

SURAKSHAK

HERITAGE INSTITUTE OF TECHNOLOGY

Newsletter of the Department of Computer Science and Engineering (Internet of Things and Cyber Security including Block Chain Technology)



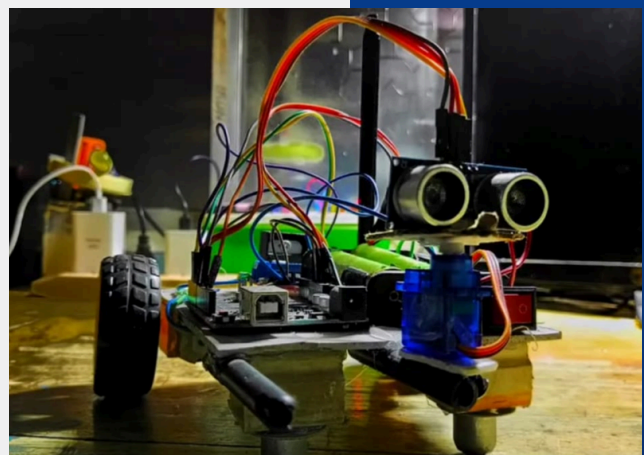
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ABOUT OUR DEPARTMENT

The Department of Computer Science and Engineering (IoT & Cyber Security including Block Chain Technology) at Heritage Institute of Technology is dedicated to fostering innovation and excellence in the rapidly evolving fields of IoT and Cyber Security. The department envisions a connected world secured by advanced cyber security measures and resilient IoT systems. With a mission to provide high-quality education, it equips students with expertise in IoT, cyber security, and blockchain technologies. Through active industry collaboration, cutting-edge research, and a supportive learning ecosystem, the department empowers students to address real-world challenges. It emphasizes teamwork, ethical values, societal responsibility, and a commitment to lifelong learning.



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MESSAGE FROM HEAD OF THE DEPARTMENT



DR. RAJA KARMAKAR

It gives me immense pleasure to share the latest updates from the Department of Computer Science and Engineering (Internet of Things and Cyber Security including Block Chain Technology) through our newsletter “Surakshak”. This newsletter highlights the remarkable achievements, events, and activities of our department. We continue to focus on cutting edge research, innovation, and skill development in emerging areas that are shaping the digital future.

The rapid growth of the Internet of Things (IoT) is transforming device connectivity, presenting both opportunities and security challenges. Our students and faculty members are actively developing secure IoT solutions while emphasizing cybersecurity to protect sensitive information and critical infrastructure. Additionally, Blockchain technology is driving innovation across sectors, from finance to supply chain management, and our department integrates these emerging technologies into research, hands-on learning, and industry collaborations to prepare students for real-world challenges.

As highlighted in this edition of Surakshak, I am proud of our students’ achievements, faculty research, and the collaborative spirit that drives our department. These accomplishments reflect our shared commitment to academic excellence and innovation. We remain dedicated to nurturing talent and preparing a future-ready workforce.



MESSAGE FROM DEPARTMENTAL CO-ORDINATOR



**PROF. SUDESHNA GOSWAMI
(GHOSH)**

Congratulations for the first issue of our departmental newsletter.

Our students as well as faculties have been very active. Competition successes, publication of research papers, and successful events mark this period. The passion and commitment of the students in our department are inspiring.

We are stretching our boundaries. New partnerships with industries and other academic institutions are being developed. Workshops and lectures by experts are being organized. These will add value to learning and development for all of us.

This newsletter is a reflection of our collective achievements. Each article, each achievement, is a part of our story. It is the result of the hard work of our students and the dedication of our faculty members.

I feel honoured to be a part of this dynamic community. Thank you for making our department a place of learning, growth, and innovation.



MENTOR'S DESK



PROF. PALASH DUTTA

Welcome to this edition of our CSE (IoT & Cyber Security Including Block Chain Technology) e-newsletter, a celebration of ideas turned into impact and efforts transformed into achievements. Within these pages, you will find stories of research that breaks new ground, prizes earned at hackathons and competitions, and the relentless spirit of innovation that defines our department.

Every recognition you see here is more than just a milestone—it is proof of curiosity in action, persistence in practice, and teamwork at its best. Together, these accomplishments showcase the vibrant culture of learning, discovery, and growth that our CSE (IoT & Cyber Security, including Block Chain Technology) family continues to nurture.

I am deeply grateful to our Head of Department for the constant motivation, to our students and faculty members for their outstanding contributions, and to the editorial team for capturing these moments so creatively.

As you explore this newsletter, I hope you feel inspired to dream bigger, innovate further, and write your own success stories. Remember, every great achievement begins with a single spark of an idea—nurtured with passion and pursued with dedication.

With encouragement and pride,
Prof. Palash Dutta

MENTOR'S DESK



MR. SIDHARTHA MOJUMDAR

I would like to take a moment to convey my sincere congratulations on the successful launch of our departmental newsletter. The commitment, creativity, and diligence of the editorial team have highlighted the accomplishments and activities within our department but also nurtures a sense of community among students, faculty, and staff.

The newsletter serves as a testament to your dedication to excellence and your enthusiasm for showcasing the vibrant nature of our department. It is clear that you have invested significant effort into curating content, designing layouts, and ensuring that the newsletter is both informative and captivating. Your collaboration and teamwork have truly borne fruit.

Thank you for taking the initiative to realize this project. Your contribution greatly enhances our department, and I am confident that the newsletter will remain a source of pride and inspiration for all of us.

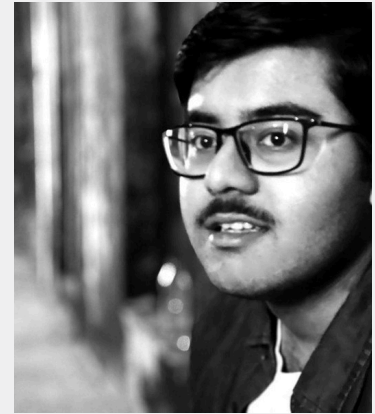
Mr. Sidhartha Mojumdar



EDITORIAL TEAM



JYOTIRMOY KARMAKAR
CSE (IoTCS) - 2027



NABHONIL BHATTACHARJEE
CSE (IoTCS) - 2027



JEET BISWAS
CSE (IoTCS) - 2027



RAJASREE GHOSH
CSE (IoTCS) - 2028



SATTWIK GHOSH
CSE (IoTCS) - 2028





To be a recognized hub for intelligent, secure, and sustainable IoT, cyber security, and blockchain education and research, producing competent professionals and innovators who build trustworthy digital systems for society and industry.

