BBD UNIVERSITY

BBD ENGINEERING TIMES

WHERE INNOVATION MEETS ENGINEERING

SCHOOL OF ENGINEERING

BBD UNIVERSITY, LUCKNOW

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EDITOR'S REPORT: EDITION-I

It is with great pride that I present the first edition of **BBD ENGINEERING TIMES**, a platform dedicated to showcasing the innovation, research, and technical prowess of our students and contributors.

This issue features a compelling collection of articles spanning emerging technologies, engineering insights, project showcases, and industry trends.

I have witnessed the team's growth and their ability to translate complex concepts into accessible, engaging content. I extend my sincere appreciation to the department, contributors, and technical reviewers whose support made this issue possible.

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A heartfelt space where students share their dreams, reflections, and messages for peers, mentors, and the world beyond. These brief yet impactful expressions embody the diversity, unity, and vibrant spirit of the **School of Engineering** student community.

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This section consists of the team of individuals that are responsible for the overall direction and quality of this magazine's content. They have worked tirelessly to present the first edition of **BBDET.**

STUDENT SPOTLIGHTS

‘Where Ideas Take Flight’

A Collection of Creativity, Curiosity & Courage

Step into the heart of our magazine — a showcase of student voices through their mindful thoughts, and reflections. These pieces offer a glimpse into the minds of tomorrow’s thinkers and creators, proving that imagination and insight go far beyond the classroom.

Dive in and get inspired by the brilliance of young minds.

Leveraging Data to Protect Our Planet

Understanding the Role of Big Data:

Innovative data-driven solutions have emerged in response to growing environmental issues, such as habitat degradation and air and water pollution.
Massive amounts of environmental data from various sources, such as satellite imagery, IoT sensors, and citizen-science platforms, can be captured, processed, and interpreted with previously unheard-of capabilities thanks to big data analytics. Environmental monitoring systems can now more accurately identify new threats, predict trends, and guide policy decisions by combining cutting-edge machine learning algorithms, geospatial analytics, and real-time processing frameworks.
Big Data has transformed many industries due to its enormous volume, variety, and velocity. It provides previously unheard-of insights into the condition of our planet in the field of environmental monitoring. Big Data enables everything from predictive modeling of natural disasters and climate trends to real-time analysis of air and water quality.
It is a fundamental tool for contemporary environmental monitoring and sustainable decision-making due to its ability to integrate various and extensive data sources.

Applications in Environmental Monitoring:

Big data is crucial to enhancing our ability to track and react to changes in the environment. It permits quicker, more intelligent, and better-informed decision-making.

Climate Change: Big data facilitates the monitoring of extreme weather events, sea level rise, and temperature variations. It helps identify trends and forecast future changes using satellite imagery and long-term climate records.
Air and Water Quality: Timely interventions are made possible by real-time pollution level monitoring.
Continuous data collection from IoT sensors and devices enables quicker environmental reactions.
Biodiversity: Monitoring population trends and species distribution supports conservation initiatives.
Data tools aid in the preservation of endangered species and the observation of habitat changes.
Natural Disaster Prediction: Forecasting of natural disasters such as earthquakes and hurricanes can be enhanced by examining historical data. Large-scale data
Urban Planning: Data-driven insights can maximize the sustainability of urban design. It helps with better environmental resource management and the planning of energy-efficient infrastructure.

Challenges in Big Data–Driven Environmental Monitoring

Big data presents a number of significant difficulties even though it enables deeper understanding of environmental systems. Data quality is still a significant obstacle.

Reliability is frequently decreased by missing values, format irregularities, and sensor drift. Privacy issues come up, particularly when tracking personal movement data in smart cities or endangered species.

The necessity of robust anonymization procedures is highlighted by this circumstance. Large-scale processing of sensor data and satellite imagery is challenging due to infrastructure deficiencies, especially in developing nations. Furthermore, because of variations in resolution and calibration, combining various datasets—from satellites to citizen science—causes technical issues. Excessive computational demands make real-time processing more difficult and frequently lead to delays in early warning systems, noise, and erroneous correlations.

Benefits

Big data revolutionizes environmental monitoring. It drives early warning systems by examining data in real time to identify and forecast natural disasters, allowing for faster and more efficient reactions. Additionally, it improves decision-making by offering more profound understandings of environmental trends that direct more intelligent policies and initiatives. Additionally, by simplifying processes and lowering the need for manual monitoring, big data helps to cut costs. Above all, it promotes a better comprehension of ecological systems by identifying patterns and connections that aid researchers and decision-makers in more effectively preserving our planet.

The Future of Environmental Data Analytics:

The ongoing advancement of sophisticated analytics methods is essential to the future of environmental monitoring. Predictive modeling and forecasting are made possible by machine learning algorithms' ability to find patterns and anomalies in big datasets.

Furthermore, even more detailed insights into environmental processes will be possible through the integration of data from the Internet of Things (IoT). Furthermore, real-time storage and analysis of massive data streams will be facilitated by cloud-based platforms.

Researchers and policymakers will have faster access to useful information as computational tools advance. A future where environmental decisions are not only well-informed but also predictive and adaptive is promised by the combination of AI, IoT, and big data. A more resilient and sustainable planet will be shaped in large part by this evolution.

> "THE PROMISE OF BIG DATA LIES NOT IN THE VOLUME OF INFORMATION, BUT IN ITS POWER TO DRIVE SUSTAINABLE ENVIRONMENTAL CHANGE."

Key Takeaways:

- Big data is an effective instrument for tracking the environment.
- It allows us to monitor changes and make educated choices, and forecast upcoming patterns.
- Big data analytics has many advantages for environmental protection, despite certain drawbacks.
- With ongoing technological advancements, environmental monitoring has a bright future.
- Global cooperation is becoming crucial for effective environmental management as data-driven solutions develop.

Building a Greener Backbone for the Digital Age

The transition to sustainable digital infrastructure involves adopting eco-friendly technologies and practices across all stages of the digital lifecycle. This includes using renewable energy sources to power data centers, implementing energy-efficient hardware, optimizing software to reduce computational loads, and promoting virtualization to decrease the need for physical resources.
Governments, tech companies, and organizations are increasingly investing in green IT solutions to align digital growth with climate goals. By embedding sustainability into the core of digital development, we can ensure long-term resilience, cost savings, and a reduced environmental footprint.

The significance of sustainable digital infrastructure in the quickly evolving digital world of today cannot be emphasized enough. The need for effective systems that reduce their negative effects on the environment is growing along with the demand for digital services.
Designing, implementing, and managing digital technologies with social and environmental factors in mind is known as sustainable digital infrastructure. Finding a balance between environmental preservation and technological advancement is the aim.

The high energy consumption of digital infrastructure is one of its biggest problems. Data centers, which are home to thousands of servers, are frequently criticized for using excessive amounts of electricity.Sustainable infrastructure focuses on optimizing energy use, adopting renewable energy sources (such as solar or wind power), and employing energy-efficient hardware and cooling systems. Digital services, including cloud storage, social media, and streaming, contribute significantly to global carbon emissions. By adopting low-carbon technologies.

The circular economy, which minimizes waste and resource consumption, is embraced by sustainable digital infrastructure. This involves prolonging the lifespan of digital devices via maintenance, restoration, and appropriate disposal techniques. One way to lessen e-waste, a growing environmental problem, is to recycle old hardware and use eco-friendly materials in manufacturing. The software that drives digital services is just as important as the hardware when it comes to sustainable digital infrastructure. Enhancing system performance and lowering computational demands through software optimization can also be crucial for advancing sustainability.

AI and machine learning will optimize digital infrastructure by automating energy management, enhancing data efficiency, and predicting maintenance to extend hardware lifespan. With 5G and smart cities rising, sustainable, energy-efficient network designs will be vital for managing growing data traffic while staying eco-friendly.

Decentralised systems, such as blockchain, reduce reliance on centralised data centres by distributing energy use, thereby easing environmental impacts. The future of sustainable infrastructure relies on collaboration among technology providers, energy firms, governments, and environmental groups to create solutions, policies, and innovations that align digital growth with environmental sustainability.

Can We Explore, NOT EXPLOIT?

Exploration doesn't have to come at the cost of preservation.

What Does Responsible Tourism Really Look Like?

A Path to Responsible Travel and Ecotourism. Sustainable tourism is a mindful approach to travel that prioritizes the preservation of natural environments, cultural heritage, and local communities, aiming to minimize negative impacts and maximize positive contributions to a destination. It seeks to strike a balance between economic benefits for locals, environmental protection, and responsible visitor behaviour, ensuring that tourism can thrive without compromising.

Key Principles of Sustainable Tourism

Environmental Protection

By preserving natural resources, cutting pollution, and promoting biodiversity, it places a strong emphasis on protecting the environment. In order to preserve and honor regional customs and heritage, cultural preservation is also essential. In terms of the economy, sustainable tourism encourages equitable income distribution, supports local livelihoods, and lessens reliance on a single sector. Participation of the local population in tourism planning and decision-making is crucial.

Socio-Cultural Benefits

By promoting cultural exchange and protecting intangible heritage, sustainable tourism cultivates respect between tourists and host communities. By appreciating traditional knowledge, arts, and customs that might otherwise be marginalized in mainstream development, it strengthens local identity.
Additionally, communities are empowered to preserve and disseminate their cultural narratives on their own terms when they are involved in tourism planning.

Challenges and Opportunities:-

Controlling the number of tourists to prevent overtourism and safeguard delicate ecosystems, making sure local communities are actively engaged in tourism decision-making, reap the benefits of tourism, and teach tourists the value of sustainable behavior and responsible practices. Additionally, there is a chance to use technology to enhance planning and monitoring and to support environmentally conscious projects that preserve the environment while producing meaningful experiences. Environmental stress is lessened with the use of digital tools like visitor flow analytics and carbon trackers. Businesses are encouraged to implement greener operations through incentives and astute policies. Open communication with the community guarantees that tourism growth aligns with regional priorities and long-term sustainability objectives.

Economic Sustainability-

Providing a variety of experiences and activities to suit various interests, lowering reliance on specific travel industries, and making investments in environmentally friendly travel infrastructure and training initiatives to guarantee long-term financial sustainability, promoting the use of regional markets and companies. This strategy not only increases resilience but also boosts the local economy.

CONCLUSION

The way we explore must change in a world where travel is more than just taking in the sights. Every location, from historic cities to immaculate beaches, has ecosystems, tales, and cultures that are valuable.

Sustainable tourism fills that need by providing a considerate means of traveling that supports local economies and leaves a smaller environmental impact.

In addition to providing a means of experiencing various cultures and environments, sustainable tourism promotes social and economic well-being in local communities and preserves the environment for coming generations. Travelers can have a positive influence and guarantee that the locations they visit stay clean and vibrant by selecting sustainable options. It's up to us as travellers, planners, and global citizens to transform tourism into a force for sustainable and inclusive development.

