Highlight of the Issue

In Conversation with Prof. Jaideep Talukdar

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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:

Reading has always been a very fascinating activity. Readers while reading a text are engaged in a constant interaction with the text to comprehend, appreciate, criticize and even create new interpretations of the existing content. The readers many a time would therefore add new dimensions to the already existing content by their new and insightful inferences. Reading provides intellectual stimulation. It is an act of great pleasure to read different kinds of texts as it not only helps expand knowledge and provide a sense of social connect, but it is also a means of exploring different perspectives and identities. Reading is also a stimulant for the imagination along with an appeal to the innate human interest in the art of story-telling. It furnishes the curious readers with newfangled ways of exploring the world around them. In this constant engagement of exploration and creation of new narratives, the reader is exposed to new view points and ideological constructs allowing them to envision characters, settings and scenarios in their transcended emergence.

In ***SLATE***, we have always made an attempt at making this reading process as enriching and rewarding as possible by traversing through a broad spectrum of ideas. Several changes have been incorporated over the time to provide an insightful and thought-provoking reading experience for our readers. To further the experience, we have added a few more pages with fresh and new ideas, which will not only help our students pen down their experiences in a new garb but also provide new narratives to our reading community. We have added the success stories of entrepreneurial ventures of 'start-ups', queries and concerns for "Earth Matters", critique and reviews of the entertainment world as 'Movie review', and accounts of a traveler in "Travel Diary", along with the existing columns.

We hope these new additions to ***SLATE*** would build on the talents of our students at the same time allow our faculty members to also contribute. Our team has tried to create new portrayals, tales and chronicles to keep our readers more informed by feeding their curious minds with particulars of new found information of the world around us. Moreover, we also have an exclusive interview with our Vice-Chancellor in this issue of SLATE along with a special feature, interview with the former Director of the Integrated Test Range (ITR), Chandipur, Shri. H. K. Ratha, adding both advice and wisdom for our young readers. Hope our readers have a pleasant experience while journeying through the pages of ***SLATE***.

Happy Reading !

Ananya Roychoudhury
Dept. of BSH

EDUCATING US

Timeless Threads: The Sacred Saga of the Saree

The Indian saree is not just an attire—it is Adi Shakti in motion, a sacred fabric carrying millennia of tradition, dignity, and divine symbolism. Its origins trace back to the Rigveda (circa 3000 BCE), where the term Vastra denoted not mere clothing, but a conduit of virtue and identity. The word 'saree' derives from the Sanskrit word Sati, meaning a strip of cloth—evolving into "chira" in Prakrit and later "sadi" in regional dialects.

One of the most powerful saree anecdotes comes from the ***Mahabharata***. Draupadi's dignity is safeguarded by Lord Krishna through an endless drape—symbolizing divine protection and the saree as a manifestation of grace. In the Skanda Purana, goddess Parvati wears silken drapes woven in gold—an offering not just of beauty, but of devotion and divine presence.From Varanasi's brocade weaves to Vijayanagara's regal silks, each region wove not just fabric, but memory. It has clothed goddesses and armed queens—its fabric holding both reverence and resistance. Its folds carried rebellion during India's independence movement and quiet strength across generations.

Each region tells its story: Tamil Nadu's Kanjeevaram sings of temples, Bengal's Tant breathes simplicity, Odisha's Sambalpuri reflects tribal faith. Maharashtra's Paithani gleams with peacock and lotus motifs—symbols of royalty and purity. Assam's Muga silk, golden and resilient, echoes the strength of the Brahmaputra. Rajasthan's Bandhani bursts with color, tied and dyed in rituals of celebration and fertility. Kerala's Kasavu, white with golden borders, carries the quiet grace of temple traditions and harvest

celebrations. These are not mere garments—they are living archives. Museums like the Metropolitan Museum of Art (MET) and Victoria and Albert Museum (V&A) now preserve sarees not just as textiles, but as cultural testimony.

"We don't just weave cloth—we pass down stories," says Saroj Meher, a fifth-generation weaver from Nuapatna, Odisha. "Every motif has a meaning. Every color has a prayer."

More than just cloth, the saree is a philosophy—of modesty and might, identity and expression. It fits both goddess and girl, tradition and now. In every pleat lies a prayer, in every drape, a story. It is Adi Shakti in fabric form—flowing, fierce, and eternal. As long as stories are told and threads are spun, the saree will endure—not just as attire, but as a sacred force.

Sneha Sruti Sahu
8th Sem, CSE

HEALTH WATCH

Understanding the need for Restorative Rest

Sleep is a vital physiological process, essential for the synchronization of the human body and mind. Being a necessity, it is often compromised by today's fast-paced society.