DEPARTMENTAL MISSION

- M1: To provide a strong foundation in computer science, IoT, cyber security, blockchain, data-driven technologies, and emerging digital systems through quality teaching-learning processes.
- M2: To apply knowledge toward the development of intelligent, secure, scalable, privacy aware, and resilient digital solutions through research, innovation, entrepreneurship, and industry collaboration to address real-world challenges.
- M3: To foster ethical values, teamwork, leadership, lifelong learning, and commitment to sustainability and societal responsibility in a multidisciplinary global context.



SHAPING THE INTERNET'S FUTURE: HERITAGE AT IETF 122, BANGKOK

In a remarkable milestone that highlights Heritage Institute of Technology's growing presence on the global innovation stage, students from the Department of Computer Science and Engineering (IoT & Cyber Security including Block Chain Technology) proudly represented India at IETF 122, held in Bangkok, Thailand. The Internet Engineering Task Force (IETF) is one of the world's most respected bodies responsible for developing and maintaining international Internet standards, making this participation a prestigious recognition of the students' technical excellence and research acumen.



Representing the India Internet Foundation (IIFON), Nabhonil Bhattacharjee and Sampurna Pyne collaborated with global researchers and domain experts to advance studies in Internet measurement and protocol optimization. Under the expert mentorship of Dr. Raja Karmakar, Assistant Professor of the department, the duo worked on evaluating DNS server performance using the AIORI IMN platform, a cutting-edge framework aimed at enhancing Internet resilience, performance, and scalability.



IETF122, Bangkok

Engaging directly in IETF working group discussions and hands-on experiments, the students gained first-hand exposure to the rigorous process of Internet standardization and research collaboration at a global scale. Their participation not only reflects deep technical understanding but also the spirit of innovation, teamwork, and open research that Heritage Institute of Technology continuously fosters.

This international engagement marks a proud achievement for the department and the institute as a whole, demonstrating Heritage's expanding contribution to cutting-edge Internet technologies, cybersecurity research, and standardization efforts. It reinforces the institute's mission to produce globally competent engineers capable of shaping the next generation of Internet technologies while representing India's growing influence in the digital world.

HARDWARE SUPREMACY:

A SMART BENGAL TRIUMPH



5TH POSITION

In a remarkable demonstration of applied engineering and technological innovation, a multidisciplinary team from the Department of CSE (IoT & Cyber Security, including Block Chain Technology) at Heritage Institute of Technology (HITK) emerged victorious at the Smart Bengal Hackathon 2025. Hosted by RCCIIT, this prestigious state-level event challenged participants to develop tangible, real-world solutions addressing West Bengal's developmental needs.

Securing the top hardware prize, in addition to ranking among the overall top five teams, emphasises the students' exceptional capability to design, build, and deploy physical technology. This project reflects not only technical acumen but also strategic problem-solving skills and a deep understanding of system integration. The success brings immense pride to HITK and highlights the department's commitment to nurturing innovators who can translate theoretical knowledge into impactful, real-world solutions.

The team—Nashrah Naazneen, Sutirtha Paul, Sumit Saha, and Nabhonil Bhattacharjee—excelled with a project that reimagined a previous innovation, blending multiple technologies into a single, robust system. Their solution combined a network of IoT sensors for real-time data acquisition, an AI-driven analytical model for intelligent prediction, and a Blockchain backend to guarantee immutable and traceable data integrity.



BLOCKCHAIN, DEMOCRATISED: AN IDEATEX VICTORY

Team Gulab Jamun from Heritage Institute of Technology (HITK) achieved 1st position at the IdeateX Ideathon 2025, competing in the 'Shulker Mines (Blockchain & Secure Systems)' track hosted by GDG on Campus, HIT. The competition aimed to encourage students to develop innovative blockchain solutions and simplify complex processes within the decentralised ecosystem.



The team, comprising Santu Patra and Nabhonil Bhattacharjee, developed "Smart Contract Modular Legos," a no-code/low-code platform designed to democratize blockchain development. By offering pre-audited modular smart contracts alongside an AI-assisted interface, the platform reduces development time, enhances security, and enables creators without technical expertise to deploy decentralised applications effectively.



Session zero, GDG

This achievement underscores HITK's commitment to fostering forward-thinking innovators capable of creating scalable and practical solutions. The victory highlights the potential for blockchain technologies to be more inclusive and accessible while addressing real-world challenges in secure systems. The project's success reflects the department's emphasis on integrating emerging technologies with creative problem-solving to nurture the next generation of industry-ready technologists.

AI FOR SAFETY: A RESOUNDING UDAAN STARTUP WIN



2nd Runner-up

The team's AI-powered Women Safety Solution impressed judges for its innovative use of machine learning for threat detection, robust architecture, and scalability. The system provides real-time alerts, predictive threat analysis, and a secure mobile interface, offering a comprehensive approach to enhancing public safety. Their solution not only demonstrates technical excellence but also addresses critical societal needs, reflecting the department's commitment to nurturing socially responsible innovators.

The Department of CSE(IoTCS) at HITK proudly celebrates the achievement of Sumit Saha, Nabhonil Bhattacharjee, and Nashrah Naazneen, who, under the mentorship of Dr Raja Karmakar, secured the top award at Udaan 2025. This inter-institutional startup and business model competition, organised by IIC and IQAC at HITK, recognises innovative solutions with significant social impact and market potential.

Winning at Udaan 2025 underscores HITK's focus on practical innovation, entrepreneurial thinking, and real-world impact. The project exemplifies the transformative potential of combining AI with socially meaningful applications, inspiring future students to develop technology-driven solutions with tangible benefits for communities.



THE EPHEMERAL VAULT: A PRIVACY INNOVATION

Team Steve's Lava Chicken, composed of Jeet Biswas, Jyotirmoy Karmakar, and Kabyik Paul, secured 3rd position at the IdeateX Ideathon in the Cybersecurity and Blockchain track. Their project, "Pirate Cove," introduced a revolutionary one-time-use digital vault, ensuring absolute file privacy by irreversibly deleting content immediately after access by the intended recipient.



This solution goes beyond standard encryption by offering a "privacy-by-design" model. It incorporates secure authentication, Blockchain-backed traceability, and ephemeral storage mechanisms, making it a novel approach in digital security. The judges praised the team for their forward-thinking application of technology in addressing modern privacy challenges, showcasing HITK's commitment to cybersecurity innovation.