Travelling Responsibly for a Greener Tomorrow

Tourism is the term used to describe travel to other places for leisure, business, or other purposes. It covers topics like traveling and cultural education. Both at home and abroad. Sustainable tourism is defined as travel that minimizes negative impacts on the environment, society, and economy while optimizing benefits for local populations and ecosystems. It aims to strike a balance between visiting new locations and preserving their economic viability, cultural heritage, and natural beauty.

Government Efforts in Promoting Sustainable Tourism in India:

India's tourism industry is expanding quickly, but it also brings with it issues like pollution, crowding, and cultural damage. The government is responding to this by promoting eco-friendly travel that respects cultural heritage, helps the community, and preserves the environment. The National Strategy for Sustainable Tourism was launched in 2022. It focuses on eco-friendly travel, reducing waste, using local resources, and involving communities. Schemes like Swadesh Darshan and PRASHAD are now designed to support green tourism. Swadesh Darshan develops tourist circuits that care for the environment, and PRASHAD improves religious sites in a safe and clean way. States like Sikkim and Kerala promote village stays, eco-tourism, and support for local culture. The government also encourages green hotels, clean tourist areas, and campaigns like Incredible India to spread awareness about responsible travel.

SUSTAINABLE JOURNEYS

Sustainable tourism is more than a travel trend. It is a dedication to preserving the earth while appreciating its splendor. It entails making thoughtful decisions: booking eco-friendly lodging, encouraging preserving cultural values, supporting regional craftspeople, and cutting down on plastic waste. We can empower communities, protect natural landscapes, and guarantee that future generations can experience the same wonders we do by traveling responsibly. When a journey has a positive effect, it becomes meaningful.

Traveller's Call of Action:

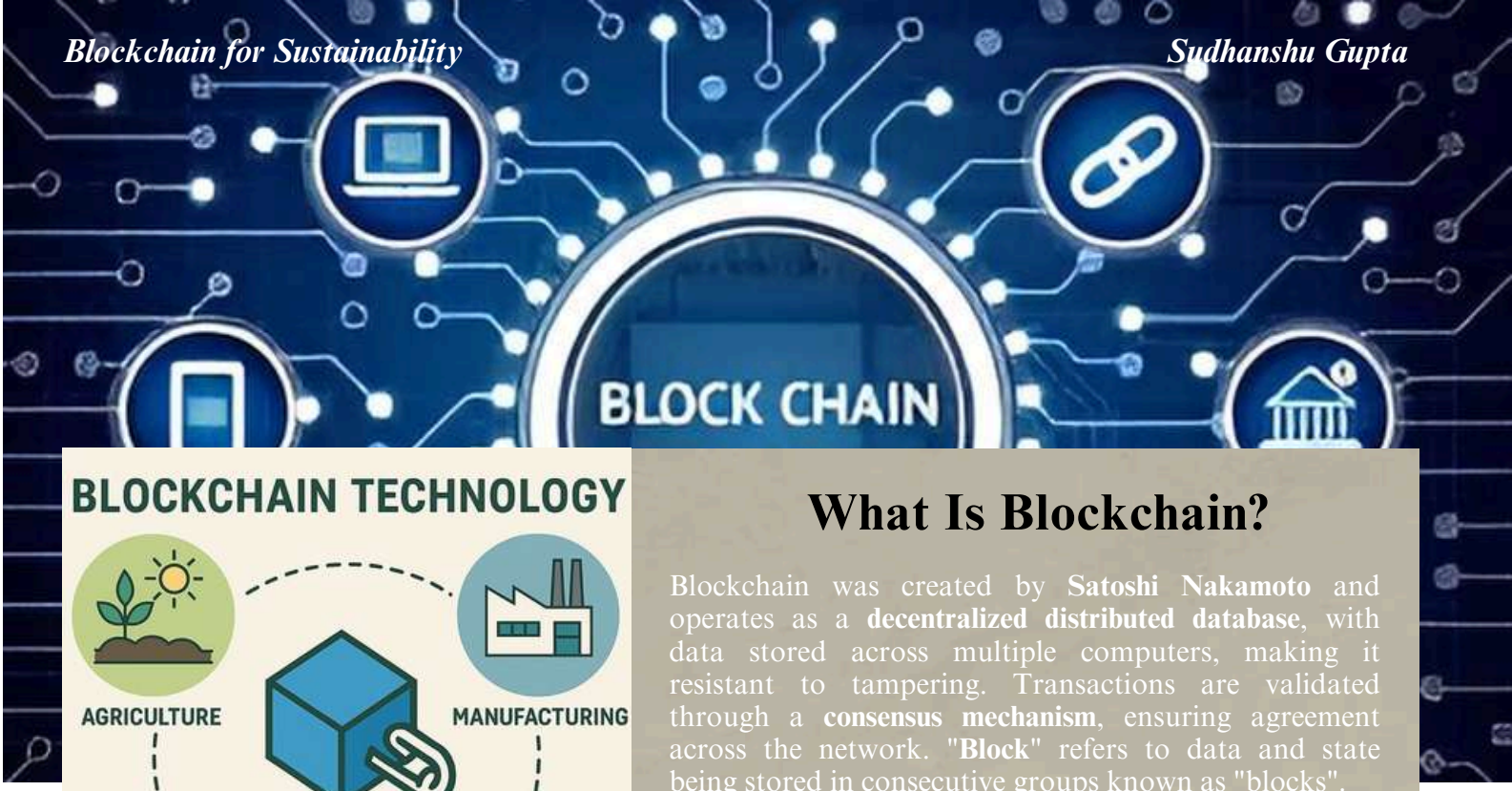
Whether you're planning a weekend getaway or a long-term trip, here are some ways you can travel sustainably:

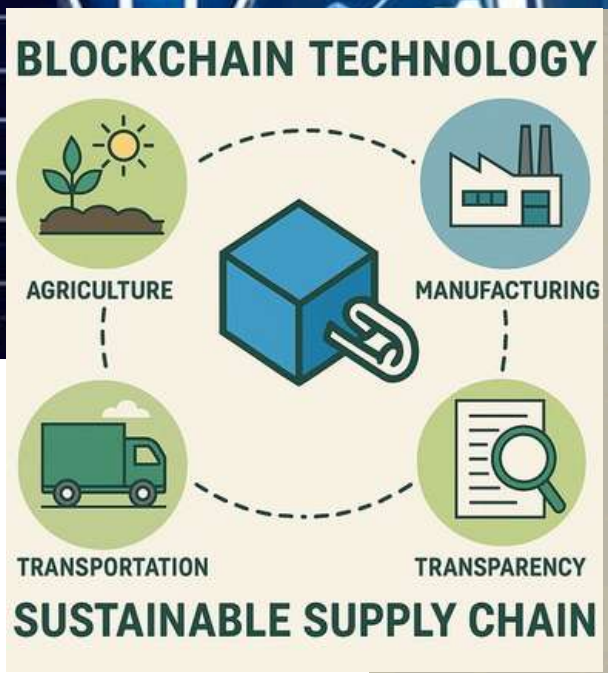
- Choose eco- certified accommodations (Look for certifications like Green Key, LEED, or Earth Check),
- Pack light and smart (Bring reusable water bottles, eco-friendly toiletries, and reusable shopping bags),
- Respect wildlife (Avoid attractions that exploit animals, such as elephant rides or dolphin shows)
- Limit energy and water use (Turn Off lights and air conditioning when not needed),
- Stay on marked trails (Protect natural habitats by sticking to designated paths),
- Give back to communities (Volunteer or participate in responsible tourism initiatives).
- Offset your carbon footprint by contributing to verified carbon offset programs when you fly or drive long distances.
- Use public transport, cycle, or walk whenever possible to reduce emissions.
- Avoid single-use plastics like straws, cutlery, and plastic wrappers; carry your own alternatives.
- Support local and seasonal food by eating at local restaurants and trying regional cuisine instead of global chains.
- Choose slow travel by spending more time in fewer places rather than rushing through destinations.
- Learn local customs and language basics to show respect and engage meaningfully with the culture.
- Dispose of waste properly and participate in clean-up efforts if possible.

This way eco tourism can be promoted and practiced.

Future Of Sustainable Tourism:

As environmental awareness grows, the travel industry is shifting toward sustainability. The future of tourism focuses on exploring the world while protecting nature, supporting local communities, and preserving cultural heritage. More travelers today are choosing responsible travel. Instead of mass tourism, they prefer meaningful experiences like staying in eco-friendly accommodations, eating local food, and respecting the places they visit. Governments and businesses are responding too. Many hotels aim to become carbon-neutral by reducing waste, conserving energy, and using renewable resources. Travel companies offer low-impact options such as train travel, cycling tours, and nature-based activities. Technology like AI, virtual tours, and eco-conscious booking tools is also helping travelers make greener choices. In India, the government promotes sustainable tourism through programs like Swadesh Darshan 2.0. States like Sikkim and Kerala are leading with community-based tourism and eco-tourism models. Tourists are encouraged to reduce plastic use, support local businesses, and choose environmentally responsible stays. Looking ahead, trends like regenerative travel, wellness tourism, digital detox getaways, and plant-based dining are expected to grow. The aim is not just to avoid harm but to create a positive impact. In short, the future of tourism is green, thoughtful, and inclusive, benefiting both travelers and the planet.





What Is Blockchain?

Blockchain was created by **Satoshi Nakamoto** and operates as a **decentralized distributed database**, with data stored across multiple computers, making it resistant to tampering. Transactions are validated through a **consensus mechanism**, ensuring agreement across the network. "**Block**" refers to data and state being stored in consecutive groups known as "blocks". "**Chain**" refers to the fact that each block cryptographically references its parent. In other words, blocks get chained together. **Smart contracts** are **self-executing agreements** stored on the blockchain, where the terms are written in code and automatically executed when predefined conditions are met. Every computer (**node**) in the network must agree upon each new block and the chain as a whole.

Revolutionizing Supply Chains with Transparency and Trust

Why Do Supply Chains Need Blockchain?

Modern supply chains span countries and involve many stakeholders, making them vulnerable to fraud, exploitation, environmental harm, and limited accountability.

Privacy is lacking. Upstream suppliers often hide sourcing and pricing data, while downstream retailers seek transparency. Legacy systems don't support controlled information sharing.

Security threats are rising. Centralized systems are easy targets, and 56% of cybersecurity breaches originate from third-party vendors, risking total disruption.

Blockchain offers solutions:

Transparency: Each step is visible to all parties.
Traceability: Tracks when, where, and how goods move.
Automation: Smart contracts reduce errors.
Trust: Secure, tamper-proof data builds confidence.