Sleep is an active and highly organized process where our body performs critical maintenance tasks. Each night, our body cycles through different sleep stages, including deep (slow-wave) sleep, which restores the body, and REM (rapid eye movement) sleep, which is vital for learning, memory, and emotional balance. The circadian rhythm helps control when we feel sleepy or awake. It's mostly influenced by light and dark, which is why screen time late at night can confuse our brain and delay sleep. A typical adult sleep cycle lasts about 90 minutes and repeats 4–6 times per night.

Prominent sleep disorders include Insomnia, Obstructive Sleep Apnea (OSA), Restless Legs Syndrome (RLS), and Narcolepsy.

Implications and Risks:

1. Chronic sleep deprivation is directly linked to a higher risk of anxiety, depression, irritability, and burnout. Physically, it weakens the immune system and increases inflammation.
2. Sleep loss impairs alertness and reaction time, which significantly raises the risk of accidents at work.
3. In industries that rely heavily on decision-making, communication, and creativity, sleep deprivation leads to reduced performance and missed opportunities.
4. Lack of sleep impairs empathy, emotional health, and impulse control, which can lead to misunderstandings, poor teamwork, and strained relationships at home and in the community.

Sleep is the silent architect of our health, the unseen sculptor of our minds, and the quiet guardian of our emotional balance. In a world that praises hustle and speed, sleep remains the most natural, powerful reset button we have. When we rest, we don't fall behind—instead, we heal, we grow, we sharpen our potential.

Rashika Das
4th Sem, EEE

FOOD FOR THOUGHT

The New Silent Crisis of 'Abundance' Trap

In a world where scarcity often dominates discussions, the paradox of abundance presents an equally profound challenge. The "problem of plenty" is not merely about surplus, it is about mismanagement, inefficiency, and the unintended consequences of unchecked progress. Whether in technology, knowledge, or resources, the abundance we create often leads to dilemmas we fail to anticipate.

Modern advancements have led to an explosion of information, automation, and innovation. Engineers and technologists have solved age-old problems of production and efficiency, yet new challenges have emerged. Take, for instance, the rise of data: we generate more information in a single day than humans did in centuries, but does it translate to wisdom? We build smarter cities, but do they ensure happier lives? We automate processes, but does it truly liberate or merely shift the burden elsewhere?

Engineering the Problem of Plenty

The field of engineering, in its pursuit of optimization, often faces the unintended consequences of overproduction. Consider software engineers grappling with an overwhelming number of programming languages, frameworks, and tools that have so many options that the sheer choice becomes a bottleneck.

In essence, plenty does not always mean progress. The presence of abundant resources, knowledge, or technology without mindful application can lead to confusion, inefficiency, and even regression.

An overwhelming influx of data may result in cognitive overload and resource wastage.

Reframing abundance as an opportunity to address the problem of plenty, engineers and decision-makers must embrace a mindset of mindful innovation. This begins with strategic minimalism—focusing not on endless possibilities, but on refining the most impactful solutions. Sustainable growth must be prioritized by developing technologies and infrastructures that not only scale but also support long-term human well-being. Purpose-driven innovation is essential; the goal should shift from producing more to producing better, whether in software, urban planning, or industrial design. Finally, human-centric engineering ensures that progress remains aligned with real human needs, avoiding the trap of overwhelming individuals with unnecessary complexities.

Omkarnath Mohapatra
4th Sem, CSE

MENTAL HEALTH:
Cognitive Restructuring

Most people experience negative thought patterns from time to time, but sometimes these patterns become so ingrained that they interfere with relationships, achievements, and even overall well-being.

Cognitive restructuring is a powerful technique that helps individuals identify and change negative or distorted thought patterns. The process involves recognizing irrational or harmful thoughts and replacing them with more balanced, realistic, and positive ones.

Here's how you can take steps toward restructuring:

1. Identify Negative Thoughts:

Be aware of negative thoughts, which are often triggered by specific situations or events can take forms such as:

- Catastrophizing: Expecting the worst outcome.
- Black-and-white thinking: Seeing things as all good or all bad, with no middle ground.
- Overgeneralization: Making broad conclusions based on limited experiences.

2. Challenge the Thoughts:

After identifying, question their validity by asking yourself:

- "Is there evidence to support this thought?"
- "Is this thought based on facts or assumptions?"
- "What would I say to a friend who had this thought?"

By reflecting on these questions, you can begin to create a more objective perspective on the situation.

Ritu Chowhan
Counselling Psychologist

MY CYBERSPACE
Dirty Secret Behind LLMs

Have a doubt? Ask GPT- the Large Language Model of Open AI. But how much energy does GPT require to handle a query and give a response? Although the energy consumption depends on the model size and number of tokens processed, at this point of time, it's extremely difficult to compute the exact energy expenditure. But there is enough research to infer the damaging environmental impacts of Chat GPT and such LLMs. The last few years have witnessed extensive usage of such models with Open AI, Google, Microsoft and others having their own versions. Below are some startling facts about the energy consumption of LLMs.

