

CSE@GNIT Bulletin

2024 - 25

Department of Computer Science & Engineering

ISSUE	SEM
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MESSAGE FROM PRINCIPAL'S DESK



Guru Nanak Institute of Technology (GNIT), established in 2003 under the Guru Nanak Educational Trust, is a premier institution of the JIS Group Educational Initiatives. Affiliated with Maulana Abul Kalam Azad University of Technology (MAKAUT) and approved by AICTE, UGC, NAAC (A+), and NBA, GNIT offers undergraduate, postgraduate, and doctoral programmes in engineering and technology. The institute became autonomous in 2016 and is the first private engineering college in West Bengal to achieve NAAC A+ accreditation. Located in North Kolkata, GNIT provides a modern, student-friendly campus with advanced laboratories, smart classrooms, digital library facilities, sports infrastructure, and innovation centres. The institute promotes an eco-friendly, plastic-free, smoking-free, and ragging-free environment that supports the holistic development of students. With around 2,000 students, GNIT combines strong academic foundations with practical learning through project-based education, internships, industry collaborations, cloud computing, High Performance Computing (HPC), and state-of-the-art research facilities .GNIT actively promotes research and innovation through AICTE MODROB, DST, SERB, and MOFPI funded projects, along with entrepreneurship initiatives under the Institution's Innovation Council (IIC).

With its emphasis on academic excellence, research, innovation, and professional development, GNIT continues to prepare competent engineers, researchers, and future leaders capable of meeting global challenges.

Prof. (Dr.) Swarup Kumar Mitra

Principal, Guru Nanak Institute of Technology, Kolkata

MESSAGE FROM HOD'S DESK



It is my pleasure to present this edition of the **CSE@GNIT Bulletin**, highlighting the achievements, innovations, and academic activities of the Department of Computer Science & Engineering. This newsletter reflects our commitment to quality education, research, and the holistic development of our students.

Our department continuously strives to provide an excellent learning environment through modern teaching practices, technical events, industry interactions, research initiatives, and skill development programs. We are proud of the accomplishments of our students and faculty, whose dedication continues to bring recognition to the department.

I congratulate everyone who has contributed to these achievements and thank our faculty, students, alumni, and industry partners for their continued support. I hope this newsletter inspires all readers and encourages us to pursue greater heights of excellence.

Prof. (Dr.) Suman Bhattacharya

Head of the Department

Department of Computer Science & Engineering

Guru Nanak Institute of Technology

MESSAGE FROM EDITOR'S DESK



Welcome to the Editor's Desk of the **CSE@GNIT Bulletin**. It is a pleasure to present another edition highlighting the achievements, innovations, and vibrant activities of the Department of Computer Science and Engineering, Guru Nanak Institute of Technology. This newsletter reflects the department's continuous pursuit of academic excellence, research, innovation, and holistic student development.

Within these pages, you will discover highlights of technical workshops, seminars, conferences, faculty and student achievements, research contributions, industry collaborations, placement success, and various departmental events. Each accomplishment represents the dedication, creativity, and teamwork of our students and faculty members. We hope this edition inspires our readers, celebrates our collective journey, and strengthens the spirit of learning and innovation that defines the CSE department. We look forward to sharing many more milestones and success stories in the editions to come.

Ms. Debapriya Sengupta

Assistant Professor

Chief Editor, CSE@GNIT Bulletin

Department of Computer Science & Engineering

Guru Nanak Institute of Technology

DEPARTMENTAL VISION

To produce proficient professionals of global standard with respect to industry, academia, and entrepreneurship who can play a key role in their respective domain and become a responsible citizen for the society.

DEPARTMENTAL MISSION

DM-1: To impart quality education with holistic development to produce professionals with leadership traits.

DM-2: To impart knowledge on emerging technologies and entrepreneurship skills to produce technocrats of global standard and entrepreneurs.

DM-3: To promote interdisciplinary work culture and opportunity to work in a team through collaborative research and project work.

DM-4: To inculcate professional ethics and moral responsibility for a better society.

PEO

PEO 1: Our graduates will establish themselves as effective professionals in industry, academia and entrepreneurship.

PEO 2: Our graduates will become profound researchers in multiple domains.

PEO 3: Our graduates will act as a leader in society.

PROGRAMME SPECIFIC OUTCOMES (PSOS)

PSO 1: Ability to use efficient algorithm for designing and developing software applications and products.

PSO 2: Ability to correlate computer science and core engineering subjects to solve real life problems across multiple domains.

PSO 3: Ability to write code efficiently in competitive environment in national and international platform.

ABOUT THE DEPARTMENT



The Department of Computer Science and Engineering, established in 2003, stands out as a premier destination for academic excellence and research-driven learning. Widely recognized as a B.Tech in Computer Science College in Kolkata, the department offers a vibrant environment where students receive top-tier technical education alongside holistic personal development through various co-curricular and extra-curricular activities.

Ranked among the Top B.Tech CSE Colleges in Kolkata, the department provides students with a strong foundation in both theoretical knowledge and practical skills. Focus areas include the latest technologies such as Artificial Intelligence, Machine Learning, Cybersecurity, Cloud Computing, and Data Science. Students benefit from advanced laboratories, live projects, and industry collaborations, ensuring hands-on learning experiences. The department also fosters a robust research culture, encouraging students to publish research papers, work on innovative projects, and participate in departmental newsletters and technical magazines to enhance their analytical and communication skills.

As one of the Top Computer Science Engineering Colleges in Kolkata and counted among the best colleges for B.Tech CSE in India, the department is committed to producing graduates who are not only academically proficient but also equipped with leadership qualities, entrepreneurial mindsets, and a global perspective. Whether you are searching for the best colleges for B.Tech CSE, reputable B.Tech CSE colleges near you, or simply looking for a college that combines academic rigor with industry relevance, this department stands as a trusted choice.