Real-World Example: From Cotton to Shirt

Imagine buying a t-shirt labeled "100% Organic & Fair Trade." **But how can you be sure it truly is?**

Blockchain makes the entire journey—from cotton farm to store—**transparent and verifiable**. At each stage, data like harvest details, labor practices, and shipping emissions are securely recorded.

A QR code on the tag links to this digital history. By scanning it, you can check where the shirt came from how it was made, and whether it meets ethical standards. No more guessing or blind trust—blockchain turns claims into facts, helping you make smarter, sustainable changes.

Challenges to Consider

Like any new technology, **blockchain isn't perfect**. One of the main concerns is its **high energy use**, especially in older systems like Bitcoin. These systems need a lot of electricity to run. However, newer, more efficient types of blockchain (like proof-of-stake) are being developed to solve this issue.

Another challenge is that many **companies still use old software and systems** that don't work well with blockchain. Connecting the two can be difficult and expensive. There's also a need for common rules and global standards. Right now, different countries and industries use different approaches, which makes it hard to use blockchain everywhere in the same way.

Finally, while blockchain keeps data safe from being changed, it can't check if the data was correct to begin with. If someone enters false or incorrect information, it stays in the system--this is called the **"garbage in, garbage out" problem.**

Blockchain in Action

IBM Food Trust is a blockchain platform used by companies like Walmart to enhance food safety. It allows the retailer to trace leafy greens and other products back to their source within seconds. This rapid traceability helps prevent food contamination, reduces waste, and builds consumer trust in product safety.

Everledger uses blockchain to track the journey of diamonds from mines to market. By recording key details like origin, ownership, and certification, it ensures that diamonds are ethically sourced and conflict-free. This helps eliminate fraud and supports responsible mining practices.

Provenance is a UK-based startup helping fashion and beauty brands prove their sustainability claims. It uses blockchain to verify and share details regarding production, sourcing, and environmental effects. This enables customers to make well-informed decisions based on open, validated product histories.

Conclusion: A Transparent Tomorrow

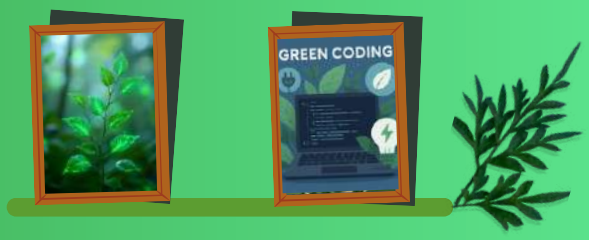
Blockchain makes it possible for supply chains to be not only intelligent but also morally and openly responsible in today's value-driven society. A cleaner, more equitable future can be shaped by consumers and aspiring innovators who comprehend this technology. Incorporating blockchain technology into sustainability initiatives can be a game-changer as the world transitions to a greener future.

"Blockchain isn't just linked to Bitcoin — it's about trust, truth, and supporting sustainability worldwide."

Green Coding

A Path towards sustainable software

In today's tech-driven world, where millions of applications and services run continuously, we often ignore the hidden energy costs of software. Every line of inefficient code, every unoptimized website, and every overloaded server contributes to rising carbon emissions. Green Coding is a modern approach that aims to reduce this digital carbon footprint by writing energy-efficient code and developing environmentally conscious software. It's not just about performance — it's about responsibility. Green coding aligns technology with sustainability, helping developers build smarter, cleaner, and greener digital solutions.



Traditional software development often prioritizes speed and features, ignoring environmental effects. However, sustainable software development integrates practices that reduce power consumption, optimize processing, and limit resource use. From choosing low-power hosting solutions to reducing unnecessary background tasks in applications, green software development takes a holistic approach. It encourages developers to think beyond the screen and into the real world — where every efficient function helps reduce energy use and minimize ecological damage.

Green coding requires both smart structural design and mindful behavioral patterns in software systems. Structurally, developers can adopt lightweight frameworks, avoid redundant logic, remove dead code, and modularize components for efficiency. Behaviorally, it means writing adaptive code that intelligently responds to user activity — like reducing background processes when idle, disabling animations on low-power mode, or enabling dark themes to save energy on OLED screens. Combined, these techniques reduce CPU cycles, memory usage, and cloud server loads — resulting in better performance and lower carbon emissions. It's about coding with purpose — and planning with care.

Green coding is not just a trend — it's essential to reduce the digital carbon footprint. Tomorrow's environmental impact depends on how we build software today. From mobile apps to AI models, every line of code matters. By choosing greener development practices, we ensure better performance, higher efficiency, and a cleaner digital world. Even small efforts now can create lasting positive effects.

Many tools and languages today support green software practices. Energy-aware IDEs, static code analyzers, cloud platforms with carbon intelligence (like Azure or AWS Graviton), and compression tools help reduce digital waste. Developers should adopt techniques like compressing files, reducing HTTP requests, lazy loading, caching, and media optimization. Efficient languages like Rust, Go, C, C++, and Elixir use less memory and boost performance in web and app development. With the right tools and a sustainable mindset, developers can build climate-friendly solutions.

Green software not only helps the environment but also offers real-world benefits. Efficient code improves performance, cuts hosting costs, saves energy, and extends mobile battery life. It also boosts system reliability and user satisfaction. Companies using green practices gain a positive brand image and align with global goals. Most importantly, green-aware developers become more thoughtful and creative, delivering smart solutions with minimal impact. It's a win-win for performance, ethics, and the planet.

ARTIFICIAL INTELLIGENCE

TECHNOLOGY THAT MOVES YOU FORWARD

TRANSFORMING LIVES THROUGH INTELLIGENT INNOVATION

Artificial Intelligence is an emerging technology, and engineers across the world are striving to make it more advanced, efficient, and accessible. With each innovation, AI is pushing boundaries streamlining industries, solving real-world challenges, and improving the way we live and work.

AI is mainly classified into three categories: Narrow AI, General AI, and Super intelligent AI. At present, only one of these is actively in use, while the others remain in experimental or conceptual stages.

As AI continues to evolve, its potential to drive meaningful change across sectors like healthcare, education, agriculture, and governance grows stronger. It's not just a technological leap it's a shift toward a smarter, more connected, and solution-oriented future.

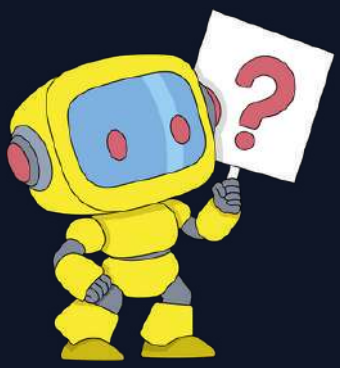
NARROW AI AND ITS ROLE IN MODERN TECHNOLOGY

NARROW AI - Also known as weak AI. It is designed to perform a set of specific tasks and functions. It is the common form of AI which is in use nowadays. They are programmed in a way that they can analyze large sets of data more quickly and accurately than humans, identify trends and patterns, make data-driven decisions and predictions.

They are capable of learning and adapting from environment through techniques such as machine learning particularly deep learning where they can make changes in the algorithms that they are working on based on the input data. Basically narrow AI learns from the environment and sets its algorithm based on the inputs for the specific task it has been assigned.
Assist in decision-making processes across various industries. Examples of Narrow AI include virtual assistants, recommendation systems, and facial recognition software. The other two types are General AI, which is also known as strong AI, a hypothetical form of AI that is yet not achieved but expected to mimic human-like intelligence in terms of reasoning and learning across domains, and Super AI, which is majorly hypothetical for now, that will surpass human intelligence.

PREDICTED FUTURE OF ARTIFICIAL INTELLIGENCE

Since AI is a constantly evolving field it is expected that we will have more independent and autonomous systems than today. In industries like healthcare AI will become more adept at identifying diseases in the earliest stages, likely before any symptoms occur cancer, neurodegenerative disorders and heart diseases. AI will empower business leaders to make smarter, data-driven decisions by providing real-time insights and predictive modeling. With the ability to analyze complex data sets, This will enable businesses to optimize operations, reduce risks, and make proactive decisions across all departments—finance, marketing, HR, and more. In strategic planning, AI systems will provide scenario analysis, helping businesses anticipate various market outcomes and align their strategies accordingly. AI used mindfully can also help address global challenges such as climate change, resource scarcity, and sustainable development.



In the coming years, we're likely to see:

- Smarter automation of not just routine tasks but also complex decision-making roles in healthcare, finance, and law.
- Artificial General Intelligence (AGI) that can reason and adapt like a human, though this is still in the research phase.
- Breakthroughs in healthcare, including AI-assisted diagnosis, robotic surgeries, and personalized treatment plans.
- Support for creativity, with AI helping in music, design, writing, and more.
- Development of smart cities, where AI manages traffic, energy use, and public services more efficiently.

However, with these advancements come challenges:

- Ethical concerns, such as bias in algorithms and misuse of AI.
- Privacy risks, as more personal data is used to train intelligent systems.
- Job displacement, requiring humans to reskill and adapt.

AI has the potential to be one of humanity's most useful tools if we use it carefully, morally, and intelligently. It can streamline industries, improve healthcare, tackling global issues like climate change and transforming education. However, this future can only come to pass if we give openness, equity, and responsibility top priority when developing AI, making sure that technology improves rather than replace or damage human life.

DEPARTMENT HIGHLIGHTS

‘A Journey of Innovation, Inspiration & Impact’

Highlights from the Department of Computer Science & Engineering

This section captures the energy and excellence of events, workshops, seminars, competitions, and cultural fests hosted by the department in recent years.

Each event sparked learning, collaboration, and innovation — from expert talks and tech fests to student-led initiatives and social outreach.

Join us in revisiting these vibrant moments that reflect the spirit and dedication of our CSE community.

AKHIL JYOT - 2025

INAUGURAL CEREMONY

Akhil Jyot a celebration of creativity, coding, ideas and innovation

In fond remembrance of our visionary Founder, Dr. Akhilesh Das Gupta, the Akhil Jyot Event was solemnly observed on his death anniversary, 12th April 2025. The event started with an opening ceremony at the renowned Dr. Akhilesh Das Gupta Auditorium. It included a tribute to the Late Dr. Akhilesh Das Gupta, recognizing his remarkable contributions and lasting legacy.

Honorable Pro-Vice Chancellor, Dr. Satish Chander Sharma, welcomed the Chief Guest with a gift and a bouquet. They took a group photo with all the distinguished guests, followed by his short welcome speech during the opening.

AKHIL JYOT - 2025

ADG - 2025

Akhil Jyot a celebration of creativity, coding, ideas and innovation

On April 12, 2025, BBD University proudly hosted "AI in Digital Growth," an engaging event focused on understanding how artificial intelligence affects the modern digital landscape. The event gathered top experts, innovators, and enthusiasts to discuss how AI is not just a new technology but a key force transforming industries, encouraging innovation, and creating new opportunities across the digital realm.

Attendees explored important topics, including the role of AI in improving data analytics and customer experience, as well as its use in automated marketing, cybersecurity, and building intelligent systems.