As per Reddit, the estimated energy consumption of a ChatGPT-4 query is 0.001-0.01 kWh (3.6-36 kJ) in comparison to Google search query which is 0.0003 kWh (1.08 kJ). The University of Massachusetts Amherst researchers studied various Natural language processing (NLP) models to infer that the carbon footprint of training a single such model is around 600,000 pounds of CO_2 emissions. (Equivalent of 125 round-trip flights between New York and Beijing).According to sources ChatGPT alone has 300 million active weekly users globally.

The reasons behind this stem from the 'Large' aspect. The huge data sets used for training, enormously complex computations, achieving parallelism, catering to the GPUs and CPUs contribute to the huge energy consumption and heat exhaust as well. As a consequence, water based cooling is sometimes used attributing to consumption in the process.

Dr. Sushree Samita Rout
Associate Professor, CSE Dept.

PROFILE OF AN ORGANISATION

The NOW Project, University of California, Berkeley

At the heart of innovation, the Computer Science Division of the University of California, Berkeley, has consistently challenged the status quo. One of its most transformative contributions to the computing world came in the 1990s through the Network of Workstations (NOW) Project—a visionary initiative that redefined how high-performance computing could be achieved.

Instead of depending on monolithic, expensive supercomputers, the NOW Project proposed a radical shift: harnessing the combined power of interconnected, off-the-shelf workstations to function as a unified, powerful computing resource. This concept laid the groundwork for what we now recognize as the foundation of distributed and cloud computing.

A Vision Beyond Hardware

The hardware infrastructure behind the NOW Project was an impressive blend of innovation and collaboration. The system comprised over 100 SUN UltraSPARC workstations, 40 SUN SPARC stations running Solaris, and 35 Intel PCs operating on Windows NT or a UNIX variant—all linked through the pioneering Myrinet switched network. This high-speed, low-latency communication backbone allowed seamless data exchange between nodes, creating a virtual supercomputer from commodity parts.

Storage was equally scalable, featuring a network of 500 to 1,000 disks, ensuring robust data handling capabilities. Importantly, much of this equipment was made possible through generous donations from industry leaders, demonstrating a spirit of partnership between academia and enterprise.

Software that Set the Standard

While the hardware was impressive, the true innovation of the NOW Project lay in its software architecture. UC Berkeley researchers engineered advanced solutions in network interface hardware, distributed file systems, scheduling mechanisms, and, most notably, Active Messages—a breakthrough communication protocol that dramatically reduced overhead in message passing. This development significantly enhanced the efficiency of parallel computing, setting new benchmarks in distributed system performance.

A Lasting Impact on Modern Computing

Before NOW, high-performance computing was synonymous with exclusivity and high cost. By proving that clusters of everyday machines could rival supercomputers, UC Berkeley democratized access to powerful computing resources. The principles established through this project now underpin modern data centers and cloud computing infrastructures, where fleets of commodity servers deliver scalable, resilient, and affordable services.

The legacy of the NOW Project is a testament to UC Berkeley's relentless pursuit of innovation. It didn't just solve a technical challenge—it transformed the trajectory of computing, empowering an era where performance is no longer confined to privilege.

"What can anyone give you greater than now?"

—William Stafford

Tamanna Jaiswal
2nd Sem. E&IE

IN CONVERSATION WITH ...

Prof. Jaideep Talukdar, Vice-Chancellor, Silicon University, Odisha

In an insightful interview with Prof. Dr. Jaideep Talukdar, the esteemed Vice-Chancellor, Silicon University, the conversation unravelled the profound vision driving the institution's transformation into a pioneering hub of education and research. Dr. Talukdar, a celebrated academic and researcher with a career spanning decades, shared his strategic outlook on how Silicon University is redefining academic excellence by fostering innovation, creating a robust research ecosystem, and building a forward-thinking administrative framework.

Dr. Talukdar emphasizes, "A university, a place where knowledge is created, involves dedicated and continuous efforts into research". He emphasized the importance of the Grant-funded Research Initiative, which aims to enhance the research culture by securing external grant funding. "External grant funding is of critical importance because it augments research in a big way. Significant effort has been put over the past year in establishing a proper research ecosystem," he explained.

In addition to fostering research, Dr. Talukdar discussed the streamlining of administrative processes aligned with the university's founding Statute. He noted, "The Statute establishes the officers and authorities of the university—the Chairman, Vice-Chairman, Vice-Chancellor, Registrar, Finance Officer, Controller of Examinations and Deans – and decision-making bodies such as the Board of Governors, Finance Committee, Board of Management, Academic Council and Research & Innovation Council. This structured monitoring and approach ensures adaptability continuous progress."