Session zero, GDG

The project demonstrates the students' expertise in both software and system design, bridging theoretical knowledge with practical deployment. "Pirate Cove" not only enhances data security but also represents an emerging trend in privacy-focused applications, reinforcing the department's vision of nurturing cutting-edge problem solvers.

TEAM DRY SHINES BRIGHT: 2ND PLACE WIN AT HACK SYNTHESIS 2.0!



HackSynthesis 2.0

Their innovative project, OptiLogix, impressed the judges with its focus on scalable supply chain optimization — a solution designed to improve efficiency and transparency across logistics networks. The system integrated the Beckn Protocol for interoperability, an AI-powered chatbot for seamless user interaction, and advanced route optimization tools to minimize delivery time and costs.

Showcasing innovation and technical brilliance, Team DRY, comprising Debdeep Banerjee, Rohan Jain, and Yash Vardhan Choudhary, secured the 2nd Place at Hack Synthesis 2.0, a premier intercollegiate hackathon organized by DriveBlaze at UEM Kolkata. Representing the Department of Computer Science and Engineering (IoT & Cyber Security including Blockchain Technology) at Heritage Institute of Technology, Debdeep Banerjee played a key role in driving the team's success through his expertise in IoT and AI-driven systems.

By blending cutting-edge technology with real-world applicability, Team DRY demonstrated a holistic approach to solving modern-day supply chain challenges. Their remarkable achievement reflects not only their creativity and teamwork but also Heritage Institute of Technology's commitment to fostering innovation, problem-solving skills, and industry-ready talent among its students.



REDEFINING ADMISSIONS:

TEAM CODE CRUSADERS DRIVE DIGITAL CHANGE AT INNOVATHON '24

A moment of pride for the Department of Computer Science and Engineering (IoT & Cyber Security including Block Chain Technology) at Heritage Institute of Technology, as Team Code Crusaders — Debojyoti Banerjee, Debdeep Banerjee, Debnanda Datta, Sutirtha Paul, and Kanishk Paul — earned the 2nd Runner-Up position at Innovathon '24, organised by NSHM Knowledge Campus, Kolkata.



Built with a focus on scalability and user experience, the platform integrates AI-assisted validation tools and cloud-based document management, ensuring reliability and accessibility for both institutions and students. Through weeks of careful design, testing, and iteration, the team demonstrated how thoughtful technology can address real-world educational challenges.



Their innovative project, titled “Paperless Admission System,” aims to modernise the admission process through a seamless, end-to-end digital ecosystem. The solution eliminates the dependency on physical paperwork and manual verification by introducing an automated workflow that ensures faster processing, transparent record-keeping, and enhanced data security. The system not only optimizes administrative efficiency but also supports environmental sustainability by significantly reducing paper consumption across the admission lifecycle.

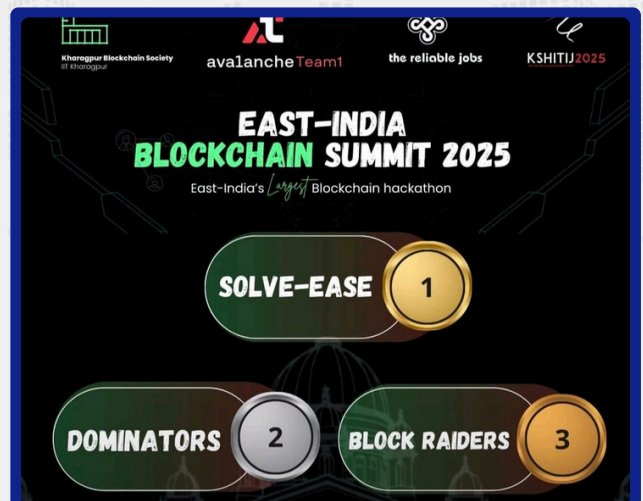
PIONEERING BLOCKCHAIN INNOVATION: TEAM BLOCK RAIDERS SHINE AT EAST INDIA SUMMIT 2025



IIT Kharagpur

A moment of immense pride for the Department of Computer Science and Engineering (IoT & Cyber Security including Block Chain Technology) at Heritage Institute of Technology, as Team Block Raiders — Amit Kumar Choubey, Kumar Gaurav, Debdeep Banerjee, and Sampurna Pyne — secured the 2nd Runner-Up position at the prestigious East India Blockchain Summit 2025, hosted by IIT Kharagpur. Their outstanding performance was further recognized with a cash prize of \$150, underscoring the excellence of their project among a highly competitive field of innovators.

The team's project presented a visionary approach to blockchain applications, demonstrating how decentralised technology can be leveraged for secure, scalable, and practical real-world solutions. Their work combined technical rigor with creative problem-solving, showcasing both a deep understanding of blockchain principles and the ability to implement them effectively in tangible use cases. By integrating robust system architecture with innovative features, the project reflected a balance of technical sophistication and usability, highlighting the team's capability to translate complex concepts into actionable outcomes.



Weeks of meticulous planning, collaboration, and technical execution allowed the team to stand out, illustrating the power of coordinated effort and strategic vision. This achievement not only celebrates the individual and collective brilliance of Team Block Raiders but also strengthens Heritage Institute of Technology's growing reputation in cutting-edge domains like blockchain and Web3, inspiring future innovators to push the boundaries of emerging technologies.

REVOLUTIONISING SUPPLY CHAINS:

TEAM DR EXCELS AT CODE CUBICLE 4.0

The Department of Computer Science and Engineering (IoT & Cyber Security including Block Chain Technology) at Heritage Institute of Technology celebrates another proud achievement as Team DR — Debdeep Banerjee and Rohan Jain — secured the 2nd Runner-Up position at Code Cubicle 4.0, organised by Geek Room in collaboration with the Hyderabad Python Users Group, with the finals hosted at the Microsoft Office, Hyderabad.



Beyond its technical depth, the project's true strength lies in its scalability and practicality. It's engineered to serve diverse industrial environments, ensuring that logistics operations become more sustainable, data-driven, and resource-efficient. Through months of focused development and testing, Team DR demonstrated a keen understanding of how AI and machine learning can transform traditional systems into smart, adaptive networks.

Their innovative project, OptiLogix, is an AI-powered platform designed to revolutionise supply chain management through automation, intelligence, and real-time decision-making. The system seamlessly integrates tools like Dock Dispatcher, Route Optimiser, and Inventory Spotter, each addressing specific pain points within logistics operations. By combining predictive analytics with process automation, OptiLogix enables enterprises to reduce inefficiencies, improve delivery accuracy, and adapt dynamically to market demands.