AKHIL JYOT - 2025

KALPATHON

Akhil Jyot a celebration of creativity, coding, ideas and innovation

Kalpathon was a coding hackathon that asked participants to tackle real-world problems with innovative software solutions within a set time. Teams displayed their programming skills, creativity, and teamwork in areas like AI, web development, and cybersecurity. The event encouraged a spirit of friendly competition, learning, and quick problem-solving, resulting in meaningful tech prototypes.

AKHIL JYOT - 2025

IDEATHON

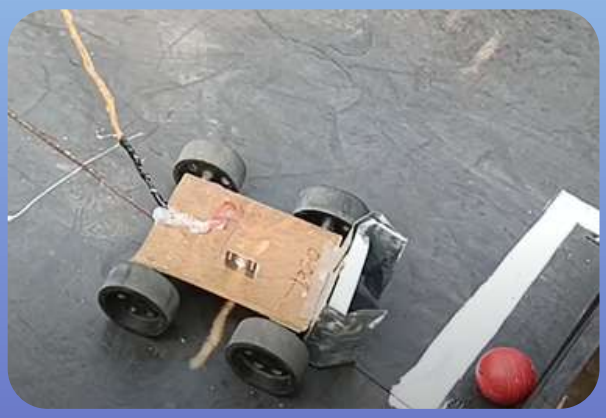
Akhil Jyot a celebration of creativity, coding, ideas and innovation

The Ideathon 2025 was an interactive platform where students could pitch their startup ideas and innovative project concepts. Participants displayed their entrepreneurial thinking by presenting solutions for real-world problems in areas such as healthcare, sustainability, education, and technology. The event promoted creativity, teamwork, and constructive feedback from mentors. This support helped students improve their ideas into practical business models.

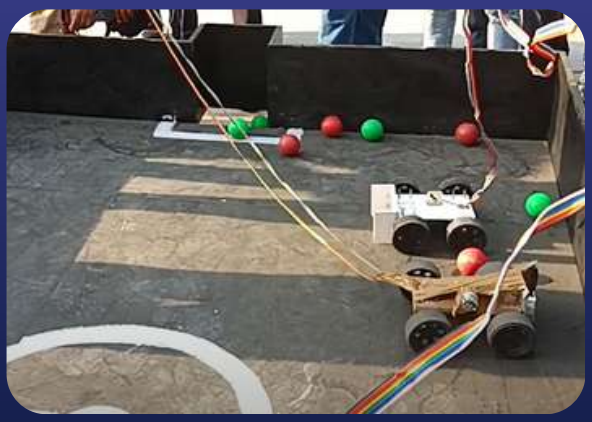
AKHIL JYOT - 2025

ROBOWAR

Akhil Jyot a celebration of creativity, coding, ideas and innovation



RoboWar sparked excitement and adrenaline as student-built robots clashed in intense battles of strategy and strength. Participants showcased their engineering skills, control systems, and tactical designs while their bots competed in knockout rounds. The event captivated the audience and highlighted the creativity and technical skill of the teams. Each match tested the durability, speed, and innovation of the robotic designs, pushing teams to improve on the spot. RoboWar not only entertained but also inspired interest in robotics, mechanical design, and competitive engineering.



AKHIL JYOT - 2025

TECH-EXPO

Akhil Jyot a celebration of creativity, coding, ideas and innovation

The Tech-Expo 2025 served as an exciting platform for students to display their innovative projects and technical skills. From AI applications to IoT solutions, participants shared a variety of ideas that tackled real-world problems. The event saw enthusiastic participation, with students showing prototypes, interacting with visitors, and gaining helpful feedback from industry experts and faculty. Many projects shone due to their originality and practical significance, highlighting the students' strong grasp of emerging technologies.

AKHIL JYOT - 2025

CALL FOR PAPERS

Akhil Jyot a celebration of creativity, coding, ideas and innovation

Students eagerly submitted their research papers to the conference, presenting new ideas and detailed studies across different AI fields. Their work showed strong analytical skills, technical expertise, and a genuine interest in addressing real-world issues through research and innovation. Many papers examined new technologies like machine learning, AI in healthcare, smart cities, and sustainable development. Experts provided helpful feedback, and several exceptional papers were acknowledged for their originality and real-world impact. This experience not only built their academic confidence but also inspired them to continue their research and development efforts.

AKHIL JYOT - 2025

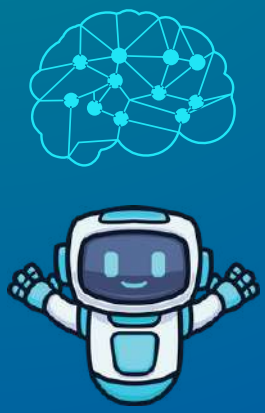
VALEDICTORY SESSION

Akhil Jyot a celebration of creativity, coding, ideas and innovation

The valedictory session marked the successful conclusion of the event, celebrating the collective efforts and enthusiastic participation of students, researchers, and experts. Dignitaries discussed the main lessons learned, praised the innovations that were showcased, and urged further research and innovation. A sincere vote of gratitude and the distribution of certificates marked the end of the session.

AI VIMARSH

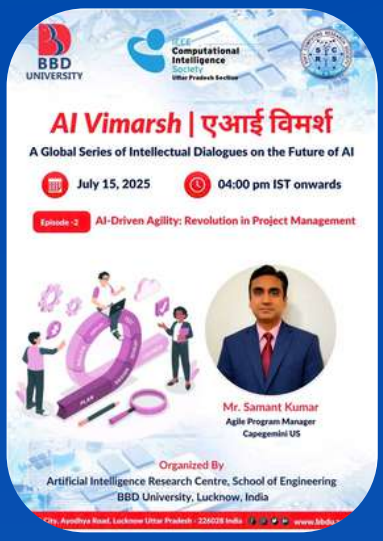
A GLOBAL SERIES OF INTELLECTUAL DIALOGUES ON THE FUTURE OF AI



A visionary initiative by the Artificial Intelligence Research Centre, School of Engineering, **BBD University**, Lucknow
In collaboration with:
IEEE Computational Intelligence Society (UP Section)
Soft Computing Research Society **(SCRS)**

At its heart, AI Vimarsh reflects our commitment to thought leadership, interdisciplinary collaboration, and futuristic learning.
As AI reshapes the world, we aim to lead with ideas that matter.

Where Ideas Converge, Intelligence Evolves



AI Vimarsh is a progressive platform that unites researchers, innovators, and experts from around the world to examine how artificial intelligence is changing in various fields.

It facilitates fruitful discussions about AI in research, education, project management, and practical innovation.

With well-known speakers and attendees from all over the world, AI Vimarsh is more than just a gathering, it's a movement for a more intelligent and flexible future.

एआई विमर्श

AI Vimarsh is a platform to learn, interact, and develop with the rapidly changing field of artificial intelligence. It is where curiosity and clarity meet.

BBD AUDITORIUM
12th April 2025

IDEA THON

2025

An ideathon is a brief, intense event where teams or individuals come up with creative answers to pressing issues in a condensed amount of time. Students from all backgrounds can participate because, unlike hackathons, the emphasis is on ideas rather than code. With chances for recognition, mentoring, or incubation, participants collaborate, think creatively, and present their ideas to judges. It honors creativity, inventiveness, and influential thinking.

"Every significant change starts with a daring idea, and the journey begins with an ideathon."

Edu sync.ai

🔍 RETHINKING THE FUTURE OF FEEDBACK

The Problem We Can't Ignore

In addition to managing a large number of pupils, teachers in today's classrooms are overburdened by the amount of administrative and grading work they have to do. Students lose out on the individualized feedback that could aid in their development because they don't have enough time for meaningful contact. Evaluating subjective or handwritten responses increases the workload and frequently causes delays or inconsistent results. In response to this bottleneck, Edusync AI was developed with the intention of rethinking how educational integrity and feedback might be preserved without sacrificing a teacher's time or a student's ability.

A Smarter Way to Assess

Edusync AI presents a more intelligent and scalable way to automate the grading process for a variety of forms, including subjective responses, objective multiple-choice questions, and even handwritten entries. With the help of Vertex AI and Google's Gemini API, the system accurately reads, comprehends, and assesses responses using OCR, NLP, and machine learning. Beyond grading, it provides dynamic, tailored feedback that saves teachers hours of manual labor while providing students with insightful criticism. With the help of an AI-powered system, assessments become more consistent, allowing teachers to concentrate on TEACHING.

🚀 WHERE INNOVATION MEETS IMPACT

An End-to-End Educational Companion

What makes Edusync unique is its comprehensive approach. Unlike conventional grading platforms, this system is designed to function in hybrid or low-digital environments as well, supporting handwritten inputs through OCR. Teachers retain full control to review, adjust, or customize feedback before it reaches the student, ensuring both automation and human oversight work in harmony. Furthermore, the system is capable of detecting plagiarism and AI-generated content—safeguarding academic integrity in a post-ChatGPT world where originality is harder to monitor.

Scalable, Feasible, and Built for Today's Needs

With over 270 million students and a growing demand for AI-based tools in the education sector, the market is ready for a solution like Edusync. Designed to be modular and scalable, it can integrate seamlessly with platforms like Google Classroom and Moodle, while running securely on a SQL-backed infrastructure. The estimated MVP cost remains modest, making it a viable option for institutions, edtech companies, and coaching centers alike. As an Ideathon concept, Edusync isn't just a project—it's a vision for the future of education, where intelligent tools uplift both learners and educators in equal measure.

👥 MEET THE MINDS BEHIND EDUSYNC AI

Edusync AI was brought to life by a passionate team of innovators who share a common vision—to reshape the future of education using intelligent technology. Yash Kumar Kanojiya led the product design, crafting an intuitive and impactful user experience tailored for educators and students alike. Ahmad Abdullah handled the core AI and backend development, integrating advanced models like Gemini API and Vertex AI with robust database management. Supporting the project with a critical eye for quality and user needs. Vaibhav Parihar, the founding frontend engineer, ensured seamless interaction and accessibility across platforms, Umang Shukla served as the Developer Advocate and QA lead. Together, this dynamic team blended creativity, technical depth, and purpose to develop a solution that promises real change in the educational ecosystem.

"Automate. Educate. Elevate."

HOLOLEARNAI – AI-POWERED HOLOGRAPHIC EDUCATION

EVALUATION & RESULTS

Study with 120 students over 4 weeks showed 33% retention improvement, 40% engagement boost, and 4.5/5 satisfaction.

WHAT IS HOLOLEARNAI?

TEAM MEMBERS

-DIVYA NISHAD
-AYUSHI KUMARI
- SAMIKSHA DWIVEDI

HoloLearnAI's adoption is limited by high costs and technical complexity, making it difficult for widespread use. With reduced expenses and simpler technology in the future, it can become more accessible globally.

