

CSE@GNIT Bulletin

2023 - 24

Department of Computer Science & Engineering

ISSUE

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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

Krittika Mondal,3rd Year, CSE, Student Editor

Priyanshu Banerjee,3rd Year, CSE, Graphic Designer

Tanisha Talukdar,3rd Year, CSE, Technical Content Scrutinizers

Arpan Mondal,2nd Year, CSE, Technical Content Scrutinizers

Pramila Das,2nd Year, CSE, Technical Content Scrutinizers

Courses Offered (CAY: 2023-24)

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

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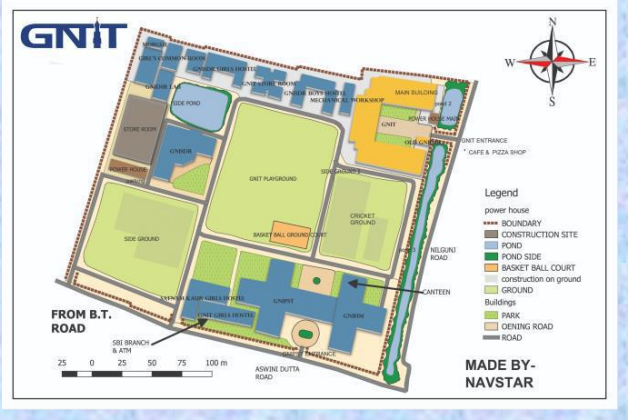
Kolkata - 700 114, West Bengal, India
Phone: +91 33 2523 3900
Email: info.gnit@jisgroup.org
Website: http://www.gnit.ac.in



STUDENT CHAPTER ACTIVITIES AND TECHNICAL EVENTS

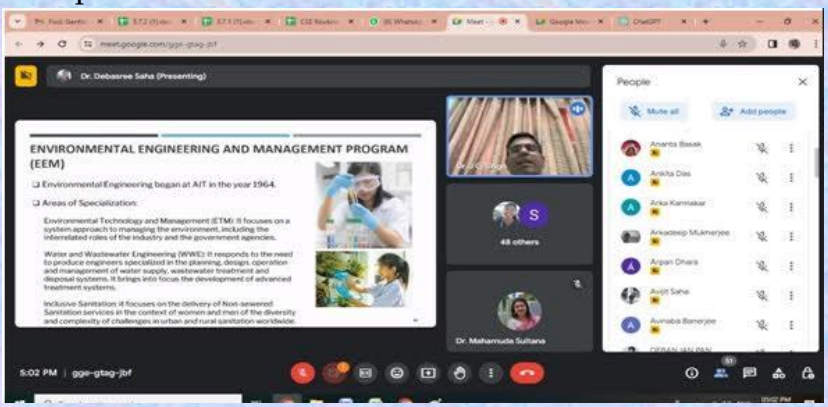
The Department of Computer Science & Engineering actively organized a series of technical seminars, workshops, expert talks, and webinars through its Professional Society Chapters during the academic year 2023–24. These initiatives were aimed at enhancing students' technical knowledge, industry exposure, research awareness, and career preparedness.

- The **Computer Society of India (CSI)** organized a **Seminar on "Application of MERN Stack Development in IT Industry"** on **7th February 2024**. The seminar introduced students to the MERN (MongoDB, Express.js, React.js, and Node.js) technology stack and its significance in modern web application development. Participants gained valuable insights into full-stack development practices, current industry trends, and career opportunities in web technologies.





- On **22nd February 2024**, the **Institute of Engineers (IEI)** conducted a **One-day Webinar on "Navigating Higher Degrees & Scholarships at Asian Institute of Technology (AIT), Thailand"**. The webinar provided comprehensive information on international higher education opportunities, scholarship schemes, admission procedures, and research prospects, motivating students to pursue global academic and professional careers.



- The **Computer Society of India (CSI)** organized an **Expert Talk on "Harnessing the Power of Artificial Intelligence and Machine Learning in Industry 5.0"** on **6th March 2024**. The session focused on the growing impact of Artificial Intelligence and Machine Learning in next-generation industries, highlighting real-world applications, automation, and future career opportunities in intelligent systems.