Reflecting on recent successes, Dr. Talukdar highlighted the achievement of securing major external grants, including an AICTE grant of Rs. 1.1 crore and a Rs. 60 lakh grant for medical research. "This latter grant marks a significant milestone for the university, enabling groundbreaking work in areas such as Alzheimer's research at the JBS Haldane Centre for Molecular Medicine," he shared.

Acknowledging challenges, Dr. Talukdar spoke about the evolving demands of academia and administration. "We have reoriented our way of thinking to take the university forward. Offices of the Deans such as Dean (Instruction), Dean (Research and Consultancy), and Dean (Student Affairs) have been augmented to handle greater workloads and the changing environment," he explained, emphasizing the importance of collaboration in overcoming obstacles.

Dr. Talukdar's strategic vision for Silicon University, encompassing education, research and consultancy, people, resources, and engagement & partnership, sets a clear roadmap for growth and excellence from 2025 to 2030. His leadership underscores the transformative power of dedication and innovation, ensuring that Silicon University continues to thrive as a hub of academic excellence and research innovation.

Aradhana Dash
6th Sem, CEN

IN CONVERSATION WITH ...

Secretary General, Silicon Students' Council

In a world enthralled by tales of overnight triumph, the evolution of authentic leadership is a quieter, steadier affair. For the Secretary General, of our Silicon Students' Council Mr. Sreedharam Manohar, 8th Semester, CSE, the ascent to leadership was neither instantaneous nor effortless. It began with hope, blossomed through service, and continues to thrive on self-awareness and a sense of purpose.

In this interview with Aradhana Dash of 6th Semester, CEN, he reflects on the essence of his journey and the values that defined his successful tenure.

Aradhana: How did you transition from being a regular student to assuming the role of Secretary General?

Manohar: I often find myself revisiting the image of my younger self—reserved, uncertain, and searching for meaning. Yet, transformation rarely makes a grand entrance. It tiptoes in subtly, through practice, exchange of ideas, and conscientious execution of seemingly minor duties. Leading over 79 Class Representatives as Secretary General provided not only unparalleled exposure but also the profound lessons of time management, adaptability, and collaborative teamwork.

Leadership extends beyond administrative achievements, delving into the realm of individuality—a principle that influenced my choice of Practice School placements. When Glosity came along, I found something that resonated with my aspirations. To me, leadership is a title, but individuality is enduring. It was a rigorous journey, no doubt. But multitasking builds resilience. I hope people realize that they are capable of much more than they credit themselves for.

Aradhana: As the Secretary General, you navigated intricate challenges, from mediating between student teams to orchestrating grand-scale events. What strategies did you employ to ensure the events' success?

Manohar: Unity amidst diversity was my ultimate trial in leadership. Open dialogue and inclusive decision-making became my guiding principles through student team management. Every voice mattered, every contribution was acknowledged, and roles were assigned to leverage individual strengths. Our team wasn't just managing the fest or events—it was fostering trust, maintaining academic harmony, and delivering excellence. I owe every success to them, and Zygon 2025 stands as a major testament to what collective effort can achieve.

Aradhana: What message would you like to give your juniors?

Manohar: Don't chase success—chase self-improvement. Trust the journey, even if it feels slow.

Aradhana: Thank you, Sir.

Aradhana Dash
6th Sem, CEN

SPECIAL INTERVIEW ...

Shri. H. K. Ratha

Shri. H. K. Ratha, is the former Director of the Integrated Test Range (ITR), Chandipur, Chairperson, IEEE Bhubaneswar Subsection, In this interview with Pratishya Priyadarshni, 6th semester EEE and Omkarnath Mohapatra, 4th semester, CSE, he shares his perspective on ITR's significance, the challenges it faces, and his advice for future technology leaders.

The Integrated Test Range, a cornerstone of DRDO's missile testing and development efforts, has played a major role in advancing India's defense technology. When asked about the key innovations developed at ITR, H. K. Ratha highlighted the complexities involved in testing missiles like the Nirbhaya, a water-cruising missile with a range of nearly 1000 km. "We can't test such missiles on land unless we evacuate massive areas. That's a huge challenge. The biggest problem is the data—getting accurate telemetry and tracking data for such long-range weapons."

Addressing the unique challenges in defense research, he emphasized the complexity of simulating multi-target scenarios and collecting real-time data. "It's not just about launching a missile—it's about what you learn from it," he added with a spark of pride in ITR's adaptive strategies.

In a forward-looking reflection, when asked about skills essential for future tech and research leaders, Mr. Ratha gave a clear answer: "No matter what discipline you're from, you must know software and cutting-edge technologies. That's non-negotiable now."

