The Tech Indica project fit perfectly into that vision, and that’s how our association began.”

How would you describe your experience working with the young innovators from SCMS School of Engineering and Technology?

“It has been a very rewarding experience. For industry veterans like us, working with budding engineers is refreshing—they are in tune with emerging trends and technologies. Their energy and eagerness to learn create a space for mutual growth.

For example, we recently conducted training on Agile methodologies, giving students exposure to industry-standard project management practices. We are also collaborating on a pilot to develop a research assistant platform. I’m glad our current batch of Computer Science and AI students are actively contributing to this effort.”

Walk us through the development journey of this project.

“The IndiaAI Mission invited proposals to build foundational AI models suited to India’s context. We submitted one, and as a first step, launched a pilot project to validate our ideas.

Through this portal, users will be able to publish research papers, gain international visibility, and potentially convert their work into patents. India currently lags behind the U.S., Europe, and China in IP creation. Patents are a direct indicator of industrial and intellectual growth, since innovations can be spun into products and services. This project is an effort to encourage students and professionals to generate intellectual property that adds both academic and commercial value within India.”

How can this project improve the efficiency of academic and research portals?

“One limitation of academic projects is their lack of exposure to real-world customer requirements. This initiative uses an advanced technology stack, including GPUs for model creation and training, while following disciplined, industry-standard processes. In Kerala especially, where large industries are fewer, such academia–industry collaborations are vital. They bridge gaps, build global awareness, and ensure students are productive from day one in the workforce. That, in turn, strengthens the scalability and sustainability of projects like this.”

Was there a defining moment in the project that reflected the team’s dedication and capability?

“Yes, definitely. Motivation among the students has been high, though academics come first—they have assessments and other commitments. That’s why we designed this as a long-term effort. We began in the fourth semester, and now the students are in their fifth. By stretching the project across 12–16 months, we balance their academic load while giving them consistent exposure and experience.”

Clarification

In our last edition, the interview with Mr. Sibi Malayil inadvertently stated that his first directorial film was *His Highness Abdullah*. His actual debut as a director was *Mutharamkunnu PO* (1985).

We regret the error.



‘Siddhartha’ mud house, Mudavanmugal, below: Govt. College of Engineering Munnar

THE PEOPLE’S ARCHITECT

I design spaces that are not just lived in, but that live in harmony with the world around them

In a world facing climate crises and social inequality, Dr. G. Shankar stands out as an architect deeply committed to eco-sensitive and socially responsible design. Educated at the College of Engineering, Trivandrum, and the Birmingham School of Architecture, UK, he turned down international offers to serve India’s underserved communities. In 1987, he founded the Habitat Technology Group, championing sustainable architecture rooted in local materials, social equity, and environmental harmony. Often called the “people’s architect,” Shankar blends philosophical depth with technical skill to create spaces that connect people and nature.

In this exclusive interview, Dr. G. Shankar shares his journey, passion for earth-based construction, and the personal vision.

Writers: Ms. Devananda Mooppil, Ms. Niranjana Kumar

Your journey into architecture that uses earth as a core building material

My childhood experiences and a deep concern for the future drew me to this field. Although I wasn’t born in Kerala, I feel a responsibility to promote construction practices that are truly suited to Kerala’s environment and social fabric. My lifelong aspiration has been to develop and spread a building style that responds to local resources and community needs.



A turning point came in seventh grade, when I became involved in a popular science movement. It opened my eyes to the reality of homelessness and poverty in our society. I encountered communities living without any guarantee of tomorrow. That experience left a lasting impact.

Later, while pursuing my Master’s degree in Birmingham, I was offered an opportunity to start a department on third-world housing at an Ivy League university. But I chose to return to India. I believed my work could have a greater impact here.

I’ve always preferred working with earth as a building material because it’s affordable, sustainable, and environmentally responsible.

On Philosophical architecture, a recurring theme in your projects.