HoloLearnAI uses AI and AR to create holographic teaching assistants, enabling immersive and personalized learning. It combines NLP and 3D rendering to boost engagement and understanding.

HoloLearnAI makes learning interactive and engaging.

HoloLearnAI is an AI + AR framework that uses 3D holographic teaching assistants (HTAs) for interactive, personalized learning. Accessible via smartphones or AR glasses, it combines NLP, adaptive AI, and real-time 3D rendering.

POWER TRIO: FEATURES , APPLICATIONS & BENEFITS

The system offers immersive conversations, real-time conceptual visualization, and role-play learning with historical/scientific figures. It includes adaptive feedback, quizzes, and multi-sensory interaction through voice, gesture, and touch for inclusivity. HoloLearnAI consists of an AR-based user interface and an AI engine that uses NLP, adaptive learning algorithms, and knowledge retrieval modules for personalized instruction..It is useful for subjects like anatomy, chemistry, and history, supports remote/hybrid learning, and provides virtual AI tutors for personalized guidance.HoloLearnAI enhances engagement, conceptual understanding, retention, and accessibility, making learning more dynamic and inclusive.

HoloLearnAI is set to transform education by making learning immersive, interactive, and highly personalized through AI and AR-powered holograms. It enhances engagement, retention, and conceptual clarity like never before. However, high costs and technical challenges remain key barriers. With future advancements, it can become a mainstream solution for smart education.

AMBULANCE FORCE

Delays in getting medical assistance can frequently mean the difference between life and death in a nation where every minute counts during emergencies. By transforming common vehicles, such as cars, rickshaws, and autos, into outfitted emergency responders, Ambulance Force is a creative project that seeks to bridge this gap. The objective is straightforward but effective: to deliver medical assistance more quickly by making use of the vehicles that are already present in every part of the city and the countryside.

This movement was sparked by the concerning lack of ambulance services and their delays in both underdeveloped rural areas and crowded urban areas. Conventional ambulances frequently experience severe delays during periods of high demand due to traffic jams or unavailability. By providing modular components that can be fitted on standard vehicles and turn them into life-saving devices in less than two hours, Ambulance Force tackles this problem head-on. Following GPS-enabled routing, these cars are linked to a central dispatch system, enabling real-time coordination and contact with hospitals.

The vehicles can provide initial help until professional care is available because each Ambulance Force kit includes necessary medical equipment and support supplies. Additionally, drivers receive the training they need to confidently handle situations. This concept's focus on the community is what makes it even more unique. It gives regular people the confidence to come forward and join a network that saves lives through direct action as well as donations.

Meet the Creators

This life-changing idea is the brainchild of **Ujjwal Srivastava**, the Co-Founder and CEO of Ambulance Force. Along with **Ayush Awasthi**, the project's lead developer handling both frontend and backend technologies, they form the passionate team driving this movement forward. Their mission isn't just about innovation; it's about impact. With every new vehicle added to the force, a new hope is born for someone in need.

The Vision Ahead

The idea behind Ambulance Force was a daring reaction to a real-life crisis: the daily death toll from delays in emergency medical assistance. The idea, which was presented as a concept during the ideathon, reimagines emergency response by utilizing the cars that are currently on our streets. The goal is to establish a community-driven emergency support system that can save more lives by enabling automobiles, rickshaws, and autos with digital coordination and modular kits. Even though the project is still in its infancy, it has the potential to spur scalable, affordable solutions throughout India and beyond, where creativity steps in as the first line of defense when assistance is most needed.

Tech Agro

Understanding the Role of AI in Agriculture

Traditional methods are no longer sufficient to guarantee steady output in agriculture because to the mounting pressures of climate change, soil erosion, and population growth. Here, artificial intelligence becomes a useful ally rather than a substitute for farmers. AI gives farmers a greater understanding of their land, crops, and timing through smart sensors, data analysis, and predictive modeling. It provides information on the best times to plant, when to water, and how much fertilizer to use, which makes farming more productive, less wasteful, and more in tune with the cycles of nature.

How Smart Farming Is Changing the Game

Across the fields of India, a quiet revolution is beginning. AI systems are now capable of analyzing real-time data from sensors embedded in soil and crops. These systems interpret moisture levels, temperature, and crop health, delivering personalized suggestions directly to the farmer's mobile device. The result is a transformation from reactive farming to proactive planning—ensuring timely actions, reducing uncertainty, and ultimately increasing yield with fewer resources.

Team Behind the Innovation

This concept was developed by **Nitin Kumar** as part of an Ideathon, bringing together a passion for sustainable agriculture and cutting-edge technology. With a strong understanding of AI applications and real-world farming challenges, the project blends academic knowledge with grassroots-level impact. Nitin's vision centers on empowering farmers through accessible innovation, and this idea marks a step toward transforming the future of agriculture in India.

Our AI-Powered Farming Solution

In order to help farmers adopt more intelligent methods, the suggested solution presents an AI-based agricultural assistant that can analyze field data in real-time. It eliminates manual guesswork and increases crop efficiency by assisting in the determination of optimal sowing times, watering schedules, and nutrient requirements using sensors and satellite data.

One of its core strengths lies in its ability to offer precise, location-specific recommendations. By interpreting soil health, crop stage, and climate forecasts, the system generates timely advice that is both actionable and easy to follow. This allows farmers to act early, avoiding losses caused by pests, over-irrigation, or poor planning.

Scalable and mobile-friendly, the model is designed to function even in low-connectivity rural areas. It offers a user-friendly interface and affordable tech setup, ensuring accessibility for farmers across different regions. This approach bridges the gap between traditional farming and intelligent automation, empowering India's agricultural backbone for a sustainable future.

KEYCHAIN FOOD TESTING DEVICE

The Keychain Food Testing Device is a portable gadget that quickly detects adulterants in milk, fruits, and vegetables using smart sensors, showing results on a small screen.

WHAT IS KEYCHAIN FOOD TESTING DEVICE?

TEAM MEMBERS

-HRITIK VERMA
SATYAM PANDEY
-AJAY SINGH
-AMAN GUPTA

Food adulteration is a growing health concern that poses serious risks to consumers. Traditional methods of detecting adulteration are expensive, time-consuming, and require technical expertise, making them inaccessible for regular consumers and small-scale producers. This creates an urgent need for an easy and affordable testing solution.

HOW IT WORKS, FEATURES AND KEY CHALLENGES

The device accepts a small sample through a tray slot and detects harmful substances in milk and other products. It displays a clear safe/unsafe status along with details and is small enough to fit like a keychain, making it highly portable.

For milk, the device uses pH, TDS, and color strips to detect adulterants like urea, soda, and detergent. For fruits and vegetables, juice is tested on the tray using sensors, while gas sensors identify vapors of pesticides and formalin.

The primary challenges include ensuring accuracy in detecting multiple adulterants, designing a compact and user-friendly device, making it affordable for widespread use, enabling multi-food testing without complex calibration, and providing real-time feedback on adulteration with clear details.

The solution is a Keychain Food Testing Machine that is easy to use, affordable, and portable. It allows users to test food on-site, detecting common adulterants such as chemicals, starch, synthetic colors, and contaminants in milk, fruits, vegetables, grains, and beverages. The device provides accurate results within minutes, helping consumers make informed choices.

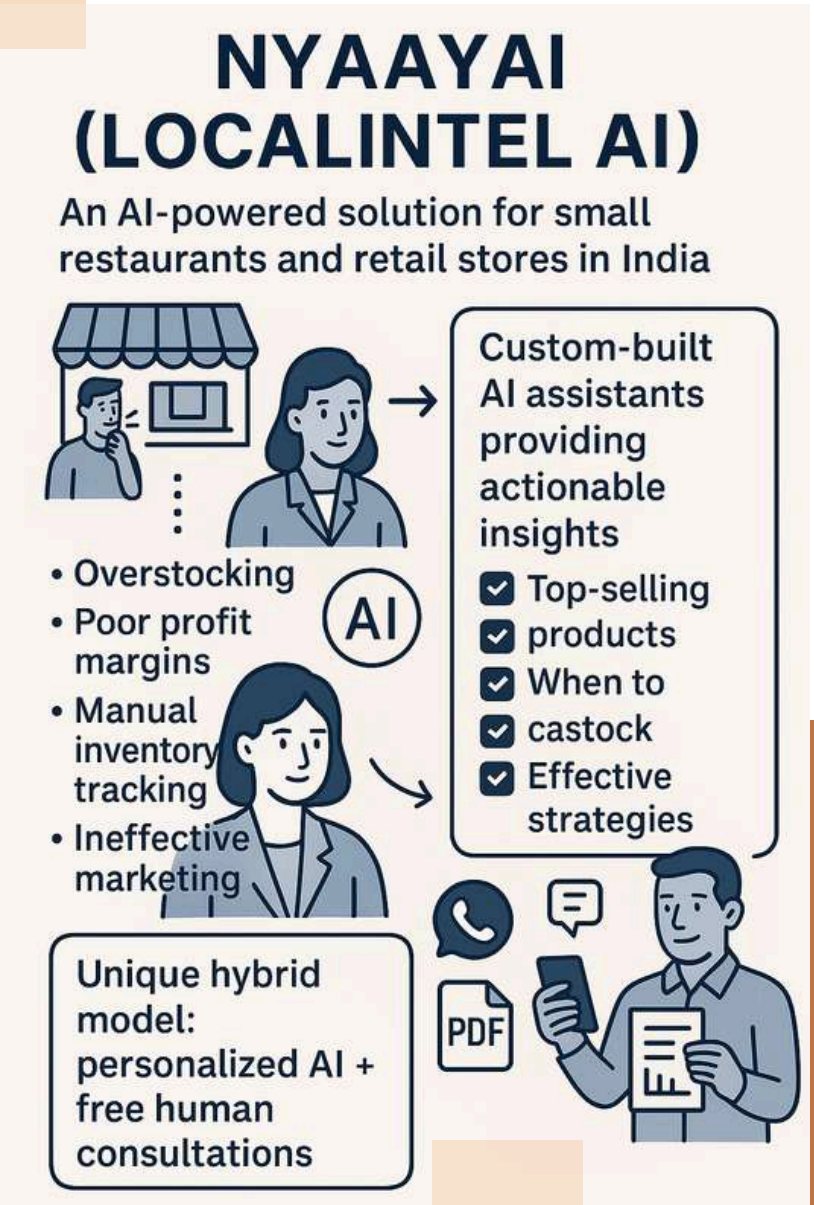
All required components are available locally or can be imported easily. The estimated production cost per unit is ₹2,800–₹3,200, making the device cost-effective and easy to assemble with minimal technical requirements.

The estimated financial requirement includes ₹40,000–₹55,000 for R&D, ₹3,15,000–₹3,25,000 for the initial batch of 100 units, and ₹35,000–₹45,000 for marketing and distribution. The total initial investment is ₹3.9–₹4.2 lakh.