Environmental impact is often a topic of concern, especially with large-scale missile tests. Mr. Ratha explained how ITR has taken measures to protect its surroundings. "We're very careful, especially about the seawater. We have environmental drives, and just like Ireland protects its turtles, we make sure the ones that come here to lay eggs are taken care of."

And finally, when asked to share a message with students, his advice was crisp and powerful: "Concentrate more on the basics and concepts. Capture the concepts, and the rest will come naturally."

Pratishya Priyadarshni
6th Sem, EEE

ALUMNI SPEAK ...

Nilakantha Roy

Nilakantha Roy, an alumnus of Silicon University, graduated in 2014 with a Bachelor's Degree in Electrical and Electronics Engineering. After working as an Electrical Power System Engineer at PRDC until 2017, he transitioned into renewable energy. In 2017, he pursued a Master of Science (M.Sc.) at Denmark Technical University (DTU) and graduated in 2019.

He then joined ABB's Electrical Modelling team for FACTS as a Project Engineer, gaining extensive knowledge over three years before moving to Siemens Energy in 2022 as a Senior Executive. His ambition led him to explore electrical modeling for large wind turbines, eventually joining Danske Ingeniør Services in Copenhagen as a Senior Power System Developer. Beyond his profession, he is passionate about writing, global cultures, and analyzing the energy industry from a core electrical design perspective.

Discussing the future of power systems in digitalization and AI, he emphasized how SCADA, fault detection, automatic state estimation, and hybrid power plant controllers have made automation essential. AI plays a key role in generation and maintenance, particularly in renewables, aiding in forecasting, fault detection, and predictive maintenance. Europe´s decentralised power sector, comprehensive grid codes and open energy market drives renewable energy innovation, whereas India´s large grid size and stringent grid codes requires more emphasis on wind energy integration and energy storage. The Indian grid enjoys a large inertial advantage over the European grid where there is a large penetration of inverter based generations.

His experience at PRDC, ABB, Siemens Energy, and Danske Ingeniør Services has given him a unique perspective on power system design. These companies excel in innovation, market forecasting, and regulatory alignment—areas where Indian firms lag. For instance, Hitachi Energy anticipated Europe's shift to inverter-based generation and promoted synchronous condensers early, benefiting from strong market analysis, academic partnerships, and government-backed research. Their flexible contracts ensure steady revenue, while strict grid code compliance secures major projects. A well-defined grid code with stakeholder input is essential for renewable integration.

For students and young professionals in renewable energy, he advised starting early with hands-on experiences. Visiting a substation first hand can make the field more engaging.

Interviewed by – **Krishnamayee Pathy**
4th Sem, ECE

MOVIE REVIEW

City of Fading Stars

La La Land is a cinematic masterpiece that captures the complexities of love, ambition, and personal growth. This film challenges the conventional notion that love necessitates sacrificing one's dreams. Instead, it advocates for the idea that true love flourishes when both individuals support each other's aspirations and dreams, rather than compromising their own. This theme is further reinforced through the film's extraordinary musical composition, which serves as both a narrative tool and an emotional anchor for the story.

One of the most compelling aspects of the film is its remarkable musical score, composed by Justin Hurwitz. The song “City of Stars” encapsulates the bittersweet reality of chasing dreams in Hollywood, while the opening number sets a vibrant and uplifting tone that immediately captivates the audience. Unlike traditional musicals such as West Side Story, La La Land offers a contemporary perspective on relationships, resonating with modern audiences through its innovative musical arrangements and heartfelt storytelling.

Beyond its music, the film excels in its visual and narrative elements. The cinematography, color palette, and performances by the lead actors contribute to a mesmerizing experience. The film poignantly explores the universal feeling of post-breakup contemplation, where individuals reflect on the "what-ifs" of their past choices and how different decisions could have led to alternate futures.

One of the film's most striking aspects is its ending.

While the story suggests that a more conventional happy conclusion could have been possible, it ultimately does not conform to expectations. La La Land underscores the significance of living authentically, embracing one's journey, and finding fulfillment beyond romantic relationships. It reminds viewers that genuine love involves supporting a partner's personal growth rather than imposing one's desires onto them.

The film beautifully conveys that love is about freedom rather than confinement. As the saying goes, "Love means letting go," and La La Land exemplifies this sentiment by portraying love as a force that encourages self-discovery and individual fulfillment.

Mohammed Zuhayer Labeeb
2nd Sem, ECE

TRAVEL DIARY

VRINDAVAN: The land of spiritual serenity, eternal devotion, & peace

In Uttar Pradesh lies Vrindavan, a city steeped in devotion, serenity, and timeless mysticism. Reverberating with the soulful echoes of Lord Krishna's pastimes, it stands as a beacon of India's rich spiritual heritage, drawing seekers from across the globe into its sacred embrace.