EDITORIAL TEAM

Editor

Ms. Debapriya Sengupta, Assistant Professor, Dept. of CSE

Student Editors

Saptak Mondal, 3rd Year, CSE, Student Editor

Nupur Ghosh, 3rd Year, CSE, Graphic Designer

Rajdip Ganguli, 2nd Year, CSE, Technical Content Scrutinizers

Rudrojyoti Manna, 2nd Year, CSE, Technical Content Scrutinizers

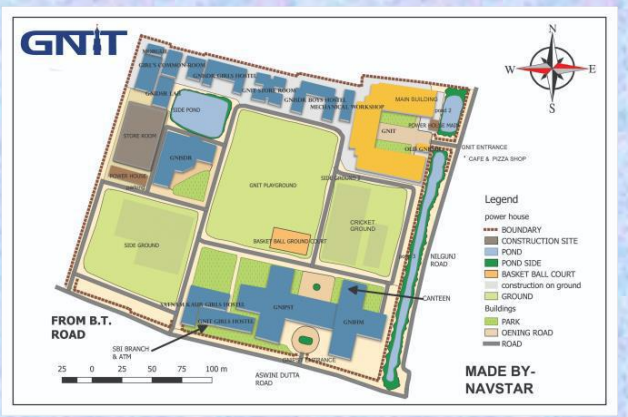
Bipronil Ghosh, 4th Year, CSE, Technical Content Scrutinizers

Courses Offered (CAY: 2024-25)

Course Name	Duration	Intake
B.Tech	4 years	180
M.Tech	2 years	18

Contact us:

Address: 157/F, Nilgunj Road, Panihati,
Kolkata - 700 114, West Bengal, India
Phone: +91 33 2523 3900
Email: info.gnit@jisgroup.org
Website: http://www.gnit.ac.in



STUDENT CHAPTER ACTIVITIES AND TECHNICAL EVENTS

The Department of Computer Science & Engineering actively organized a series of technical seminars, workshops, expert talks, and webinars through its Professional Society Chapters during the academic year 2024–25. These initiatives were aimed at enhancing students' technical knowledge, industry exposure, research awareness, and career preparedness.

A seminar on **"Web Development with Python"** on **8 January 2025 at 10:30 AM** for the **2nd-year CSE students**. The session was delivered by **Mr. Deepayan Pal, Director and Founder, Sikharthy Infotech Pvt. Ltd.**The seminar focused on the fundamentals and practical aspects of **Python-based web development**, including backend programming, frameworks, databases, APIs, authentication, security, and deployment. Students gained an understanding of how Python can be used to develop **dynamic, secure, scalable, and efficient web applications**, along with practical insights into modern web development practices.





The Department of Computer Science & Engineering, GNIT, organized a seminar on **"How to Defend Against Multi-Stage Attack Campaigns"** on **10 March 2025 at 2:30 PM** for the **3rd-year CSE students**. The session was delivered by **Mr. Abhishek Mitra, CEO & Co-Founder, Indian Cyber Security Solutions**.The seminar focused on understanding the different stages of sophisticated cyberattacks, including initial access, persistence, lateral movement, data theft, and impact. Students learned about **threat detection, network monitoring, access control, incident response, and defense-in-depth strategies**. The session helped participants understand how layered security measures can detect attacks early, prevent their progression, and strengthen overall cybersecurity resilience.



A seminar on **"The Future Developer's Toolkit: Prompt Engineering, Generative AI and MERN Stack Essentials"** on **5 May 2025 at 3:00 PM** for the **2nd and 3rd-year B.Tech. students**. The session was delivered by **Dr. Sabyasachi Saha, Founder & CEO, Techno Exponent**.The seminar focused on emerging technologies in software development, including **Prompt Engineering, Generative AI, and MERN stack development**. Students gained insights into AI-assisted coding, effective prompt design, frontend and backend development, database management, API integration, and application deployment. The session helped students understand how modern AI tools and full-stack technologies can be combined to develop **innovative, scalable, and user-oriented software applications**.



STUDENT AND MENTORS ACHIEVEMENT

Integration – Code-IT

🏆 *(2nd Runner up)*

Project Title: *CP-Visual – Competitive Programming Algorithm Visualizer*

Description: At Integration - Code-IT (Indian Statistical Institute, Kolkata), the team built "CP-Visual", an algorithm visualiser that helps learners grasp competitive-programming techniques step by step, winning 2nd Runner-up honours.

Student(s): AI-ML (2024-2028) Anish Kundu (501124010011), Priya Sharma (501124010031), Satarup Halder (501124010044)

Faculty Mentor(s): Mr. Sumit Kumar Banerjee

Date: 11th -12th January, 2025

Place: Indian Statistical Institute (ISI), Kolkata, West Bengal



JIS IDEAJAM

🏆 *(Team CacheCrew : Winner); (NeuroNexus: 2nd runner-up)*

Project Title: *AquaSense: Smart Irrigation Scheduler*

Description: Champion team at JIS IDEAJAM 2025, where the team conquered every challenge and won the title. The idea focused on bringing innovation and regularity to water footprints through India's first Irrigation Scheduler, built as a digital library-backed system.

Student(s): CSE (2022-26): Raj Kumar Singh (Leader) , Unnati Narayan, Sneha Mishra, Pritiraj Ghosh

Faculty Mentor(s): Dr. Ananjan Maiti, Dipankar Basu, Ms. Mandira Banik

Date: 11th March 2025

Place: Dhanno Dhanya Auditorium, Kolkata



IETF HACKATHON 122

Project Title: *ProtoFlow: Next-Generation Network Innovation*

Description: Contributed to open internet standards development at the IETF 122 Hackathon by collaborating with global experts to build and improve real-world protocol implementations.