Portable keychain device for quick food adulteration testing.

NYAAY AI

NYAAYAI is an AI-powered solution designed specifically for small restaurants and retail stores in India that struggle with data-driven decision-making. Founded by Rickey Pandey and supported by Niharika Pandey, the startup addresses critical issues such as overstocking, poor profit margins, manual inventory tracking, and ineffective marketing — all due to the lack of accessible and affordable analytics tools. LocalIntel AI offers custom-built AI assistants that act as personal data analysts, tailored to each business's specific sales, customer behavior, and seasonal trends.



These assistants provide simple, actionable insights like which products perform best, when to restock, what causes losses, and which marketing strategies work — all delivered in user-friendly formats like WhatsApp messages, PDFs, or live calls. What sets this venture apart is its unique hybrid model: personalized AI solutions combined with free human consultations to guide business decisions, especially for non-tech-savvy clients. Starting with a target market of over 15 million Indian small businesses, NYAAYAI is scalable, regionally adaptable, and aligned with the digital adoption trend post-COVID. The estimated initial budget of ₹2,00,000 will cover equipment, software, marketing, legal, branding, and pilot testing costs. Funding will be sought through seed grants, incubator support, or bootstrapping. With a focus on empowering local businesses through smart, simple, and affordable AI, NYAAYAI aims to transform how India's grassroots economy competes in a data-driven world.

The uniqueness of NYAAYAI lies in its hybrid model — combining smart AI tools with human consultation, making it ideal for non-tech-savvy users. Each AI assistant is custom-trained for the client's specific needs, ensuring relevance and accuracy. For example, a small café owner could identify their most profitable menu item and slowest day, while a kirana store might learn when to restock fast-moving goods based on past demand patterns. The startup supports its clients from data collection — even from handwritten records or spreadsheets — to final insight delivery and action planning. With India's 15+ million small businesses as potential users, NYAAYAI is designed to be scalable, affordable, and culturally aligned with local business behavior and seasonality. Its core vision is to democratize data-driven decision-making, helping local businesses grow faster, smarter, and more sustainably — even if they've never used technology before.

MESSAGE FROM THE TEAM

"We believe this idea is vital for the future. Our mission is to drive change and create global impact."

SNAPPIT

WHAT'S REAL IN AN AI WORLD

TEAM MEMBERS

PRAKHAR VISHWAKARMA

PRANJUL JAISWAL

"SnappIt converts digital assets into NFTs with embedded metadata and stores them on blockchain and IPFS, ensuring permanent, tamper-proof authenticity."

"AI deepfakes erode trust and enable fraud. SnappIt ensures authenticity, preventing misuse and restoring confidence across legal, media, and public domains."

Using Web3, NFT, and IPFS to Combat Digital Fakery

A portable keychain-sized device that quickly tests milk, fruits, and vegetables for adulterants and harmful chemicals, providing real-time results using smart sensors.

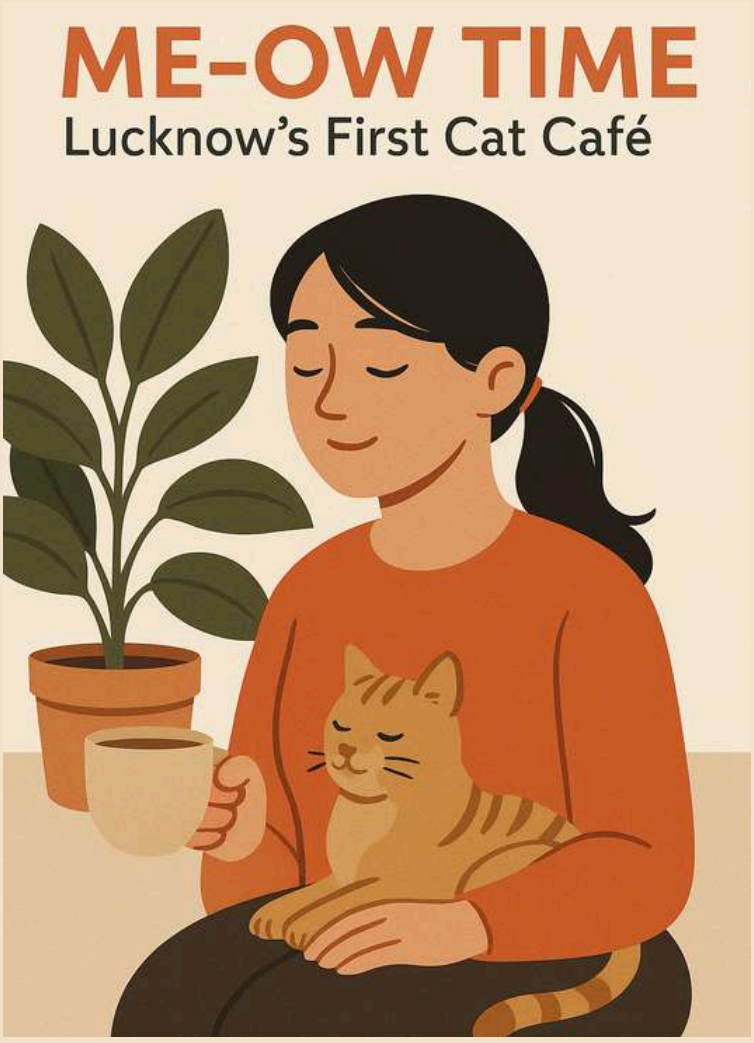
HOW IT WORKS AND ITS APPLICATIONS AND IMPACT

"SnappIt secures digital evidence for courts, law enforcement, and whistleblowers. It helps media verify content and fight deepfakes, supports activists documenting protests, and protects journalists. Its blockchain-based system ensures authenticity, transparency, and tamper-proof storage across multiple sectors."

SnappIt ensures evidence integrity in courts, secures law enforcement data, and enables anonymous whistleblowing. It combats fake news and deepfakes, empowering journalists and fact-checkers with verified content. Activists can document protests with confidence, while creators protect intellectual property by timestamping their work, ensuring undeniable ownership."

SnappIt envisions a world where truth is verifiable, permanent, and immune to manipulation. By leveraging blockchain and decentralized technologies, it seeks to become the universal standard for digital authenticity, ensuring that society can trust what it sees, shares, and stores in the digital age.

ME-OW TIME



ME-OW TIME: A HEALING SPACE FOR NEW BEGINNINGS

ME-OW TIME is Lucknow's first cat café — a comforting space designed to ease the emotional strain of moving to a new city. Many students and professionals face loneliness, stress, and anxiety when they leave home, often silently struggling to adjust. During such a phase, I personally experienced unexpected relief through the quiet companionship of a friend's cat. That peaceful presence, combined with a warm cup of coffee, sparked the idea of ME-OW TIME — a café that offers emotional support through rescued cats and a calming environment.

Scientifically, interacting with cats is proven to reduce cortisol (the stress hormone) and boost oxytocin, helping individuals feel connected, calm, and cared for. ME-OW TIME is more than a café — it's a healing space for people who miss home, can't own pets due to restrictions, or simply need a break. What makes it unique is its first-mover status in Uttar Pradesh, where no cat cafés currently exist, despite their growing popularity in cities like Mumbai and Bangalore. Internationally, over 260 cat cafés thrive in the U.S., with many earning ₹1.6–4 crores annually.

ME-OW TIME: A PURPOSE-DRIVEN VENTURE FOR WELLNESS AND COMMUNITY

Our café combines a cozy, Instagrammable setup with adoptable cats from local shelters, comforting beverages, and curated events such as cat yoga, open mics, wellness meetups, and adoption drives. This makes it not just a business, but a community-building and mental wellness initiative.

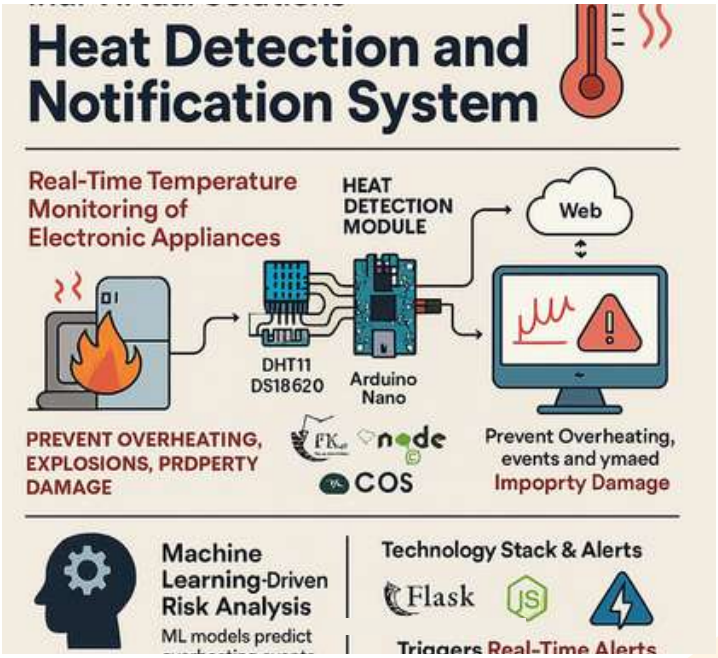
The venture will generate revenue through café sales, timed cat lounge entry, merchandise, and events. With a startup cost estimated between ₹2.5–4.5 lakhs, funding will cover rent, licenses, café setup, and cat care essentials. Currently run as a sole proprietorship, ME-OW TIME aims to grow through partnerships with mental health advocates, designers, veterinarians, and sponsors. In the future, franchising and donation-based sponsorships will ensure sustainability and scale.

At its core, ME-OW TIME is about offering a simple, gentle form of healing — where the comfort of a purring cat and a hot drink can make all the difference. Because sometimes, wellness doesn't begin with medicine — it begins with a meow.

BBDET VAIBHAV BHARDWAJ

INDI VIRTUAL SOLUTIONS
HEAT DETECTION AND NOTIFICATION SYSTEM

Indi Virtual Solutions presents an innovative Heat Detection and Notification System ♨, a hardware-software solution designed for real-time temperature monitoring of electronic appliances to prevent malfunctions and hazards like overheating, explosions, and property damage. The system integrates an array of sensors (DHT11, DS18B20) with Arduino Nano and ESP8266 microcontrollers and NRF24L01 RF transmitters for continuous data collection. After that, the data is sent to an online application for visualization and remote access. Its Machine Learning-Driven Risk Analysis is a key feature. ML models use usage and historical data to predict overheating incidents, detect minor temperature patterns, and dynamically modify alert thresholds. In order to evaluate operational efficiency, the system additionally computes the Relative Coefficient of Performance (COP). When anomalies are found, the solution uses a technology stack that includes Flask, Next.js, Node.js, and machine learning algorithms to send out real-time alerts, allowing for prompt preventive measures. An AI-powered appliance heat detection and alerting solution is available from Indi Virtual Solutions. It monitors temperatures, anticipates overheating, and sends out real-time alarms using sensors and machine learning. By preventing malfunctions, property damage, and safety hazards, this cutting-edge solution seeks to extend the life of appliances.