A NATIONAL FINAL BREAKTHROUGH

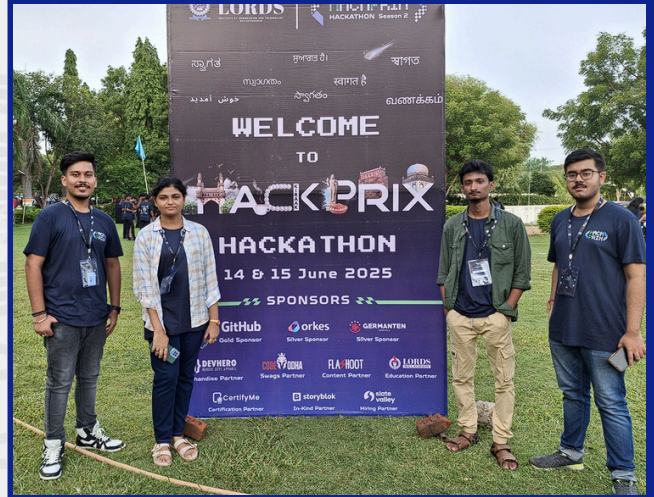


HackPrix Season 2

Phoenix AI stands out for democratizing access to artificial intelligence, allowing users with minimal technical expertise to harness advanced ML and AI capabilities. The platform's intuitive interface, scalable architecture, and intelligent workflow management impressed judges and industry experts alike.

Team Phoenix Builders—Jeet Biswas, Nabhonil Bhattacharjee, Santu Patra, and Diya Dey—advanced to the national finals of HackPrix Season-2 Hackathon in Hyderabad, competing among 8,500 teams nationwide. Their project, Phoenix AI, is a no-code platform enabling users to visually build, train, and deploy complex AI models without writing code.

This achievement not only reflects the students' technical proficiency but also positions HITK as a hub for innovative AI solutions. By combining AI accessibility with practical applications, the team demonstrated how student-driven technology can bridge knowledge gaps and foster inclusive innovation across industries.



EMPOWERING SUSTAINABILITY:

TEAM HARVESTH2O EXCELS AT SUSTAINOVATION SEASON 1 HACKATHON

The Department of Computer Science and Engineering (IoT & Cyber Security including Block Chain Technology) at Heritage Institute of Technology proudly celebrates the outstanding achievement of Team HarvestH2O at the Sustainovation Season 1 Hackathon, organised by INTIN in collaboration with Amity University, Noida. Out of more than 850 participating teams from across India, Team HarvestH2O made it to the national finals, receiving high praise from judges and industry experts for their innovative and socially relevant solution.



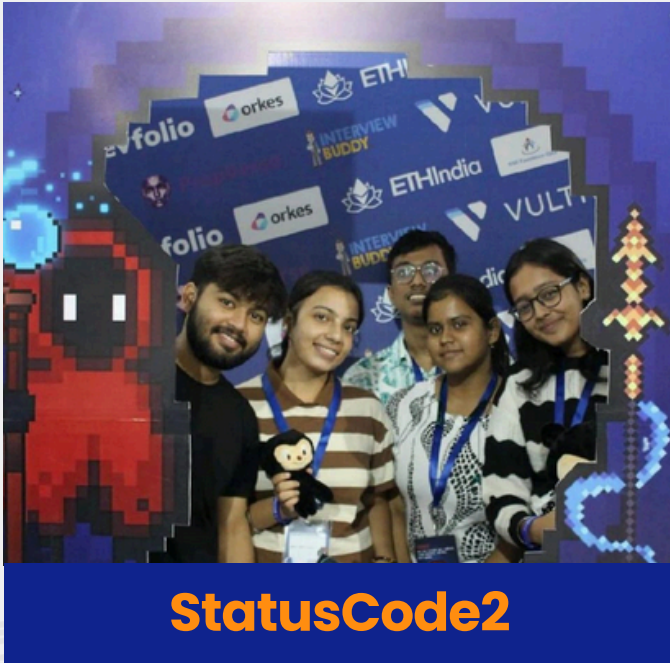
Their project, SoilLearn, is an advanced IoT-powered hardware-software ecosystem that integrates real-time data monitoring with gamified learning modules. By measuring soil parameters such as moisture, pH, and temperature, the system provides users with instant insights into soil health. What makes SoilLearn unique is its engaging design that connects students, educators, and farmers, turning traditional soil monitoring into an interactive educational experience.



This achievement highlights the team's technical excellence, creativity, and dedication to sustainability. Through SoilLearn, Team HarvestH2O demonstrated how emerging technologies can bridge education and environmental awareness, paving the way for a greener, more informed future. The department continues to encourage such impactful innovations that align technology with meaningful change.

REVOLUTIONISING SKINCARE:

TEAM CODESTORM TRIUMPHS AT STATUSCODE2 HACKATHON



The Department of Computer Science and Engineering (IoT & Cyber Security including Block Chain Technology) at Heritage Institute of Technology proudly celebrates the remarkable achievement of Team Codestorm — Ishani Panda, Harsh Sinha, and Mohit Paul — at the StatusCode2 Hackathon, hosted by IIIT Kalyani on 23rd–24th August 2025. Competing against top teams from across the nation, they secured 1st Position in the Medical Track and 2nd Position in the Vultr Track, showcasing exceptional innovation, teamwork, and technical excellence.

Their project, Skinsey, is an AI-powered dermatology application designed to make skincare smarter, more accessible, and highly personalised. Using just a single photo, Skinsey provides instant skin analysis, customised care routines, and intelligent recommendations based on environmental and climatic conditions. The app also integrates Chansey AI, a 24/7 chat assistant for real-time support, along with a smart dermatologist locator, ensuring seamless access to expert care anytime, anywhere.

This victory stands as a testament to the team's ingenuity, dedication, and vision for real-world problem-solving. Team Codestorm's achievement reinforces Heritage Institute of Technology's commitment to fostering impactful innovation and demonstrates how AI can be harnessed to revolutionise healthcare accessibility and personal wellbeing.



AN IDEA HONoured:

NATIONAL IDEATION FINALIST



Shibam Saha of the CSE(IoTCS) department at Heritage Institute of Technology has been recognised as one of the Top 1000 participants nationally in the prestigious College Youth Ideation competition, hosted by Think Startup. This event brings together the brightest young minds from across India to present innovative solutions addressing societal, technological, and entrepreneurial challenges.