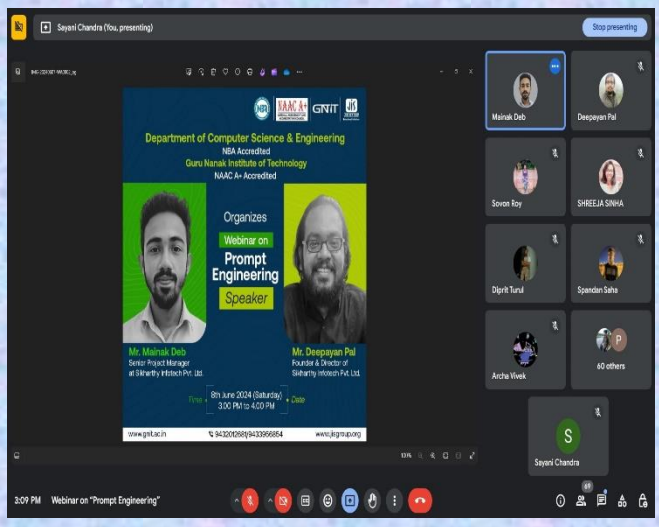
- On **25th April 2024**, the **ISTE Student Chapter** conducted a **Workshop on "Intellectual Property Rights (IPRs) and IP Management for Start-ups"**. The workshop created awareness about patents, copyrights, trademarks, and intellectual property management, emphasizing the importance of protecting innovations and fostering entrepreneurship among aspiring innovators.

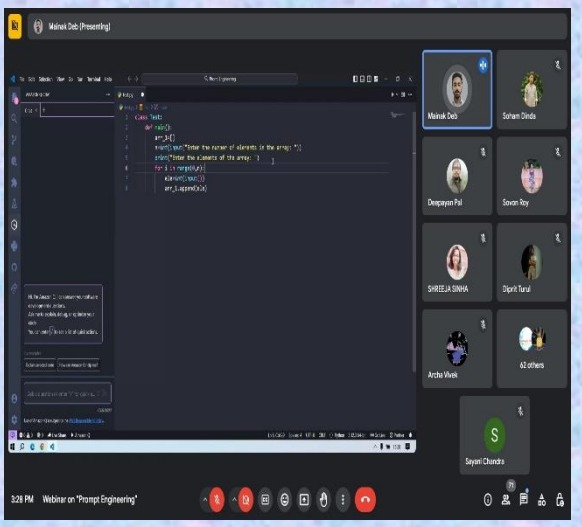


- The **SESI Student Chapter** organized a **One-Day Seminar on "Full Stack Development"** on **29th May 2024**. The seminar introduced students to front-end and back-end development technologies, software development frameworks, and industry best practices, enabling them to understand the complete web application development lifecycle.



- The academic session concluded with a **One-day Webinar on "Prompt Engineering"**, organized by the **Computer Society of India (CSI)** on **8th June 2024**. The webinar familiarized students with the principles of prompt engineering, demonstrating how effective prompts can enhance the capabilities of Generative AI and Large Language Models for research, software development, and various industrial applications.





- On **11th and 12th March 2024**, the Department of Computer Science and Engineering, Guru Nanak Institute of Technology (GNIT), organized an industrial visit for the **3rd-year B.Tech CSE students** to **Euphoria Genx**, a leading software development company located in **Salt Lake Sector V, Kolkata**. The visit provided students with valuable exposure to the professional IT environment, software development practices, and industry workflows. It served as an excellent opportunity to bridge the gap between classroom learning and real-world applications while enhancing students' understanding of current technologies and career opportunities in the software industry.









STUDENT AND MENTORS ACHIEVEMENT



SMART BENGAL HACKATHON 2.0 (Software-Open Innovation)

Description: Participated in a state-level innovation challenge, collaborating in a team to develop a software-based solution for an open-ended problem statement. Contributed to ideation, design, and implementation under time constraints. Strengthened problem-solving, creativity, and teamwork skills.

Faculty Mentor: Dr. Sayan Nath

Student name: Swagata Das, Sreemoyee Dutta, Aritra Chakraborty, Suvodeep Guria, Abhradeep Pal, Monotapa Bhattacharya

Place: RCCIIT, Kolkata

Date: 16th April 2024-17th April 2024



SMART BENGAL HACKATHON 2.0 (Software-Open Innovation)

Description: Participated in a state-level innovation challenge, collaborating in a team to develop a software-based solution for an open-ended problem statement. Contributed to ideation, design, and implementation under time constraints. Strengthened problem-solving, creativity, and teamwork skills.

Faculty Mentor: Dr. Ananjan Maiti, Dipankar Basu

Student name: Raj Kumar Singh, Bhavya Anand, Unnati Narayan, Abhishek Kumar Thaur, Som Roy, Prithiraj Ghosh

Place: RCCIIT, Kolkata

Date: 16th April 2024-17th April 2024





EY Techathon 4.0

Description:

Participated in a competitive innovation challenge focused on solving real-world business and technology problems. Collaborated in a team to design and present a technology-driven solution within defined timelines. Enhanced skills in analytical thinking, problem-solving, and teamwork.