At the eastern edge of the city, the Yamuna River flows gracefully, its waters carrying the whispers of countless prayers. Pilgrims gather along its banks, immersing themselves in ancient rituals and melodious kirtans that resonate through the air. Boats glide across the tranquil expanse, offering a unique vantage point from which to soak in the ethereal beauty of this revered river.

Vrindavan is home to an extraordinary array of temples, each narrating a divine saga in its own way. The Banke Bihari Temple, founded by Swami Haridas in 1864, stands as a sanctuary of devotion, its serene ambiance maintained by the absence of bells and conches to preserve Lord Krishna's undisturbed rest. Not far away, the Prem Mandir, a radiant symbol of divine love, dazzles visitors with its exquisite Italian marble architecture—a masterpiece sculpted over eleven years and unveiled to the public in 2012.

Mysticism permeates through the air at Nidhivan, a sacred grove enveloped in lush greenery, where Tulsi plants thrive perpetually. Legends whisper that after sunset, Lord Krishna and Radha enact their celestial Rasleela here, an occurrence so profound that entry is strictly forbidden at night. Moreover, the ISKCON Temple, or Krishna Balaram Temple, established in 1975, serves as a spiritual epicenter, its energetic ambiance alive with kirtans and the eternal teachings of the ***Bhagavad Gita***.

Close by, the Radha Raman Temple, one of Vrindavan's oldest shrines, safeguards a self-manifested deity of Lord Krishna, revered with meticulous rituals passed down through centuries.

Looking ahead, Vrindavan's skyline is set to change with the ambitious Vrindavan Chandrodaya Mandir project, envisioned as the world's tallest religious monument at a planned height of 213 meters. This architectural marvel, once completed, will further elevate the city's stature as a pilgrimage hub of global significance.

Beyond its spiritual grandeur, Vrindavan is a haven for pure vegetarian cuisine. Devotees here embrace Satvik Bhojan, a culinary tradition that excludes onion and garlic, allowing flavors to shine in their natural essence.

With over 5,884 temples and an astonishing 60 million visitors in the 2022–2023 period, Vrindavan stands as an eternal testament to faith, devotion, and cultural vibrancy. It is more than a destination—it is an experience, a journey into the divine, where history, mythology, and spirituality converge to create an unforgettable tapestry of sacred bliss.

Krishnamayee Pathy
4th Sem, ECE

THE INDIAN START-UP SCENE

Zepto: A Step Closer to Success

In today's rapidly evolving world, technological growth and innovation have redefined the way we live and work. Among the many flourishing sectors, entrepreneurship has emerged as a dynamic force, captivating young minds and reshaping the global economy. India, in particular, has witnessed a surge in start-ups, especially in the e-commerce, healthcare, and finance sectors.

E-commerce, introduced in India in 1995, has grown into a major economic driver. With over 5,100 e-commerce start-ups—940 of them funded—India raised around $224 million in 2021 alone. Major players like Nykaa, Zomato, and Swiggy have transformed digital commerce into an essential service. Among the rising stars is Zepto, a quick-commerce start-up founded in July 2021, focused on delivering groceries efficiently and swiftly.

Zepto's remarkable growth speaks volumes: its FY24 financials recorded a 120% revenue surge, reaching ₹4,454 crore, while reducing losses by 28%. This success lies in understanding the evolving needs of today's consumers—primarily, convenience and speed. In a post-pandemic world marked by long work hours and increased digital dependency, time has become a prized commodity. Zepto capitalized on this by offering budget-friendly, timely home delivery of daily essentials, aligning perfectly with modern consumer demands.

Customer satisfaction and high-quality service have been Zepto's pillars of strength, allowing it not only to gain market trust but also to reduce operational inefficiencies. Its internet-based

model offers vast accessibility and visibility, both nationally and globally, giving it an edge in a digitally connected world.

However, with digital expansion comes the growing concern of cyber fraud. A staggering 900% rise in online fraud, amounting to ₹33,165 crore over the past four years, calls for urgent action. Entrepreneurs must ensure legal compliance and secure operations, while customers must remain vigilant and informed. Cyber safety is not a choice—it is a necessity.

E-commerce, when executed responsibly, holds immense potential. Zepto stands as a testament to this promise—blending innovation, efficiency, and adaptability to build a sustainable business model. Its journey illustrates how the right vision, coupled with a deep understanding of market needs, can shape a successful future.

In essence, the growth of e-commerce is more than a business trend—it's a symbol of a progressive nation. And as Zepto paves the way, it also inspires countless others to take their own step closer to success.

Satasha Samanwhita Pradhan
2nd Sem, ECE

EARTH MATTERS

Navigating the Water Crisis: Strategies for a Sustainable Future

The water crisis is not just an issue in India; it is a global challenge that threatens millions of lives and ecosystems. According to the UN World Water Development Report, nearly half of the world's population is experiencing water stress, and even Sustainable Development Goal (SDG) 6, which aims to ensure availability and sustainable management of water and sanitation for all, is not on track to meet its targets.