Student(s): CSE (2022-26): Debarghya Bhattacharyya

Faculty Mentor(s): Mr. Dipankar Basu

Date: 15th-16th March, 2025

Place: Bangkok, Thailand



INNOVACIÓN 2025 – Coding Competition

🏆 *(2nd Runner up)*

Project Title: *AI-Powered Automated Testing*

Description: At INNOVACIÓN 2025 (IEM & UEM Kolkata), the team built an AI-powered automated testing solution to reduce manual effort in software quality assurance, earning 2nd Runner-up honours.

Student(s): CSE (2023-27): Srijan Dey (500123010162), Sneha Pore (500123010148), Farhan Khalid (500123010057)

Faculty Mentor(s): Dr. Ipsita Saha

Date: 22nd-23rd March, 2025

Place: Institute of Engineering & Management (IEM) & University of Engineering & Management (UEM), Kolkata



PROXEC 3.0

Project Title: *Cybersecurity and Blockchain Technologies for Secure Digital Infrastructure*

Description: At PROXEC 3.0 (Abacus Institute of Engineering and Management), the team combined cybersecurity and blockchain concepts to protect digital infrastructure from compromise, impressing judges to win 1st Runner-up honours.

Student(s): CSE (2024-28): Amrita Dalal (500124010013), Snehal Kumar (500124010200)

Faculty Mentor(s): Mr. Moloy Dhar

Date: 27th March, 2025

Place: Abacus Institute of Engineering and Management, Kolkata



Quizwiz 2K25

Project Title: *AI-Generated Content: Innovation or a Threat to Human Creativity?*

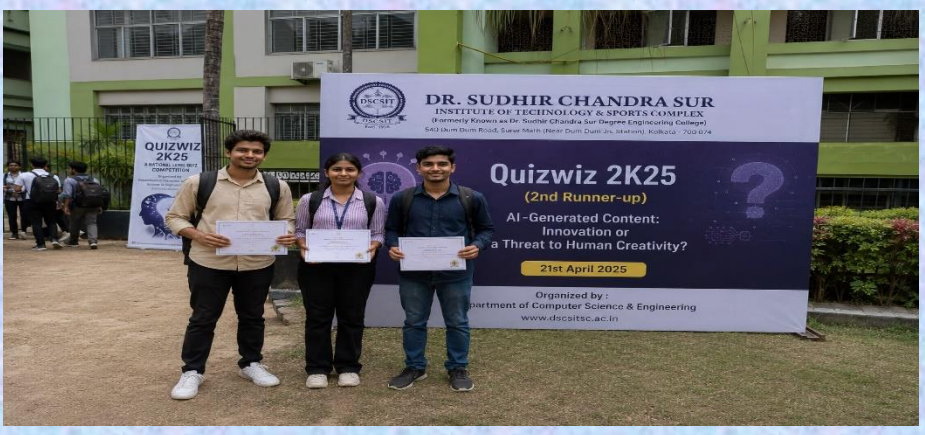
Description: At Quizwiz 2K25 (Dr. Sudhir Chandra Sur Institute), the team presented on "AI-Generated Content: Innovation or a Threat to Human Creativity?", earning 2nd Runner-up honours for its balanced technical and ethical analysis.

Student(s): AI-ML (2024-2028) Sayan Majumder (501124010047), Neha Prasad (501124010027), Abhijeet Ghosh (501124010002)

Faculty Mentor(s): Dr. Krishna Kumar Jha

Date: 21st April 2025

Place: Dr. Sudhir Chandra Sur Institute of Technology and Sports Complex, Kolkata, West Bengal



IDEASPARK at INGENIUM 2025

Project Title: *AgriMind: AI Agents for Smarter Farming*

Description: Innovation meets Entrepreneurship at GNIT! Guru Nanak Institute of Technology proudly hosted INGENIUM — the Inter-Institutional Technical Innovation & Business Plan Pitch Competition. The team demonstrated ideas to improve traditional agricultural practices using AI Agents and LLMs, and was declared Winner of Idea Spark 2025 at Ingenium.

Student(s): CSE (2022-26): Raj Kumar Singh (Leader), Unnati Narayan , Sneha Mishra

Faculty Mentor(s): Dr. Ananjan Maiti, Dipankar Basu, Ms. Paramita Sarkar

Date: 23rd-24th April, 2025

Place: Guru Nanak Institute of Technology, Kolkata



Brainware University Texibition 2025 (Coding Competition)

(2nd Runner up)

Project Title: *AI Digital Twin for Cybersecurity*

Description: At Brainware University Texibition 2025, the team developed an AI Digital Twin for Cybersecurity to simulate and strengthen system defences, earning 2nd Runner-up honours for the project.

Student(s): CSE (2023-27): Rohan Hazra (500123010110), Sayantani Banerjee (500123010136)

Faculty Mentor(s): Dr. Pijush Dutta

Date: 30th April- 1st May 2025

Place: Brainware University, Kolkata, West Bengal



ACM UG Project Contest in Computing – 2025

Project Title: *AgentX: Agentic AI for UG Innovation*

Description: The ACM Kolkata Chapter organized the UG Project Contest in Computing 2025 for undergraduate students in CS/IT and allied streams, with final presentations held at the University of Calcutta, Salt Lake campus. GNIT students presented an Agentic AI-based UG project.

Student(s): CSE (2022-26): Raj Kumar Singh (Leader), Unnati Narayan, Sneha Mishra

Faculty Mentor(s): Dr. Ananjan Maiti, Dipankar Basu, Ms. Debapriya Sengupta

Date: 11th May, 2025

Place: Calcutta University, Saltlake Technology campus(ACM UG Project Contest 2025)



Hexafalls Hackathon 2025

Project Title: *DeepFake Shield*

Description: At Hexafalls Hackathon 2025 (JIS University), the team built "DeepFake Shield" to identify and flag manipulated media content, standing out for its problem framing and execution to win 1st Runner-up honours.