Future ideas call for enabling predictive maintenance, creating a specialized mobile application, and incorporating pressure and airflow sensors.The system boasts strong feasibility across technological, economic, market, and operational aspects, utilizing affordable, reliable components and scalable software. Its Unique Selling Proposition (USP) lies in addressing a growing market demand for safety, cost-effectiveness through open-source tech, scalability, and sustainability by promoting energy saving and preventing waste. Inspired by real-world incidents of appliance overheating, the solution aims to enhance safety and efficiency.

Indi Virtual Solutions is seeking ₹7,05,000 for development, which covers prototype creation, 3D casing and PCB design, app development, backend infrastructure, comprehensive testing, hosting, BIS certification, and setting up a product experience center. This investment will also facilitate initial team expansion, paving the way for a safer and more energy-efficient future for electronic appliances.

This Heat Detection and Notification System by Indi Virtual Solutions offers a proactive solution to appliance safety. By seamlessly integrating advanced sensors and AI, it provides real-time monitoring and highly accurate predictive alerts. This effectively mitigates critical risks like overheating and costly property damage, ensuring enhanced safety, extending appliance lifespan, and promoting ultimate peace of mind for users.

TECHNICAL *Events*

Code. Create. Compete.

Technical events aren't just competitions—they're launchpads for the next generation of thinkers.

A range of technical activities are frequently organized by BBDU's School of Engineering (SOE) with the goal of improving student's practical knowledge and innovative abilities. Coding contests, hackathons, project displays, robotics challenges, and expert presentations by professionals in the field are some examples of these events. These programs give students invaluable practical experience, promote collaboration, cultivate an innovative, problem-solving mindset that is in line with actual engineering difficulties.

FACULTY DEVELOPMENT PROGRAM

The School of Engineering at BBD University, in collaboration with IIT Kanpur, hosted the Faculty Development Program (FDP) on "Machine Learning with Python" from July 22 to August 2. In addition to covering the foundational ideas of machine learning, its development, and its applications, this 10-day curriculum included practical exercises using a variety of Python libraries, including NumPy, Pandas, Scikit-learn, TensorFlow, and Keras.

CAREER COUNSELING SEMINAR

The "Career Counseling Seminar" was held on August 21, 2024, at BBD University's School of Engineering (SOE). Mr. Satish Anand, a renowned speaker from Josh Talks, spoke to B.Tech pre-final year students at the seminar. The crucial significance of profile development in the current competitive job market was the main topic of Mr. Anand's enlightening talk. The purpose of the event was to give students useful advice and techniques for negotiating their future professional pathways.

TECHXPLORE

On August 22, 2024, the School of Engineering at BBD University held Tech Xplore, an engineering project exhibition that gave students a chance to showcase their technical know-how and creative problem-solving skills. The Honorable Pro-Vice Chancellor, Prof. Dr. S.C. Sharma, urged students to use technology and creative approaches to solve problems in the real world.

SMART INDIA HACKATHON

Smart India Hackathon is an initiative by The Government of India, aimed to engage students in pressing real-world challenges. On September 3, 2024, the School of Engineering organized the internal Hackathon. A total of 31 teams presented solutions for various problems with 186 students actively participating in this dynamic event.

ORIENTATION PROGRAM

The orientation program for BTech students at BBD University was held on October 1, 2024. The event was honored by Prof. Dr. S.C. Sharma and the guest of honor Er. V.B. Singh, President, Institution of Engineers(IEI).

Industry experts, Mr. Aman Bakshi and Mr. Rahul Batra addressed the students and shared valuable insights. Additionally, Prof. (Dr.) S.M.K Rizvi, Dean of students and welfare also delivered a mindful speech.

WORLD MENTAL HEALTH DAY

The School of Engineering, BBD University organized a Panel Discussion on October 10, 2024 to celebrate World Mental Health Day. The event was conducted in collaboration with CHABIYAN PROJECT. The event was featured by inviting Chief Guest Mr. B.K. Maurya, Director General. Retired IPS Officer, Ms. Ruchita Chaudhary addressed the students. The event was a great success with insightful tips for maintaining sound mental health.

ALUMNI INTERACTION PROGRAM

Held on October 10, 2024, the Alumni Interaction Program featured Ms. Yashasvi Mishra, Salesforce Architect at METSO, Finland, and a proud BBD alumna. She shared her professional journey, insights into tech careers, global opportunities, and the evolving role of technology. The sessions inspired students to aim higher and helped them understand industry expectations and global pathways.

AI CHATBOT WORKSHOP

On November 12, 2024, the Centre of Excellence at BBD University organized a hands-on workshop on "Building Intelligent Chatbots through AI." The session provided students with practical exposure to AI-driven chatbot development, highlighting real-world applications and advanced techniques in artificial intelligence. It served as a strong platform for students to learn and apply emerging AI technologies.

SEMINAR ON "DRIVING DIGITAL INTELLIGENCE"

The School of Engineering, Babu Banarasi Das University organized an insightful seminar on "Driving Digital Intelligence", delivered by Mr. Vinothkumar Kolluru, Senior Data Scientist at Fractal Analytics on November 19, 2024. The session offered a deep dive into the evolving landscape of data science and artificial intelligence, focusing on how digital intelligence is transforming industries and decision-making processes.

IEEE STUDENT BRANCH

School of Engineering, BBD University marked the inauguration of its IEEE STUDENT BRANCH on 5th Dec, 2024 with a grand ceremony at Dr. Akhilesh Das Gupta Auditorium.

Prof. (Dr.) S.C. Sharma, Pro Vice-Chancellor, inaugurated the student branch with a traditional lamp lighting ceremony.

Esteemed guest Dr. Praveen Dwivedi, Additional Director, STPI Lucknow graced the occasion as chief guest. This branch is the confluence of innovation and research, technical innovation and professional development, offering students invaluable opportunities for global networking, skill enhancement and involvement in impactful projects.

NATIONAL SEMINAR ON IASSC

The "National Conference on Innovative AI Solutions for Sustainable Cities," held on February 3-4, 2025, was a two-day event focused on exploring the transformative potential of Artificial Intelligence in addressing urban challenges. Jointly hosted by the Association of Indian Universities (AIU), Kotak School of Sustainability IIT Kanpur, and Chhatrapati Shahu Ji Maharaj University (CSJMU), Kanpur, the event featured keynote sessions, panel discussions, thematic workshops, and an exhibition of AI-driven solutions from startups.

HONEYWELL RPA TRAINING FOR WOMEN

On February 06, 2025, BBDU launched the Centre of Excellence for Women Empowerment with ICT Academy and Honeywell. The initiative introduced Robotic Process Automation (RPA) Training to equip women with advanced IT skills, promoting their growth in the tech industry.

WCSC 2025 CONFERENCE AT BBDU

BBD University hosted the World Congress on Smart Computing (WCSC 2025) on February 22–23. Organized by the AI Research Centre and sponsored by the Soft Computing Research Society, the event saw 413 paper submissions, with 39 selected for publication. Eminent guests and experts added great value to this prestigious academic event.

PANEL DISCUSSION ON "WOMEN IN AI"

The AI Research Centre, School of Engineering, BBD University is proud to host a Panel Discussion on "Women in AI" in celebration of International Women's Day, March 8, 2025. This event is dedicated to honoring the remarkable achievements of women in the field of Artificial Intelligence and promoting gender equality in STEM. Eminent women leaders, researchers, and professionals from academia and industry will come together to share their journeys, insights, and contributions to AI.

AKHIL JYOT

ADG 2025 -AI Conference

BBD University organized the International Conference on AI in Digital Growth (ADG 2025) on April 12, 2025, in memory of Dr. Akhilesh Das Gupta Ji. Sponsored by IEEE UP Section CIS Chapter, the event featured 68 selected papers presented in 10 sessions. The Memorial Lecture was delivered by Dr. Sanjay Tyagi, STPI Bengaluru, with a keynote by Dr. Shokook Khandan from the UK. Students excelled in Ideathon, Hackathon, Project Expo, and Robotics Challenges, winning 28 awards.

NATIONAL CONFERENCE ON VIRTUAL LABS

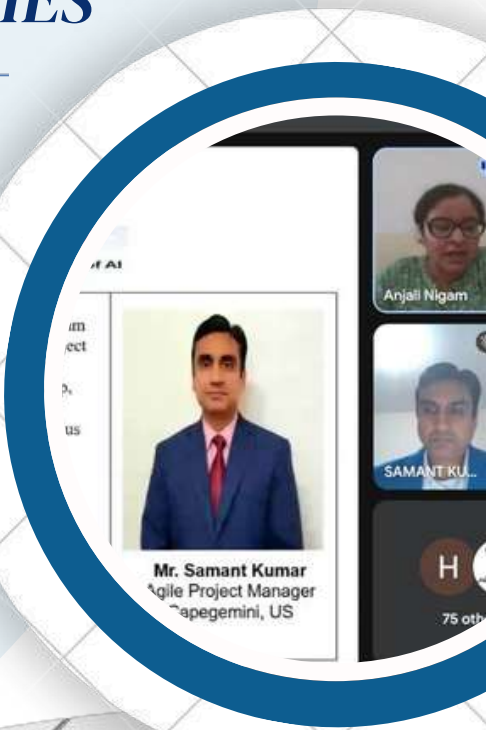
On May 2–3, 2025, students and faculty from the School of Engineering, BBD University participated in the National Conference on Virtual Labs at IIT Kanpur. They presented impactful ideas on the effective use of virtual labs, focusing on enhancing digital education, especially in rural areas. The event showcased BBD's dedication to innovation in education and rural empowerment through technology.

VIRTUAL LAB INAUGURATION

The School of Engineering inaugurated Virtual Labs on June 16, 2025 to promote hands-on digital learning. The event was graced by Pro VC Prof. (Dr.) Satish Chander Sharma and featured a session by Mr. Vinay Tripathi from IIT Kanpur. Under the guidance of Dr. Praveen Kumar Shukla, the initiative marked a new step toward innovation in technical education.

AI VIMARSH — GLOBAL DIALOGUE SERIES

On June 26, 2025, BBD University launched "AI Vimarsh," a global series on the future of AI, with its first episode focused on "AI in Higher Education and Research." The event featured international experts Dr. Shokooh Khandan (Manchester Metropolitan University) and Dr. Sandeep Singh Sengar (Cardiff Metropolitan University), and was supported by IEEE and SCRS. It encouraged global academic discussions on the role of AI in education and research.