Several factors contribute to this crisis, including inadequate urban infrastructure and the increasing extent of concrete flooring, which disrupts the natural water cycle. The expansion of urbanization has led to reduced groundwater recharge and over-reliance on surface water bodies. Furthermore, the contamination of water sources by harmful substances such as pharmaceuticals, nanomaterials, micro plastics, heavy metals, industrial chemicals, detergents and hormones exacerbates the situation, making water not just scarce but also toxic.

These have infiltrated the biotic components of nearly every type of ecosystem. Recent studies have shown that these contaminates can cross the placenta and enter fatal bloodstream, raising concerns about the long-term effects on human health. Microplastics have even been found in mothers' milk in certain regions. This highlights the far-reaching consequences of water contamination, which extend beyond aquatic life and ecosystems to affect human health.

To confront this growing challenge, a multi faceted approach is necessary. Governments must implement and enforce stricter regulations for effluent and wastewater treatment to prevent pollutants from entering water bodies. Research into the development of biodegradable plastics and polymers should be promoted, as they offer a potential solution to reduce plastic pollution. Additionally, water education plays a crucial role in raising awareness and encouraging responsible water use. Individuals need to understand the importance of conservation and adopt sustainable practices in daily life.

For the agricultural sector, where water usage is most significant, introducing methods like drip irrigation and sensor-based irrigation systems can vastly improve water efficiency. These techniques not only conserve water but also ensure that crops receive the right amount of hydration at the right time, reducing wastage.

Moreover, scientists and engineers must focus on designing affordable and efficient wastewater treatment plants, water filters, and weather prediction systems that can support sustainable water management. The development of these technologies can help mitigate water scarcity while ensuring water quality.

Only through shared commitment and innovative solutions we can ensure the sustainable use of water for generations to come. It is imperative that we take immediate action to secure this vital resource and preserve the health of our planet.

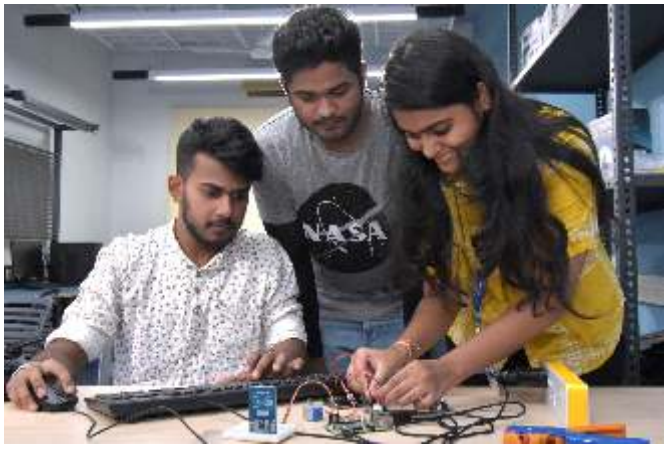
Kumari Anamika
Assistant Professor, BSH

MAKERSPACE:
Revolutionizing the Maker Movement

Hephaestus, the Greek smith who forged Achilles' legendary shield, Vishwakarma, the divine architect of Dwarka in Hindu mythology, and Ptah, the Egyptian god who created the world through thought and speech—all embody the essence of divine craftsmanship. Across ancient civilizations, these mythological figures symbolize more than just skill—they represent the timeless reverence for those who imagine, design, and create. This universal admiration underscores the enduring value of the maker's spirit—a mindset rooted in creativity, innovation, experimentation, and the relentless drive to build and improve.

The maker's spirit has given rise to the Maker Education movement. This hands-on learning approach fosters creativity and problem-solving. In Maker Education, schools and colleges promote practical learning through activities such as building, experimenting, and innovating. They create collaborative workspaces, such as makerspaces, where students can share tools, ideas, and skills while working on real-world projects. Rooted in STEM (Science, Technology, Engineering, and Mathematics), the movement gained momentum in 2005 with magazines and fairs that celebrated innovation and invention. Embracing this spirit, SiliconTech has set up a state-of-the-art Makerspace Lab to nurture innovation, design thinking, and practical skills among students.

The Makerspace at SiliconTech is a well-equipped innovation hub designed for exploration, creation, and collaboration. It empowers students to explore the fields of robotics, technology, and electronics by working with innovative tools and technologies. It provides hands-on experience



with 3D printers, microcontrollers, and open-source platforms, enabling students to design, prototype, and test their ideas. The lab also supports projects related to Industry 4.0, encouraging students to develop smart connected systems that reflect current industrial trends. Through this focused environment, students gain practical exposure to the emerging technologies and build the skills needed to thrive in a tech-driven world.