Student(s): CSE (2023-27): Debtanu Roy (500123010052), Monalisa Das (500123010080), Oindrila Chakraborty (500123010087)

Faculty Mentor(s): Dr. Tinku Adhikari

Date: 28–29 June 2025

Place: JIS University, Kolkata, West Bengal



FACULTY CONTRIBUTIONS AS RESOURCE PERSONS IN FACULTY DEVELOPMENT PROGRAMMES (FDPS)

Dr. Srabani Biswas was honored with a Certificate of Appreciation for her valuable contribution as a Resource Person in the Faculty Development Program (FDP) on "Wireless Sensor Network and its Application", held from 15th January 2025 to 19th January 2025 at Guru Nanak Institute of Technology (GNIT), Kolkata. The programme was organized by the Department of Computer Science & Engineering, Guru Nanak Institute of Technology. Through her insightful session on 15th January 2025, she shared her expertise on Wireless Sensor Networks, their applications, and emerging technological developments, providing valuable guidance and enriching the learning experience of the participating faculty members.


GNIT
Approved by AICTE
Affiliated to MAKAUT
GURU NANAK INSTITUTE OF TECCHNOLOGY

Certificate of Appreciation

This certificate is proudly presented to

Dr. Srabani Biswas

in sincere appreciation of her valuable contribution as

RESOURCE PERSON

in the Faculty Development Program (FDP) on

"Wireless Sensor Network and its Application"

Date of Program: 15th – 19th January 2025
Date of Session: 15th January 2025
Issued on: 16th January 2025

Her insightful expertise, engaging sessions and valuable guidance greatly enriched the learning experience of all participants.

Organized by
Department of Computer Science & Engineering
Guru Nanak Institute of Technology, Kolkata

Suman Bhattacharya
Prof. (Dr.) Suman Bhattacharya
Head, Department of Computer Science & Engineering
GNIT, Kolkata

Swarup Kumar Mitra
Prof. (Dr.) Swarup Kumar Mitra
Principal
Guru Nanak Institute of Technology
Kolkata

Prof. (Dr.) Mahamuda Sultana was honored with a **Certificate of Appreciation** for her valuable contribution as a **Resource Person** in the Faculty Development Programme (FDP) on **"Recent Technological Innovations in Artificial Intelligence, Machine Learning and Data Science"**, held from **20th April 2025 to 29th April 2025** at **NIT Warangal**. The programme was organized by the **Electronics & ICT Academy, NIT Warangal**, in association with the **Department of Computer Science & Engineering, JIS University, Kolkata**. Through her insightful sessions and expertise, she provided valuable guidance on emerging developments in **Artificial Intelligence, Machine Learning, and Data Science**, greatly enriching the learning experience of the participants.

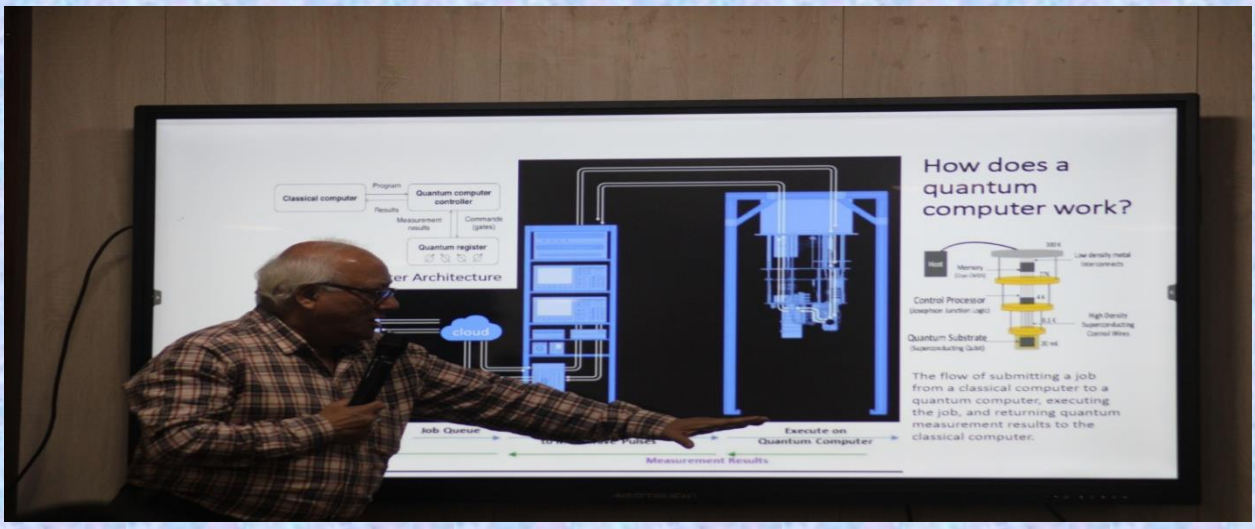

E & ICT ACADEMY
NATIONAL INSTITUTE OF TECHNOLOGY
WARANGAL
(An Institute of National Importance under MoE, Govt. of India)
JIS UNIVERSITY
Certificate of Appreciation
This certificate is proudly presented to
Prof. (Dr.) Mahamuda Sultana
in sincere appreciation of her valuable contribution as
RESOURCE PERSON
in the Faculty Development Programme (FDP) on
"Recent Technological Innovations in
Artificial Intelligence, Machine Learning and Data Science"
held from 20th April 2025 to 29th April 2025
at NIT Warangal
We are grateful for her insightful sessions, expertise and
inspiring guidance that greatly enriched the learning experience of participants.
Organized by
Electronics & ICT Academy, NIT Warangal
in association with
Department of Computer Science & Engineering,
JIS University, Kolkata
Dr. Sujit Das
Assistant Professor
Department of CSE
NIT Warangal
Programme Coordinator
Prof. R. B. V. Subramanyam
Chief Investigator
E & ICT Academy
NIT Warangal
Dr. Radha Krishna Jana
Assistant Professor
Department of CSE
JIS University, Kolkata
Programme Coordinator