For me, architecture is not just about structures—it’s about creating dignified spaces that serve people and respect the planet. The first step in philosophical architecture is to clearly distinguish between a client’s essential needs and their additional wants. I believe construction should begin within one’s financial means, with the flexibility to expand later based on evolving preferences. A home, in my view, should be a generous investment in the future—something that serves not only

the present inhabitants but also future generations.

How do you ensure that a project reflects your unique creative signature?

Before undertaking a project, I thoroughly assess not only the physical landscape but also the psychological landscape—or mindscape—of the client. My designs are consistently gender-sensitive and people-centric. I prioritize inclusivity, ensuring that every structure addresses the needs of women, persons with disabilities, and those who are specially challenged. Additional considerations include water availability, wind and light direction, terrain altitude, electricity access, and overall site accessibility.

How did you envision your ideal home?

As an architect, I prioritise high privacy, viewing my home as a haven akin to a mother’s lap. Beyond desiring a house, I aspired to cultivate a forest within the town, ultimately building my home amidst nature. My focus was on creating a comfortable space for reading and music rather than a large bedroom. Siddhartha, my home, is the first constructed space entirely without reinforcement, using sand for walls, roof, and foundation. All construction materials are eco-sensitive or recycled. I am proud to have designed and built a home of this nature.

When Reality Hits Harder Than a 1000V Voltage Spike

Muhsina O. M.

Engineering tests everything: your mind, your mood, your confidence and your will to live.

I walked into my first semester wide-eyed, hopeful and with a head full of overconfidence.

Day one began with orientation. People had timetables, sticky notes, highlighters - and me? I was vibing... Smiles, icebreakers, selfies... little did I know, this was the last time I'd laugh that semester.

Suddenly, I wasn't the topper anymore. I was one of many... There were nights I questioned everything — my branch, my decision, my dreams.

"Why does everyone else seem to get it?"

"Am I the only one feeling this lost?" Integration, differentiation, Fourier series... my brain said, 'Buffering...' and then the teachers were saying, "This is the easiest semester!!! You'll score the highest here!"

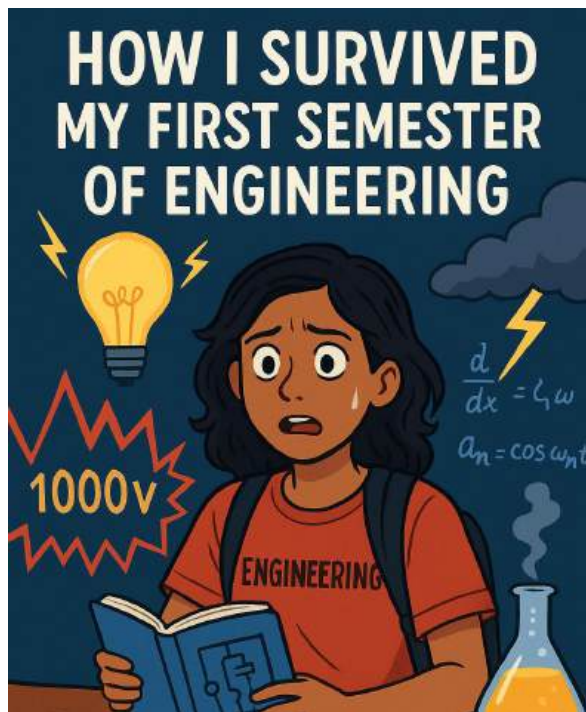
And I was like - WOW!

If this is the easy one, what kind of horror show is waiting in the coming years? Oh My GOD! Can't wait!

Life felt exciting. Exciting, like a rollercoaster with no seatbelts.

But somewhere in the middle of that chaos, we'll somehow meet our gang — the ones who were equally confused/lost. I got a few of those people too.

We laughed at our cluelessness... our stupidities... Sleep schedule? Non-existent.



Mental state? Fluctuating. But vibes? Always high!!!

I kept telling myself — "Nothing is impossible for someone who fights, who works hard."

Even when the subjects looked tough, I believed I was tougher. I walked in ready to beat it... but somehow, nothing seemed to work. It was around that time I shifted to the hostel.