Shibam's ideas stood out for their originality, practical feasibility, and forward-thinking approach. The recognition at the final ceremony held at IIT Delhi underscores not only his entrepreneurial mindset but also the department's commitment to fostering critical thinking, innovation, and leadership among students. By excelling in a highly competitive national arena,

Shibam exemplifies how HITK equips its students to tackle real-world problems with creativity, technical skill, and a vision for positive societal impact. His achievement adds another dimension to the department's growing record of producing innovators capable of making significant contributions to India's technology and startup ecosystem.

TRIUMPH AT HACKHERITAGE '24: VEILX SECURES 1ST PLACE!



Arkoprobho Sinha Roy, along with his dedicated team VeilX, achieved the 1st position at HackHeritage 2024, Heritage Institute of Technology's flagship innovation event. Their project, VeilX, addresses one of the most pressing concerns in the digital age: secure and privacy-conscious document management. The application leverages the power of Artificial Intelligence and Blockchain technology to provide an intelligent, decentralised solution for handling sensitive data.

VeilX incorporates context-aware redaction features that allow users to selectively mask or remove confidential information from documents, ensuring complete compliance with privacy norms. Simultaneously, the platform uses IPFS-based decentralized storage, guaranteeing that files are securely stored and decentralised. Beyond privacy, VeilX introduces a novel data monetisation model, empowering users to control how their data is shared, accessed, or monetised.

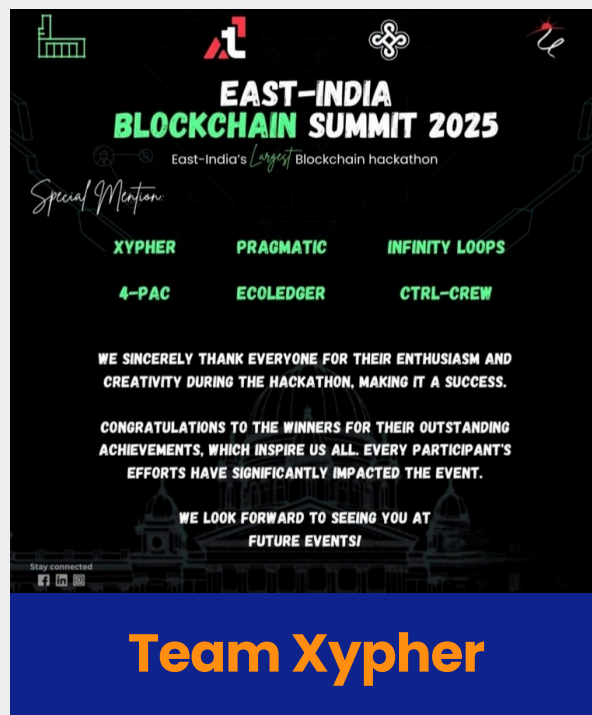
This project sets a new benchmark in user-centric data protection, reflecting the team's innovative thinking and technical expertise. Winning the top prize at HackHeritage demonstrates the team's ability to translate advanced concepts into practical, deployable solutions. VeilX's recognition highlights the department's focus on nurturing students capable of designing technologies that balance security, usability, and societal relevance, cementing HITK's reputation as a hub for pioneering innovation in cybersecurity and blockchain-based solutions.

A DESCI REVOLUTION AT IIT KGP

Continuing his streak of innovation, Arkoprobho Sinha Roy was part of team Xypher, which clinched 1st position at the East-India Blockchain Summit 2025, organised by IIT Kharagpur. Their groundbreaking project, Innofund, represents a revolutionary platform for Decentralised Science (DeSci). By leveraging Web3 technologies, Innofund aims to transform the global scientific research ecosystem through transparency, equity, and community-driven collaboration.



Innofund enables scientists and researchers to receive transparent funding for their projects, while allowing contributors to track research progress on-chain. This ensures accountability, prevents misuse of resources, and fosters a culture of open, verifiable scientific discovery. The platform also democratizes access to scientific funding by reducing reliance on traditional institutions, empowering early-stage researchers and innovators from diverse backgrounds.



By securing the top position at such a prestigious event, Arkoprobho and his team demonstrated their ability to develop technology that not only solves immediate technical problems but also drives systemic change in global research practices. Innofund exemplifies HITK's vision of producing students capable of merging technical mastery with societal impact, showcasing how blockchain can redefine trust, transparency, and participation in critical sectors such as scientific research.

TRIUMPH FOR RAJASREE: AN AUDIENCE CHOICE VICTORY



We are immensely proud to announce a moment of significant artistic achievement within our community. Please join us in extending a heartfelt congratulations to the exceptionally talented Rajasree Ghosh, who has been honored with the Audience Choice Award at Angika 2.0. This distinguished cultural event, meticulously organised by Nriyaksha at Techno India University, is a known platform for showcasing profound artistic expression and competitive talent.

To be chosen by a panel of judges is one thing, but to be selected as the audience's favourite is a truly special and powerful form of recognition. The Audience Choice Award is a direct reflection of a performer's ability to transcend the technicalities of their art and forge a genuine, emotional connection with every person in the room. Rajasree's performance was not just seen; it was felt. Her artistry, passion, and commanding stage presence clearly resonated deeply with the spectators, making her the undeniable favourite of the event and a standout performer.

This accolade speaks volumes about her dedication, countless hours of practice, and the innate ability to communicate stories and emotions through her craft. It is a well-deserved honour that highlights her remarkable talent and the profound impact she had on all who witnessed her performance. We celebrate this incredible achievement, which not only brings pride to Rajasree but also serves as an inspiration to aspiring artists everywhere. Her success underscores the vibrant cultural spirit that thrives within our university.

A BLUEPRINT FOR A BETTER FUTURE:

'SAHAAY' PROJECT SELECTED FOR PREMIER INNOVATION CONTEST



We are thrilled to announce a major achievement for the Department of CSE (IoT & Cyber Security including Block Chain Technology). Following an exceptional performance at HackHeritage 3.0, Team Elysium has been proudly selected among the Top 50 teams for the prestigious Smart India Hackathon (SIH) 2025!