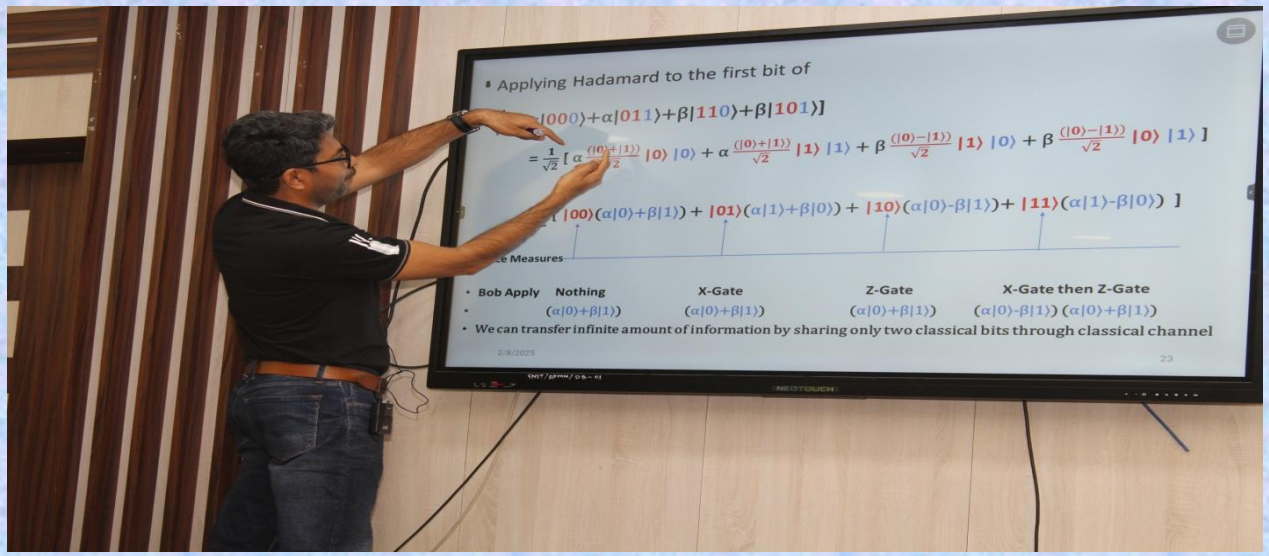
ATAL Faculty Development Program (FDP)

Guru Nanak Institute of Technology (GNIT) successfully organized the AICTE- six-day Offline **ATAL Faculty Development Program (FDP)** titled "Quantum Computing and Nanotechnology: Synergy and Future Prospects" from 3rd to 8th February 2025. With a total of 60 participants, the program was successfully coordinated by Dr. Sunipa Roy, Dean, R&D, Associate Professor of Electronics and Communication Engineering, and co-coordinated by Dr. Ipsita Saha, Associate Professor of Computer Science & Engineering. The FDP was inaugurated with an opening address by Prof. (Dr.) Swarup Kumar Mitra, Principal of GNIT, and Dr. Adhish Kumar Chakraborty, Registrar of GNIT, who emphasized the importance of quantum computing and nanotechnology. In the

inauguration session, the chief guest was Dr. Arpan Pal, Chief Scientist TCS Research & Innovation Services, TATA Consultancy Services.







AdSoc5.0: AI-Driven Smart Healthcare for Society 5.0

Guru Nanak Institute of Technology (GNIT), Kolkata, organized the **2025 AI-Driven Smart Healthcare for Society 5.0 (AdSoc5.0)** conference on **14–15 February 2025**, bringing together researchers, academicians, healthcare professionals, and industry experts to explore the transformative role of Artificial Intelligence (AI) in healthcare.

Organized jointly by the Department of Computer Science and Engineering and the Department of Electrical Engineering at GNIT, the conference was technically co-sponsored by the IEEE Kolkata Section. The event provided an academic platform for discussing innovative AI-driven solutions for healthcare, including clinical decision-making, genomic analysis, intelligent healthcare systems, and emerging technologies for improving patient care.

The conference emphasized interdisciplinary collaboration, knowledge exchange, and research-driven innovation to address contemporary healthcare challenges. It also encouraged researchers to present their scientific contributions and engage with experts from academia and industry. The programme featured distinguished keynote speakers, including Prof. (Dr.) Amlan Chakrabarti, Director of AKCSIT and Professor at the University of Calcutta; Dr. Sayan Kumar Ray, Head of the School of Computer Science and Professor at Taylor's University, Malaysia; and Mr. Subrata Das, Research Scientist at the BRIC–National Institute of Biomedical Genomics, Kalyani.AdSoc5.0 reflected the growing importance of integrating artificial intelligence with healthcare to support smarter, more accessible, and technology-enabled medical services. The conference also highlighted the value of global collaboration and interdisciplinary research in shaping the future of healthcare in the Society 5.0 era.Through this initiative, GNIT reinforced its commitment to academic excellence, technological innovation, and collaborative research, contributing to the advancement of intelligent healthcare solutions for society.