BBDU SOE CLUBS

BBD University offers vibrant student clubs that promote innovation and skill development.

~ **INNOSPHERE** fosters creative ideas and entrepreneurship.
~ **SCRS** focuses on smart cities and robotics.
~ **IEEE STUDENT BRANCH** connects students to global tech trends.
~ **SOE ROBOTICS CLUB** encourages hands-on robotics projects.
~ **BBDET** enhances engineering skills through practical learning.

These clubs host events, workshops, and competitions. They help students build skills and explore interests. Active participation boosts teamwork and leadership.

BBDET

The inaugural edition of BBD Engineering Times marks a vibrant beginning for the School of Engineering at BBD University. This magazine captures the creativity, innovation, and dedication of students and faculty, offering a glimpse into the dynamic world of engineering at BBDU. From technical articles to project showcases, it reflects the spirit of learning, imagination, and progress. More than just a publication, it is a platform where ideas flourish and achievements are celebrated—a powerful start to a promising tradition.

ROBOTICS CLUB

The SOE Robotics Club at BBD University is a dynamic, student-driven hub where innovation meets automation. Rooted in collaboration and creativity, the club empowers engineering students to design and build intelligent robotic systems that address real-world challenges. Blending mechanical design, AI, and automation, it fosters critical thinking and hands-on learning. Through workshops, hackathons, and national competitions, the club transforms ideas into prototypes, making it more than just a technical group—it's a launchpad for future innovators shaping the world of robotics.

INNOSPHERE CLUB

Innosphere, the technical forum of the School of Engineering at BBD University, is a student-led platform where innovation and creativity come to life. Living up to its motto “Engineering with Innovation,” it inspires students to turn ideas into real-world solutions through teamwork and hands-on experiences. With activities like workshops, hackathons, and expert sessions, Innosphere nurtures talent, curiosity, and leadership—building a strong culture of innovation that shapes the engineers of tomorrow.

SCRS

The Student Chapter of Research & Symposium (SCRS) at the School of Engineering, BBD University, is a vibrant platform that promotes research-driven learning and interdisciplinary innovation. Focused on emerging technologies and real-world applications, it encourages students to move beyond academics and engage in meaningful exploration. Through workshops, expert talks, training sessions, and collaborative research, the chapter builds a strong bridge between theory and industry. More than a student group, SCRS is a growing community where curiosity thrives, ideas evolve, and future researchers take their first steps.

IEEE STUDENT BRANCH

The IEEE Student Branch at the School of Engineering, BBD University, is a globally connected, student-led platform that promotes innovation, research, and professional growth in engineering and technology. As part of the world’s largest technical organization, it offers students opportunities to engage in real-world problem-solving, participate in international events, and build strong professional networks. Through workshops, forums, and competitions, the branch empowers future engineers to lead with creativity, collaborate globally, and contribute to technological progress on a meaningful scale.

FACULTY LEADERSHIP: POWERING SOE CLUBS

SOE ROBOTICS CLUB

Ms. Poonam Verma
(Coordinator)

Mr. Shailesh Vishwakarma
(Member)

INNOSPHERE STUDENTS' CLUB

Ms. Abha Shukla
(Coordinator)

BBD ENGINEERING TIMES

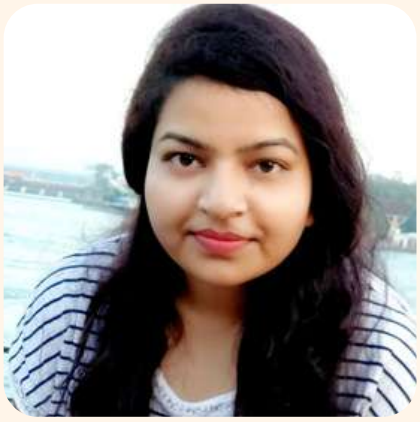
Dr. Mrinalini Srivastava
(Coordinator)

BBDU CODELAKE

Ms. Revathi L.
(Coordinator)

PROBLEM OF THE WEEK

Ms. Shailja Chaurasiya
(Coordinator)



Ms. Arti Singh
(Member)

FACULTY LEADERSHIP: POWERING SOE CLUBS

SCRS STUDENTS' CHAPTER

Ms. Kratika Chandra
(Coordinator)

Ms. Sweety Pal
(Coordinator)

IEEE BBDU STUDENTS CHAPTER

Dr. Mrinalini Srivastava
(Coordinator)

IBM CENTRE OF EXCELLENCE

Mr. Abhishek Sharma
(Coordinator)

Mr. Sachin Bhardwaj
(Member)

Dr. Dhyan Chandra Yadav
(Coordinator)

Dr. Suman Sharma
(Member)

AI RESEARCH CENTRE

BBD UNIVERSITY

SCHOOL OF ENGINEERING

PROBLEM OF THE WEEK CONTEST

Every week, BBD University presents a unique "Problem of the Week" challenge to encourage students to think out of the box, apply logic, and sharpen their programming skills.
Students are required to solve the coding question and mail their solution within the deadline. The top performers are featured weekly based on their accuracy, logic, and efficiency.

CODING IS NOT JUST A SKILL — IT'S A SUPERPOWER!

LET'S DECODE BRILLIANCE, ONE WEEK AT A TIME!

💡 **Why Participate?**

- Weekly exposure to real-world coding problems
- Recognition and feature in the university magazine
- Strengthens problem-solving and DSA skills
- Builds a solid coding portfolio for placements and hackathons

📢 **How to Participate?**

Keep an eye on your WhatsApp community or university portal.
Submit your solution at:
bbdusoe@gmail.com before the deadline.

OUR WEEKLY WINNERS :

Here are the Top 10 Coding Champions who cracked the challenge with precision:

1. Divya Tripathi (CS-43)
2. Rifat Zehra (CS-46)
3. Shubham Kumar (CCML-3)
4. Akshat Prajapati (IOTBC-3)
5. Mriganka Singh (CCML-2A)
6. Divyanshu Yadav (AI-2B)
7. Suraj Kumar Shukla (CS-1E)
8. Amandeep Yadav (CS-1E)
9. Shreya Singh (CS-1H)

STUDENT MEMBERS

BHADRAYU SRIVASTAVA
B.Tech CSE 43

AYUSHI KUMARI
B.Tech CSE 44

VOICE OF MESSAGE

Chief Editor – BBDET
B.Tech (CSE-CCML), School of Engineering

My journey at the School of Engineering has been one of learning, leadership, and constant growth. Holding roles in BBDET and Utkarsh has given me a platform to express creativity, manage responsibilities, and connect with inspiring peers.

This magazine is a reflection of our collective passion and potential as engineering students.

Let's continue building a future we're proud of—together.

– Aditya Dash

Chief Editor - BBDET | Assistant Coordinator – Innosphere Club
B.Tech (CSE), School of Engineering

I have grown, been creative, and had meaningful experiences during my time at BBD University's School of Engineering. I've observed how the university combines technical education with personal growth as a CSE student. I've been exposed to leadership, teamwork, and creativity through my involvement in BBDET and Innosphere Club. The talent and vitality of our student body are reflected in this magazine.

Together, let's continue creating, discovering, and developing.

– Manya Agarwal

VOICE OF MESSAGE

Assistant Coordinator - Innosphere Club
B.Tech (CSE), School of Engineering

Learning, leadership, and exploration have all been a part of my time at the School of Engineering. I've witnessed firsthand the strength of collaboration, ingenuity, and student-led impact through my roles in the Innosphere Club and Utkarsh event.

The innovative and cooperative spirit that characterizes SOE is reflected in this magazine.

Together, let's continue to grow, create, and strive.

– Nitin Modanwal

Assistant Coordinator – Innosphere Club
B.Tech (CSE), School of Engineering

I have experienced a combination of commitment, learning, and personal development during my time at the School of Engineering. Being named a University Topper has been a significant accomplishment.

However, the learning opportunities outside of the classroom are what really enhanced my path. I've had the opportunity to lead projects, interact with creative people, and work with motivating colleagues as an assistant coordinator at Innosphere Club. The enthusiasm and promise that characterize our SOE community are reflected in this magazine. Together, let's keep aiming for greatness.

– Supriya Vishwakarma

VOICE OF MESSAGE

Chairperson – IEEE Student Branch
B.Tech (CSE-AI), School of Engineering

I have been able to develop as a team player and communicator in addition to as a student since I joined the School of Engineering. As the Chairperson of the IEEE Forum, I've had the chance to amplify student voices, promote innovation, and contribute to the vibrant tech culture at BBDU.

This magazine showcases the creativity, dedication, and passion of our engineering community.

Let's keep moving forward—together.

–Anushka Gupta

General Secretary – IEEE Student Branch
B.Tech (CSE-IOTBC), School of Engineering

It has been a rewarding experience full of passion and purpose to be a part of the School of Engineering. In my capacity as IEEE Student Branch General Secretary, I've had the chance to take the lead, work with others, and support an innovative and high-achieving culture. This magazine captures the energy, creativity, and drive of our student community. I hope it inspires every reader to dream big and make a difference.

– Khushi Tripathi

VOICE OF MESSAGE

Student Head – SCRS
B.Tech (CSE-AI), School of Engineering

Leading the Student Chapter of Research & Symposium (SCRS) has been an enriching part of my journey at the School of Engineering. It gave me the platform to encourage curiosity, drive student-led initiatives, and bring academic ideas to life.

From organizing research-focused sessions to engaging with brilliant minds, this role helped me grow as both a student and a leader.

I hope this magazine embodies the kind of inquisitive, motivated, and forward-thinking spirit of exploration that SCRS aims to promote.

– *Tarun Pratap Singh*

Associate Head – SCRS
B.Tech (AI), School of Engineering

One significant aspect of my tenure at SOE has been serving as the Associate Head of SCRS. It gave me the chance to collaborate with driven people and support an innovative and high-achieving academic culture.

I've witnessed firsthand how students flourish when given the opportunity to collaborate, exchange ideas, and ask questions at research events and symposiums.

This magazine stands as a symbol of that journey—one led by ideas, insight, and inspiration.

– *Shreyansh Rai*

VOICE OF MESSAGE

Student Head - Robotics Club
B.Tech (CSE-CCML), School of Engineering

Being part of the Robotics Club at BBDU has been one of the most rewarding chapters of my journey. At Utkarsh, our team of sixteen gave everything to events like RoboCon, Robo War, and Line Follower—and in return, we gained far more than just wins.

Late nights, countless retries, and shared breakthroughs taught us teamwork, resilience, and belief in each other. These weren't just tech events—they were moments that built friendships and confidence.

I hope to keep growing this club into a space where ideas are welcomed, failures are embraced, and every student feels the joy of building something real.

– *Shashwat Pandey*

BBD Engineering Times

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Aditya Dash

Faculty Head
Dr. Mrinalini Srivastava

Editor-in-Chief
Manya Agarwal

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