This success is a testament to the dedication, collaborative spirit, and innovative vision of the team members from Heritage Institute of Technology:

- Jeet Biswas, CSE (IoTCS)
- Jyotirmoy Karmakar, CSE (IoTCS)
- Kabyik Paul, CSE (IoTCS)
- Arunima Dutta, CSE

The team tackled the critical problem statement of creating a "Unified platform to combat poverty, hunger, and the educational gap." Their solution, Sahaay, is an intelligent, multi-faceted e-platform designed to create sustainable social impact. The project is brilliantly structured with three core components: FeedConnect, which uses AI and blockchain for transparent food redistribution; EmpowerBridge, an ML-driven fair marketplace for local businesses; and EduBridge, a volunteer-driven platform to close the educational gap for underprivileged children.

This journey reminds us that "technology is not just about code—it's about compassion." When innovation meets empathy, as it has with 'Sahaay,' real transformation begins. We celebrate Team Elysium for this remarkable achievement and for the opportunity to represent our college at a premier competition with a project that has so much potential for meaningful change.

SCIENTIFIC ESSAY SUCCESS: AVISHEK CHAKRABORTY WINS 3RD PLACE!

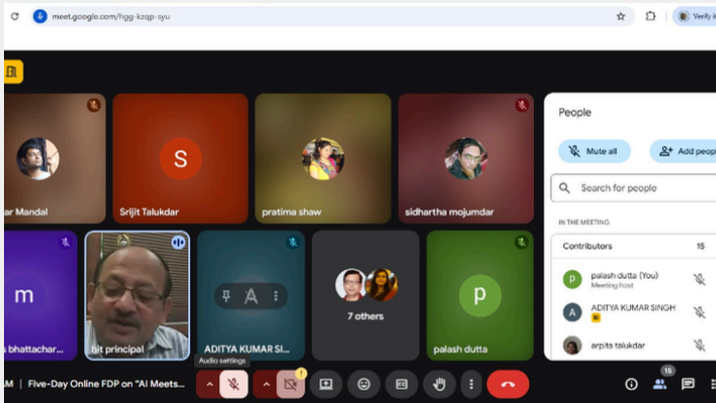


Avishek's award-winning essay, titled "Space Tourism and Colonising Mars: Science Friction or Near Reality," captured the judges' attention with its insightful exploration of one of today's most captivating scientific topics. His work stood out for its deep analysis, clarity of thought, and the skilled way it navigated the complexities of futuristic space travel.

We are thrilled to celebrate another outstanding achievement from a student of the CSE(IoTCS) department. Please join us in congratulating Avishek Chakraborty for securing the 3rd Position in the highly competitive Scientific & Innovative Essay Competition. The event was organised by the Science Club of Heritage Institute of Technology, in association with IIC-HITK and with support from IQAC-HITK, on October 28th, 2024.

This accomplishment is a clear demonstration of Avishek's ability to blend deep scientific understanding with creative, innovative thinking. It highlights not only his excellent research and writing skills but also his passion for tackling the big questions that will shape our future. This recognition is a proud moment for both Avishek and the Heritage Institute of Technology, reflecting the high calibre of talent nurtured within our institution.

AI MEETS IOT: FACULTY DEVELOPMENT PROGRAMME (FDP) RECAP



The Department of CSE (IoT & Cyber Security including Block Chain Technology) at Heritage Institute of Technology is pleased to announce the successful conclusion of its five-day online Faculty Development Programme (FDP) on the theme: "AI Meets IoT: Advancing Systems through Machine Learning." Held from July 7th to July 11th, 2025, the programme was organised in association with IIC, HITK and supported by IQAC-HITK.

Designed to empower faculty, researchers, and industry professionals, the FDP provided a deep dive into the powerful convergence of Artificial Intelligence (AI), Machine Learning (ML), and the Internet of Things (IoT). The sessions explored how AI can be applied to build intelligent, autonomous, and context-aware IoT systems for critical sectors such as healthcare, smart cities, Industry 4.0, agriculture, and cybersecurity.

The comprehensive schedule guided participants on a journey through cutting-edge topics. The week began with foundational concepts like ML for Intrusion Detection Systems, then progressed to advanced areas including Natural Language Processing, Generative AI, and IoT-based Wireless Sensor Networks. The programme culminated with a forward-looking session on the integration of Large Language Models (LLMs) with IoT, followed by a valedictory ceremony.

The programme's success was driven by a lineup of eminent speakers, including Dr. Ditipriya Sinha, Dr. Anasua Sarkar, Mr. Soumyadip Chowdhury, Dr. Debayan Ganguly, Dr. Kalyan Mahata, and Dr. Debarshi Kumar Sanyal. Their expertise provided participants with invaluable knowledge, enabling them to better design personalised smart applications, improve predictive capabilities in IoT systems, and understand real-time autonomous decision-making.

A special thanks is extended to the dedicated Organising Committee for their meticulous planning and execution. The guidance of Convener Dr. Raja Karmakar, Co-ordinators Prof. Sudeshna Goswami and Prof. Palash Dutta, and Committee Member Mr. Suryadeep Dasgupta was instrumental in making this FDP a resounding success.

BEST PAPER AWARD: COMSNETS WORKSHOP '25!



We are immensely proud to announce a landmark achievement for the Department of CSE (IoT & Cyber Security including Block Chain Technology). A research paper authored by a team of our students and faculty has been honoured with the Best Paper Award at the prestigious 17th IEEE/ACM International Conference on Communication Systems & Networks – Systems for the Future of AI/ML (COMSNETS Workshop '25 – SysAI).

This achievement was made possible by the brilliant collaboration, dedication, and innovative spirit of the following student-faculty team from the Heritage Institute of Technology:

- Aritra Dutta Banik (3rd Year)
- Trisagni Mandal (3rd Year)
- Anubhab Mukherjee (3rd Year)
- Sharnabho Chatterjee (3rd Year)
- Dr. Raja Karmakar (Faculty)

Securing a Best Paper Award at a premier conference like COMSNETS is a remarkable feat. Please join us in extending our heartiest congratulations to the entire team for this outstanding accomplishment and for bringing such a distinguished honour to our institution.

The award-winning paper, titled "Phone Patrol: An Intelligent Surveillance System for Mobile-Free Environments," stands out for its innovative approach to solving a real-world security challenge. This significant international recognition is a direct reflection of the department's commitment to fostering a culture of cutting-edge research and academic excellence in the fields of AI, IoT, and Cybersecurity.

WEBINAR RECAP:

SYNERGISING MACHINE LEARNING AND BLOCKCHAIN

The Department of CSE (IoT & Cyber Security including Block Chain Technology) at Heritage Institute of Technology successfully hosted the engaging webinar, "Synergising Machine Learning and Blockchain," on March 20, 2025. The event, held in association with IIC, HITK and supported by IQAC-HITK, brought together experts from both academia and industry.