IEEE




GNIT
IEEE

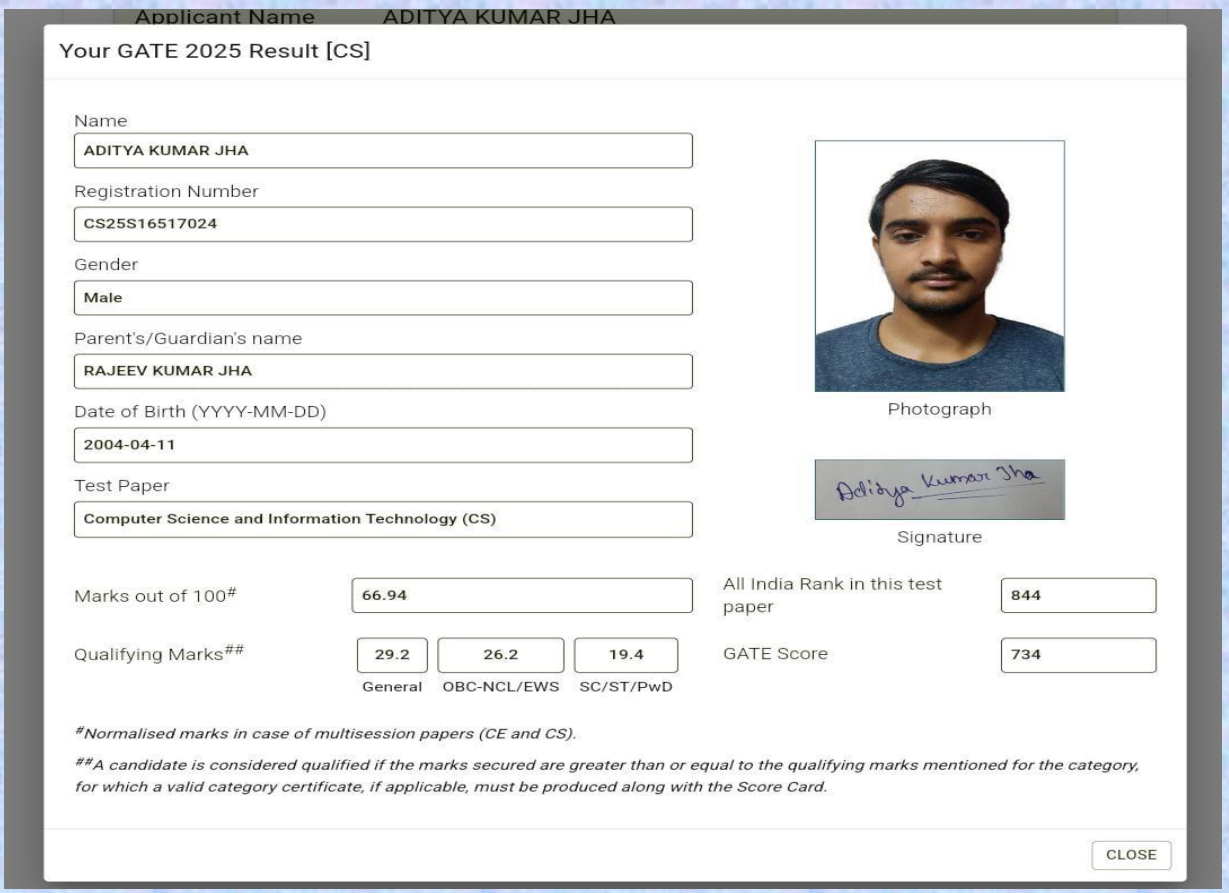


Student Achievements and Academic Excellence

Aditya Kumar Jha, a B.Tech student of the Department of Computer Science and Engineering (CSE), Guru Nanak Institute of Technology (GNIT), has brought pride to the institution by securing an impressive **All India Rank (AIR) of 844 in the Graduate Aptitude Test in Engineering (GATE)** examination.

This remarkable accomplishment reflects his dedication, consistent efforts, and strong understanding of core engineering concepts. Securing a commendable rank in a highly competitive national-level examination such as GATE is a significant milestone in an engineering student's academic journey. It demonstrates his commitment to academic excellence and his determination to pursue higher goals in the field of engineering and technology.

His achievement serves as an inspiration to fellow students, encouraging them to pursue their academic aspirations with confidence, discipline, and perseverance. The Department of Computer Science and Engineering and the institution take pride in his success and congratulate him on this noteworthy accomplishment, wishing him continued success in his future academic and professional endeavours.



Faculty Achievements and Research Excellence

JIS SAMMAN 2025

Mr. Sourish Mitra was honoured with the prestigious JIS SAMMAN 2025 on 1 February 2025 for achieving the highest number of patent publications. This recognition highlights his contribution to innovation, intellectual property development, and research activities. His achievement reflects the institution's commitment to fostering a culture of creativity, technological advancement, and research excellence.



JIS PURASKAR 2025

Dr. Ipsita Saha received the JIS PURASKAR 2025 on 13 March 2025 in recognition of the highest number of publications in indexed journals. This accomplishment reflects her dedication to academic research, scholarly contributions, and knowledge dissemination. Her achievement serves as an inspiration to faculty members and researchers to pursue impactful research and contribute to the advancement of their respective fields.



Dr. Suman Bhattacharya was honoured with the JIS PURASKAR 2025 on 13 March 2025 for achieving the highest number of publications in indexed journals. This recognition acknowledges his commitment to research, academic excellence, and scientific knowledge sharing. His accomplishment strengthens the institution's research culture and encourages continued scholarly engagement.



Ms. Mandira Banik received the JIS PURASKAR 2025 on 13 March 2025 for the highest number of publications in indexed journals. This achievement recognises her dedication to research and academic publishing. Her accomplishment reflects the importance of sustained research efforts in enriching academic knowledge and promoting institutional excellence.



Dr. Srabani Biswas was awarded the JIS PURASKAR 2025 on 13 March 2025 for achieving the highest number of publications in indexed journals. This honour recognises her scholarly contributions and commitment to academic research. Her achievement highlights the value of research-driven teaching and the dissemination of knowledge through recognised scholarly publications.



Best Paper Award at STEP2025

Mr. Dipankar Basu and Dr. Ananjan Maiti received the Best Paper Award at the *1st International Conference on Smart Technology for Emerging Problems (STEP2025)* on 22 March 2025. This achievement recognises the quality and merit of their research contribution and highlights their commitment to innovation and scientific exploration. Their success brings recognition to the institution and encourages further participation in research-oriented conferences and academic forums.