At first, the mess food was gourmet... then it was just me and my Maggi against the world.

Here came the real deal: the electric supply! It would cut off exactly two minutes after we plugged in the kettle. We became full-time undercover agents, sneaking around to switch it back on, like we were in a spy movie. That

was hostel life - chaotic but kind of lowkey iconic.

Some nights, I cried because I missed home. Some nights, I cried because I felt like a failure. Other nights, I cried without even knowing why.

My heart longed for peace.

There were nights when I stared at my notes for hours - not because the topic was hard, but because I felt like I was falling behind.

Even when it hurt, I didn't stop.

I selectively studied, memorized previous year questions & hoped the universe would be kind I may not have become a genius overnight, but I had grown. I was more resilient, more independent & honestly became the hardest-working version of myself I've ever known.

Engineering didn't just teach me circuits... it taught me life...

Because now, I'm built different.

Maybe it's the main character energy in me that stood up again the next day - that stubborn part of me that just wasn't ready to give up.

Here I am, in my 7th semester. Even though my CGPA isn't perfect, I'm so proud that three years ago, that little girl didn't give up.

I'm so proud that she kept going, even when it was really hard.

(The writer is a Semester 7 student of Electrical Engineering)

Charged Minds of SSET

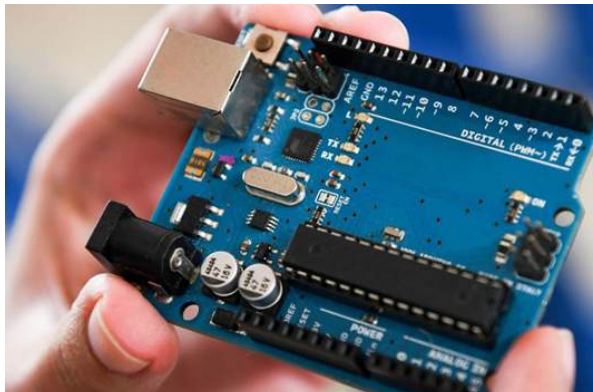
Creativity And A Tiny Blue Board

How First Years Became Inventors Using Arduino UNO

First-year Electronics and Communication Engineering students at SCMS turned ideas into inventions through the course "Build Smart with Arduino UNO: Think. Simulate. Create."

A team of Alfiya Raju, Archana Manoj, Kadheeja Sumal V S, and Sumayya M built an Automated Mess Attendance

System using fingerprint authentication for contactless, error-free records. Another team — Devatheertha Radhakrishnan, Devika M S, Rithun S, and Yadunand P P — created a Smart Agricultural System that monitors soil health using sensors and AI-generated code. Their projects prove that innovation begins with curiosity, creativity, and a tiny blue board.



Powering Ships!

An MoU between M/s Waves Electronics and SCMS School of Engineering and Technology led to the creation of a 24V, 100A IGBT-based battery charger for ships. Developed as a B.Tech project by the Department of Electrical and Electronics Engineering, it was led by Salman P Y, who now refines the design as a full-time engineer at Waves.

Charger-cum-discharger for BMRC

Another innovation from this partnership was an IGBT-based battery charger-

cum-discharger for Bangalore Metro Rail Corporation, designed for high efficiency, unity power factor, and low ripple content—enhancing battery performance in metro systems.

Inputs: Mr. Ajit Joseph, Assistant professor, ECE; Hiba Parveen Sem. 5 ECE; Kevina Mariam Dona, Shruthi S., Dept. of AI & Data Science



Growing Healthier Mung Dal?
AI students use cold plasma to boost mung bean germination sustainably

Cold plasma—a partially ionised gas found in lightning and auroras—is being explored as a green technology in agriculture. At SCMS School of Engineering and Technology, second-year AI and Data Science students built a gliding arc plasma system to treat mung dal seeds for 1–4 minutes. Seeds exposed for one minute showed stronger roots, faster germination, and greater vigour, proving plasma's potential to enhance crops without chemicals. Their work earned the Best Paper Award at ICEAMT 2025 and is set for international publication.