A key highlight of the webinar was the clear breakdown of the distinct yet complementary roles each technology plays. The speakers positioned Blockchain as the fundamental "trust layer," which enables the secure, immutable, and transparent data exchange necessary for modern systems. Layered on top of this, Machine Learning serves as the "intelligence layer," driving predictive analytics, anomaly detection, and adaptive decision-making. The synergy of these layers, the session concluded, allows for the creation of highly secure, intelligent, and resilient ecosystems in critical fields like finance, supply chain, and healthcare.



The session was designed to explore the powerful combination of Machine Learning (ML) and Blockchain, focusing on how these two transformative technologies can work in tandem to strengthen data security, enhance transparency, and enable intelligent automation across a variety of sectors.

Ultimately, the webinar encouraged participants to rethink data-driven innovation, demonstrating the tangible applications of ML-Blockchain integration. It provided a clear path toward developing smarter cybersecurity strategies and laid the conceptual groundwork for the advanced solutions that will define Industry 6.0.

A LANDMARK VICTORY AT IIT GUWAHATI:

HERITAGE TEAM 'SECURENET INNOVATORS' WINS NATIONAL IEEE HACKATHON

We are ecstatic to announce a monumental victory for the Department of CSE (IoT & Cyber Security, including Block Chain Technology). Team Securenet Innovators has achieved First Place at the highly competitive National IEEE-IC Standards Hackathon 2.



The prestigious event, hosted by AIORI and IIF, was held at the Indian Institute of Technology (IIT) Guwahati, bringing together the brightest young minds from across the country. Our team stood out for their innovative approach, exceptional problem-solving skills, and dedication to developing cutting-edge cybersecurity solutions.

This remarkable achievement was brought home by the brilliant members of Team Securenet Innovators:

- Nabhonil Bhattacharjee
- Sampurna Pyne
- Dr. Raja Karmakar (Faculty Mentor)



Their success on the national stage is just the beginning. With this victory, Team Securenet Innovators has earned the distinct honour of representing India at the upcoming International IETF-122 Hackathon in Bangkok, Thailand. This is a phenomenal opportunity for them to showcase their talent on a global platform.

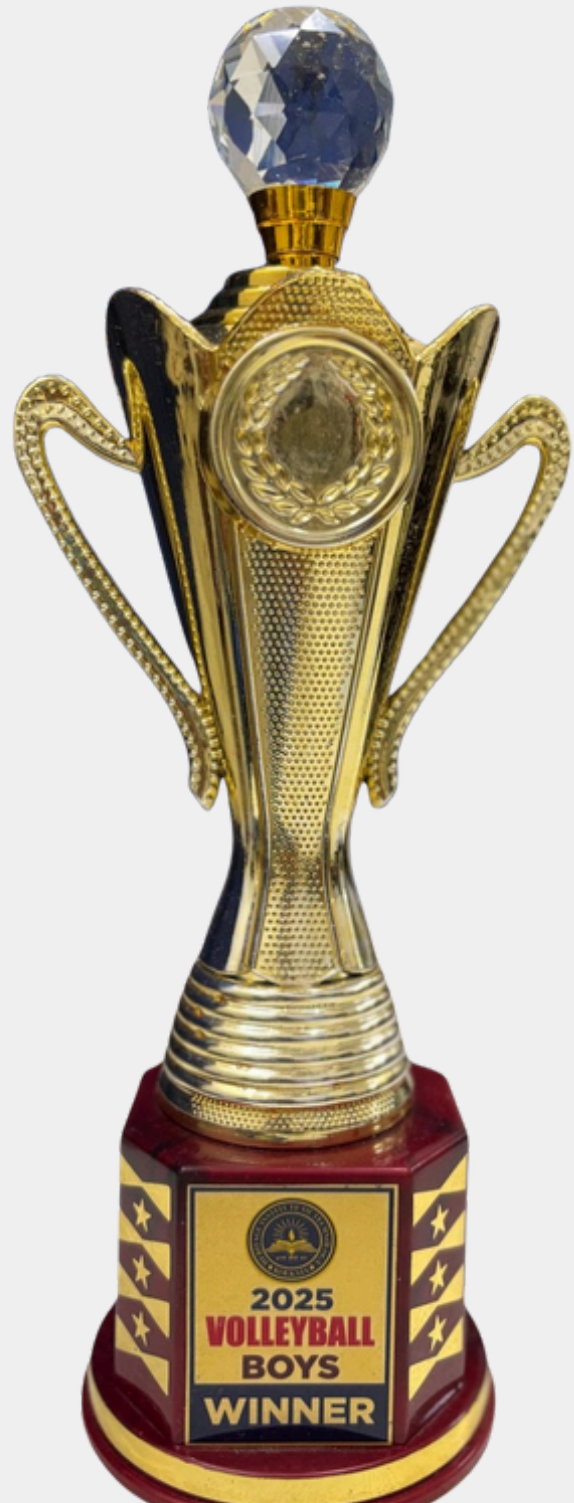
VOLLEYBALL VICTORY!

CSE (IOT & CYBER SECURITY) SECURES 1ST PRIZE!

A massive shout-out to our champions! The Department of CSE (IoT & Cyber Security including Block Chain Technology) is thrilled to announce that our team has clinched the 1st Prize in the highly competitive Inter-Department Volleyball Competition held at Heritage Institute of Technology!

Throughout the tournament, our players demonstrated exceptional skill, unwavering determination, and phenomenal teamwork. Their performance on the court was a thrilling display of power and coordination, leading them to emerge victorious against tough competition from other departments.

This fantastic victory is a testament to the department's incredible team spirit and dedication, proving that our commitment to excellence extends far beyond the classroom. It highlights the well-rounded talents of our students and their ability to collaborate and succeed in any arena.



ANOTHER FIRST PLACE VICTORY:

HERITAGE TEAM 'ENIGMATIK' TRIUMPHS AT IEEE JU HACKATHON



We are thrilled to announce another first-place victory for the Department of CSE (IoT & Cyber Security, including Block Chain Technology)! Team Enigmatik has secured the top prize at the highly competitive IEEE JU Double Slash Hackathon, hosted by Jadavpur University at their Salt Lake Campus from February 15th–16th, 2025.

Their winning project, “A Comprehensive Traffic Management System,” captured the judges' attention with its innovative approach to urban mobility. The system is designed to leverage powerful machine learning models to automate road traffic control and significantly improve the response times of emergency services. This forward-thinking solution directly addresses real-world challenges, aiming to create safer and more efficient cities.