1st International Conference
On
Smart Technology For Emerging Problems
(STEP2025)
Our Knowledge Partners
Our Industry Partners
Certificate of Merit
has successfully presented his / her paper named
at STEP2K25 in Online / Offline mode with co-authors
Awarded in the Best Paper Category of STEP2K25
Dr. Abhik Hazra
Convener
STEP2K25
GMIT
Dr. S. K. Chowdhury
Chairman
IEEE
Kolkata Section
Dr. R. Bhasak
Chairman
IE(I)
WBSC
Mr. S.N Mukhopadhyay
Chairman
IET
Kolkata Network
Dr. N. N. Jana
Principal
GMIT

Champion at IETF 122 Hackathon

Mr. Dipankar Basu achieved the distinction of becoming a Champion at the Internet Engineering Task Force (IETF) 122 Hackathon on 16 March 2025. This accomplishment highlights his technical expertise, problem-solving abilities, and innovative approach to technology development. His success demonstrates the value of practical experimentation, collaborative development, and active engagement with emerging technological challenges. The achievement serves as an inspiration to students and faculty members to participate in technical competitions and contribute to innovation.



FACULTY RESEARCH & SCHOLARLY PUBLICATIONS

Publication Highlights | January–June 2025

International Conference Publications — 14

Book Chapters / Proceedings — 5

Books Published — 3

International Conference Publications

01 | Moloy Dhar, Suparna Biswas, Soumyajit Nandi, Soumyanil Dey

Image Captioning Using Deep Learning Technique: A Novel Technique | Recent Developments and Applications in Materials Science and Engineering (RDAMSE 2025) | January 2025

02 | Priyanka Ghosh, Somita Banerjee, Sharayana Saha, Suparna Dey

Integrating Machine Learning in Private Blockchains: Enhancing Security, Efficiency, and Decision-Making | International Conference on Sustainable AI and Its Applications (ICSAA-2025) | January 2025

03 | Augustina Saha, Priyanka Chakraborty, Priyanka Ghosh, Shirshendu Samanta, Tiyasa Sen

Impact of Nutrient Management and Varietal Choices on Productivity in Buckwheat-Green Gram Systems for Food Security | International Conference on Emerging Trends in Bioengineering and Food Technology (ETBFT 2025) | March 2025

04 | Dipankar Basu, Debarghya Bhattacharyya, Ananjan Maiti

Design and Implementation of a Modular DNS Resolver Information Query Tool Leveraging RFC 9606 | 1st International Conference on Smart Technology for Emerging Problems (STEP 2025) | March 2025

05 | Dipankar Basu, Biswadeb Mukherjee, Debarghya Bhattacharyya, Ananjan Maiti

Investigating Culinary Practices Transformation Through AI-Powered Offline Recipe and Diet Management Chatbots | 1st International Conference on Smart Technology for Emerging Problems (STEP 2025) | March 2025

06 | Sayan Acharya, Ankita Ghosh, Debjit Sen, Dipankar Basu, Ananjan Maiti

Multi-Level Attention Fusion for Real and Fake Face Classification Using VGG16 | 1st International Conference on Smart Technology for Emerging Problems (STEP 2025) | March 2025

07 | Aritra Sadhuhan, Annwesha Kundu, Sayan Acharya, Akash Karmakar, Dipankar Basu, Ananjan Maiti

Illegal Hunting and Poaching Detection Using AI in Amazon Rainforest Birds | 1st International Conference on Smart Technology for Emerging Problems (STEP 2025) | March 2025

08 | Nowrin Parveen, Rudrojyoti Manna, Dipankar Basu, Ananjan Maiti

Evaluating the Reliability of AI Systems in Autism Spectrum Disorder Identification | National Conference on Research Advancements and Innovations in Computing, Communications and Information Technologies (RAICCIT) | April 2025

09 | Zishan Khan Chowdhury, Debtanu Roy, Anurag Bhattacharjee, Arna Saha, Ananjan Maiti

The Role of AI in Enhancing Customer Satisfaction in Service Operations | International Conference on Sustainable AI and Its Applications (ICSAA-2025) | January 2025

10 | Annesha Nandi, Harender Singh, Arunangshu Majumdar, Aparna Shaw, Ananjan Maiti

Optimizing Baby Sound Recognition Using Deep Learning Through Class Balancing and Model Tuning | International Conference on Sustainable AI and Its Applications (ICSAA-2025) | January 2025

11 | Rooprekha Baksi, Parveen Nowrin, Ananjan Maiti

Navigating AI Transformation in Organizational Ecosystems with Strategies for Effective Technology Integration | International Conference on Sustainable AI and Its Applications (ICSAA-2025) | January 2025

12 | Bidyutmala Saha

Blockchain-Based Supply Chain and User-Centric Service-Oriented Framework for Healthcare 5.0 | 3rd International Conference on Automation and Computation (AUTOCOM 2025) | March 2025 | DOI: 10.1109/AUTOCOM64127.2025.10956948

13 | Priyanka Chakraborty, Nirupam Saha, Supratik Nath, Koyel Das

Enhancing Oral Disease Classification Using Dilated Convolutional Neural Network | AI-Driven Smart Healthcare for Society 5.0 (AdSoc 5.0) | February 2025

14 | Sayan Nath, Bidyutmala Saha, Ujjal Bhattacharya, Riddhi Lahiri, Shampurna Rakshit, Sandipan Mukhopadhyay

AI for Early Warning of Dehydration | AI-Driven Smart Healthcare for Society 5.0 (AdSoc 5.0) | February 2025 | DOI: 10.1109/IEEECONF64992.2025.10962842

Book Chapters / Proceedings

01 | Moloy Dhar, Suparna Biswas, Soumyajit Nandi, Soumyanil Dey

Image Captioning Using Deep Learning Technique: A Novel Technique | Recent Developments and Applications in Materials Science and Engineering (RDAMSE 2025) | January 2025 | ISBN: 978-81-983133-3-1

02 | Augustina Saha, Priyanka Chakraborty, Priyanka Ghosh, Shirshendu Samanta, Tiyasa Sen