At the heart of the Makerspace is not just cutting-edge technology, but a spirit of resilience and collaboration. Innovation thrives here not just because of 3D printers or microcontrollers, but because the lab nurtures courage, curiosity, and community. Students back each other's ideas, collaborate across disciplines, and grow together. In this space, the maker's spirit is powered as much by emotion and persistence as by tools and technology.

Sweta Mohanty
Assistant Professor, BSH

STUDENTS' CORNER ...

Flight of A Dream

It takes all of a man's might
to toil day and night,
Without a sign of hope's ray
to keep thoughts of insufficiency at bay.

For a brief moment in between his routine,
A beckoning cry for help escapes,
Only to be ushered by his fear
Back to his heart's pathetic state.

The ride back home from work is long,
flashes of a life that could have been
disrupted by his vision as he waits longingly,
for another win.

Motion pictures play on a wall,
on the command of his imagination.
Hours spent staring at the ceiling of his room,
juxtaposing his reality with fiction.

Waking up to dawn's light,
a chirp cut his yawning halfway.
A bird has perched on his windowsill
with a broken wing that refuses to heal.

Its constant hopping makes it wobble,
the man thinks it would give up, slowly.
The clock goes unseen for an hour,
till the bird flaps its wings finally.

The bird took a dynamic flight.
The man's heart fluttered at this sight.
Oh! It has caught another dream!
His heart has caught yet another dream!

Sarbani Devaprita
2nd Sem. CSE

Letters Never Sent

In the city of Manchester, there lived a young girl named Laura Jackson. She lived with her father and stepmother, who were harsh on her. Laura was forced to work as a maid in the houses of the rich, often mistreated by them. Her father didn't allow her to continue her education, even though Laura had a passion for writing since childhood. Her dream was to become the world's best fiction writer. She used to participate in story-writing competitions during her school days, but ever since her mother died, her father had deprived her of attending university.

Left lonely, Laura spent her days crying and writing letters to her deceased mother, sharing all her pain and worries. She wrote her feelings in the form of poems and short stories. Every night, she packed them inside envelopes and dropped them into a letterbox by the side of the road, without signing her name. After working long hours as a maid, she would sit with a piece of paper and a photo of her mother in her hand, pouring her heart out in writing.

One night, after being ill-treated by her stepmother for not completing her chores on time, Laura cried in her bed, holding her mother's

photo. She longed for her mother's comforting presence. That night, as she cried herself to sleep, her mother, who was in heaven, couldn't bear to see her daughter in pain. She visited Laura in her dreams. Laura dreamt of her mother hugging her tightly and kissing her forehead, reminding her that even though she had died, she would always be there to guide and comfort Laura. Tearfully, Laura embraced her mother, but suddenly, she woke up to find it was just a dream.

Laura awoke in the early morning, feeling sad, and went to work. While sweeping the floor, she picked up a newspaper and was surprised to see her poem in the editor's section. She couldn't believe her eyes. Beneath the poem was a message asking the writer to contact the editor. Laura, overwhelmed with excitement and curiosity, sneaked into her father's room, used his laptop, and emailed the editor.

The next day, Laura visited the editor in the city of Birmingham. She traveled by train and arrived in the afternoon. To her astonishment, the editor had collected all the letters she had written to her mother. He praised Laura's writing skills and invited her to join his team as a writer. Laura could hardly believe her luck.

Soon, Laura began writing short stories and poems, which were published in the newspaper's editorial section. Her dream was finally coming true. Over the years, Laura Jackson became a celebrated author, known across England for her novels and fiction. Her book Letters Never Sent was sold worldwide. In it, she described how her mother in heaven helped her achieve her dreams and the boundless love mothers have for their children, even after they have passed away.

Ananya Das
2nd Sem, ECE

Harvest Hopes

The farmer walks across the barren land,
Where life restores and rescans,
As another season of cropping arrives,
A new turmoil with a cherry topping.

Hustling the plough under the torrid sun,
Like nurtured dreams and hopes spun,
Damp soil deluging the young seeds,
Through sleepless nights and endless deeds.

Friends on the surface, foes later,
Like the weeds that come off the platter,
Roots deep beneath, tangled and tight,
Listening to the silent whispers of the dark night.

Through seasons of drought and storms,
The grapples of life detangle and reform,
In moments of silence and labor of patience,
Dreams strengthen, and faith gains credence.

In every bloom, there's a cycle renewed,
In every hope, a fantasy brewed,
A harvest blossoms from the arid soil,
As ambitions rise through troubled toil.

Underneath the Earth's precious embrace,
Life prospers with lessons of fleeting grace,
A farmer's heart filled with dreams untold,
As in barren life, struggled promises unfold.

Priyambada Dash
2nd Sem, CSE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