This remarkable win is a testament to the technical excellence and creative problem-solving skills of the team, composed of these talented third-year students from Heritage Institute of Technology:

- Parthiv Dasgupta
- Sambhav Agarwal
- Aditya Gupta

REDEFINING THE FUTURE OF FARMING:

HERITAGE STUDENTS SHOWCASE 'AGRIAI' AT ENVISAGE HACKATHON

We are proud to highlight the remarkable ingenuity of Team CodeCrafters, who made a significant impact at the Hack ur Way Hackathon, a premier event of Envisage, the annual techno-cultural fest of Techno Main Salt Lake.

This achievement showcases the power of inter-departmental collaboration at Heritage Institute of Technology, with team members from both the CSE and IT departments. The brilliant minds behind this project include:

- Sohom Mukherjee, CSE (IoTCS)
- Ujjawal Kumar Mukherjee, CSE (IoTCS)
- Abu Talha, CSE (IoTCS)
- Himanshu Kumar (IT)
- Prakash Kumar (CSE)

The team presented their visionary project, AgriAi, a decentralized intelligent farming assistant. This cutting-edge solution aims to transform the agricultural sector by integrating advanced AI for smart analytics (using RAG and Gemini LLM), blockchain for secure and transparent crop traceability, and deep learning for accurate plant diagnostics.



By synergising these powerful technologies, AgriAi aspires to empower farmers with intelligent, transparent, and sustainable agri-tech innovations. The project is a testament to the team's forward-thinking approach and their ability to tackle complex, real-world challenges. Congratulations to Team CodeCrafters for developing such an impactful project and for showcasing the innovative spirit of our institution!

FIRST PLACE IN PREMIER HACKATHON:

CSE DUO SHINES AT LTI MINDTREE EVENT



The Department of CSE (IoT & Cyber Security, including Block Chain Technology) is thrilled to announce an outstanding victory at the prestigious LTI Mindtree Hackathon, organised in collaboration with GitHub at the LTI Mindtree campus.

Our team rose to the top amidst fierce competition, securing the coveted First Place against talented participants from premier institutions such as Jadavpur University, Haldia Institute of Technology, IEM, and UEM. This victory is a testament to the exceptional technical acumen and creative problem-solving skills of the winning duo from Heritage Institute of Technology:

- Sohomo Mukherjee, CSE (IoTCS)
- Dibyajyoti Chakraborty, CSE (IoTCS)

The event's prestige was further elevated by the presence of eminent industry leaders, including Mr. Anand Natarajan, GSI Alliance Director at GitHub, along with other senior executives from LTI Mindtree, who witnessed the innovative solutions presented.

This remarkable achievement underscores the department's growing reputation for fostering innovation and producing industry-ready talent capable of excelling on competitive platforms. Please join us in extending our heartiest congratulations to Sohomo and Dibyajyoti for this incredible accomplishment and for bringing such a significant honour to our institution!

ANOTHER TOP HONOUR FOR OUR INNOVATORS: TEAM CODEFORCE CLINCHES FIRST PRIZE AT MICROSOFT EVENT

Embodying this spirit of innovation, we are immensely proud to announce that Team Codeforce from the Department of CSE (IoT & Cyber Security including Block Chain Technology) has clinched the 1st Position at the prestigious Microsoft Codeforce 2025 Hackathon.



Held in a highly competitive offline format, the hackathon saw our team rise to the top against 16 other talented teams. Team Codeforce thoroughly impressed the judges with their cutting-edge ideas, seamless teamwork, and exceptional technical ingenuity, setting a new benchmark for excellence.



The team's victory was celebrated at a grand prize distribution ceremony, where they were honoured with certificates and accolades in recognition of their stellar performance. This remarkable win not only underscores the team's innovative prowess but also powerfully reflects the department's unwavering commitment to fostering creativity, collaboration, and excellence in technology-driven problem-solving.

Congratulations to Team Codeforce on this outstanding achievement!

INNOVATING FOR A SMARTER CAMPUS:

TEAM'S 'CAMPUS CHECK' PROJECT WINS TOP PRIZE



The Department of CSE (IoT & Cyber Security including Block Chain Technology) proudly congratulates Team Gulab Jamun for securing the coveted 1st Position at HackHeritage 3.0. This flagship 36-hour offline hackathon, organised by Heritage Institute of Technology, took place on August 22nd–23rd, 2025.

This outstanding achievement was brought home by the brilliant and collaborative efforts of our students:

- Diya Dey
- Santu Patra
- Anubhav Sanyal
- Soumyajit Acooli

Their winning project, Campus Check, is a smart attendance and scheduling application designed to transform campus management. The solution features real-time attendance toggling for students, a dynamic QR-based system to prevent proxy attendance, and a powerful AI-driven timetable generator. This intelligent tool optimises schedules by considering crucial variables like faculty availability, room capacity, and course requirements, showcasing a practical path toward a more efficient academic ecosystem.

This victory is a testament to the team's technical innovation, problem-solving acumen, and commitment to building intelligent solutions for real-world challenges. Congratulations to Team Gulab Jamun for their exceptional performance and for winning top honours at our own institution's premier hackathon!

AN IDEA WITH MAJOR POTENTIAL: CHRONOSYNC' PROJECT MAKES THE CUT FOR SIH 2025



We are exceptionally proud to announce that a team from the Department of CSE (IoT & Cyber Security including Block Chain Technology) has achieved national recognition in one of the country's biggest innovation platforms. Team Position Undefined has been selected among the Top 50 teams nationally for the prestigious Smart India Hackathon (SIH) 2025.

This remarkable achievement is the result of the brilliant work and dedication of the following students from Heritage Institute of Technology:

- Swarnapravo Tripathi
- Lokesh Mondal
- Deep Sanbui
- Srijita Ghosal

Their innovative project, ChronoSync, is an AI-powered web platform designed to automate and streamline college timetabling and attendance management. The platform offers a robust solution featuring intelligent, clash-free scheduling algorithms and secure, real-time attendance tracking that uses both OTP verification and geofencing to prevent proxies. ChronoSync stands out as a cost-effective and intelligent solution to persistent campus management challenges.

Being selected for SIH is a powerful validation of the team's technical excellence, their innovative vision, and the project's strong potential to enhance institutional efficiency at scale. Congratulations to the entire team on this outstanding accomplishment, and we wish them the very best in the next stages of the competition!



THANK YOU