Impact of Nutrient Management and Varietal Choices on Productivity in Buckwheat-Green Gram Systems for Food Security | Proceedings of the International Conference on Emerging Trends in Bioengineering and Food Technology (ETBFT 2025) | March 2025 | ISBN: 978-93-3141-6115-1

03 | Moloy Dhar, Soumyanil Dey, Soham Bhattacherjee

Image Captioning Using VGG-16 and VGG-19: A Mixed Model Approach | Smart Systems and Wireless Communication: Proceedings of SSWC 2024, Smart Innovation, Systems and Technologies, Volume 433 | April 2025 | ISBN: 978-981-96-1348-9 | DOI: 10.1007/978-981-96-1348-9_16

04 | Priyanka Ghosh, Debdutta Pal, Piyali Katwa, Bhaskar Maity

GenKey: Cryptographic Key Generation Using a Genetic Algorithm | Data Mining and Information Security: Proceedings of ICDMIS 2024, Volume 3 | June 2025 | ISBN: 978-981-96-6060-5

Books Published

01 | Mr. Nirupam Saha, Mr. Sourish Mitra, Mr. Rafiqul Islam, Mr. Dipankar Basu

Automating Intelligence: Exploring AI and ML in the Real World – Part 1 | Natals Publication | March 2025 | ISBN: 978-93-6581-0

02 | Dipankar Basu, Priyanka Chakraborty, Paramita Sarkar, Nikita Dutta

Automating Intelligence: Exploring AI and ML in the Real World – Part 2 | Natals Publication | March 2025 | ISBN: 978-93-6581-103-2

03 | Ms. Sayani Chandra, Dr. Srabani Biswas, Dr. Ipsita Saha

Mastering LaTeX: A Comprehensive Guide to Professional Document Preparation – B5 Size | Chyren Publication | June 2025 | ISBN: 97-89-3714-30104

FACULTY PATENTS & INNOVATIONS

01 | Dr. Ipsita Saha, Dr. Srabani Kundu, Sayani Chandra, Dr. Sunipa Roy, Biswajit Chaki Chowdhury, Riddhi Lahiri, Ujjal Bhattacharya, Silvat Das, Diprit Turul

Storage Device for Integration with a Wearable Audio Device and Method Thereof | Patent Publication No.: 202431103456 | 03 January 2025 | Status: Published

02 | Mr. Sourish Mitra, Dr. Suman Bhattacharya, Dr. Mahamuda Sultana, Dr. Ananjan Maiti, Mr. Biswajit Chaki Choudhury, Bristidev Burman, Mafuja Khatun

An Internet-of-Things (IoT)-Based Integrated System for Maintaining an Aquarium | Patent Publication No.: 202431103467 | 03 January 2025 | Status: Published

03 | Indranil Sarkar, Ananjan Maiti, Chiranjib Dutta, Shirsendu Dutta

IoT-Based System for Organic Pest Control in Farming and Method Thereof | Patent Publication No.: 202431103465 | 03 January 2025 | Status: Published

04 | Dola Saha, Dr. Suman Bhattacharya, Debasree Saha, Koushik Pal, Debjit Mukherjee, Sandip Basak

System for Monitoring Stress Levels and Providing Intervention During Stress Episodes | Patent Publication No.: 202431103470 | 03 January 2025 | Status: Published

05 | Moloy Dhar, Shuvodeep Debnath, Priyanka Chakraborty, Subhasree Bhattacharjee, Anirban Ghosh

A Smart Gas Sensing System and Method for Real-Time Continuous Gas Monitoring by the System | Patent Publication No.: 202531001886 | 17 January 2025 | Status: Published

06 | Moloy Dhar, Dr. Debasree Saha, Dr. Suparna Biswas, Biswajit Chaki Choudhuri, Soumyajit Nandi

An AI-Driven Adaptive Lighting System to Alleviate Digital Eye Strain: A Futuristic Approach | Patent Publication No.: 202531002349 | 17 January 2025 | Status: Published

07 | Ananjan Maiti, Chiranjib Dutta, Aniket Dutta

An Automated System and Process for Real-Time Identification and Classification of Fish Species in Aquaculture | Patent Publication No.: 202531002147 | 17 January 2025 | Status: Published

08 | Dr. Suparna Biswas, Dr. Avali Banerjee, Dr. Antara Ghosal, Moloy Dhar, Saptarshi Pramanik

System and Method for Underwater Acoustic Communication Between Sea-Borne Vehicles | Patent Publication No.: 202531018322 | 04 April 2025 | Status: Published

09 | Ms. Shampurna Rakshit, Mr. Ujan Ghosh, Mr. Sandipan Mukhopadhyay, Mr. Ujjal Bhattacharya, Dr. Mahamuda Sultana, Dr. Suman Bhattacharya, Ms. Nilanjana Adhikari

Performing Undo and Redo Operations on Operating System (OS) of Smartphone | Patent Publication No.: 202531013813 | 07 March 2025 | Status: Published

10 | Dola Saha, Ananjan Maiti, Sourish Mitra, Koushik Pal, Debjit Mukherjee, Sandip Basak, Ayon Ghosh

System and Method for Detecting Pests and Dispensing Pesticide in a Field | Patent Publication No.: 202531013812 | 07 March 2025 | Status: Published

11 | Moloy Dhar, Pallabi Das, Shuvodeep Debnath, Dr. Debasree Saha, Biswajit Chaki Choudhuri, Ujjal Bhattacharya

Modified CBC and Buffer System Incorporating Oleo Hydraulic System for… | Patent Publication No.: 202531013845 | 07 March 2025 | Status: Published

12 | Antarlina Giri, Subhasree Bhattacharjee, Chandrima Chakrabarti, Moloy Dhar

Temporal Plant Disease Identification System | Patent Publication No.: 202531015157 | 20 June 2025 | Status: Published