Faculty Mentor: Mr. Rafiqul Islam
Student name: Bipronil Ghosh, Debjoty Chandra
Place: World Technology Center, Bengaluru
Date: 8th February,2024



FACULTY MENTORSHIP AND RECOGNITION IN INNOVATION AND HACKATHONS

- Dr. Sayan Nath was honored with a Certificate of Appreciation for serving as a Mentor at the Smart Bengal Hackathon (SBH) 2024, organized by RCC Institute of Information Technology (RCCIIT), Kolkata, with the support of the Department of Information Technology & Electronics, Government of West Bengal. Held on 16th–17th April 2024, the hackathon recognized his invaluable guidance, technical support, and mentorship in helping student teams develop innovative ideas and functional prototypes. His contribution played a significant role in fostering innovation, problem-solving skills, and entrepreneurial thinking among students.



- Dr. Ananjan Maiti received a Certificate of Appreciation for Mentorship at the Smart Bengal Hackathon (SBH) 2024 in recognition of his exemplary mentorship and guidance provided to student participants. Organized by RCC Institute of Information Technology (RCCIIT), Kolkata, with support from the Department of Information Technology & Electronics, Government of West Bengal, the event was held on 16th–17th April 2024. Through his continuous technical mentoring and encouragement, Dr. Maiti inspired students to transform innovative ideas into practical solutions and working prototypes, strengthening the institute's culture of innovation and collaborative learning.



Smart Bengal Hackathon (SBH) - 2024

INSTITUTION'S INNOVATION COUNCIL (Ministry of Innovation Council) · Azadi ka Amrit Mahotsav · शिक्षा मंत्रालय MINISTRY OF EDUCATION · MoE's INNOVATION CELL (GOVERNMENT OF INDIA) · Dept. of IT and Electronics Govt. of WB · RCC INSTITUTE OF INFORMATION TECHNOLOGY · AICTE

Certificate of Appreciation

for Mentorship

This certificate is proudly presented to

Dr. Ananjan Maiti

of Guru Nanak Institute of Technology

has provided exemplary mentorship and guidance to the participants for their innovative idea and prototype, at Smart Bengal Hackathon 2024, organized by RCC Institute of Information Technology, Kolkata; supported by Department of Information Technology and Electronics, Govt. of West Bengal, during 16th - 17th April 2024.

Prof. (Dr.) Amriban Mukherjee
Principal In-charge, RCCIIT

Prof. (Dr.) Indrajit Pan
President-IIC, RCCIIT

Prof. (Dr.) Debasish Mondal
Convener-IIC, RCCIIT
Chief Convener, SBH 2024

CAS IEEE CIRCUITS AND SYSTEMS SOCIETY · IEEE Women in Engineering · IEEE Advancing Technology for Humanity · RAS ANTA STUDENT CHAPTER · ELECTRUTION OF TELECOMMUNICATION ENGINEERS · The Robotics Society

- Mr. Dipankar Basu was recognized with a Certificate of Appreciation for Mentorship for his dedicated guidance and support to student teams during the Smart Bengal Hackathon (SBH) 2024. His mentorship enabled participants to refine innovative concepts, develop functional prototypes, and effectively present their solutions. His contribution reflects the department's commitment to promoting creativity, innovation, and experiential learning through active participation in prestigious state-level hackathons.



Smart Bengal Hackathon (SBH) - 2024

INSTITUTION'S INNOVATION COUNCIL (Ministry of Innovation Council) · Azadi ka Amrit Mahotsav · शिक्षा मंत्रालय MINISTRY OF EDUCATION · MoE's INNOVATION CELL (GOVERNMENT OF INDIA) · Dept. of IT and Electronics Govt. of WB · RCC INSTITUTE OF INFORMATION TECHNOLOGY · AICTE

Certificate of Appreciation

for Mentorship

This certificate is proudly presented to

Dipankar Basu

of Guru Nanak Institute of Technology

has provided exemplary mentorship and guidance to the participants for their innovative idea and prototype, at Smart Bengal Hackathon 2024, organized by RCC Institute of Information Technology, Kolkata; supported by Department of Information Technology and Electronics, Govt. of West Bengal, during 16th - 17th April 2024.

Prof. (Dr.) Amriban Mukherjee
Principal In-charge, RCCIIT

Prof. (Dr.) Indrajit Pan
President-IIC, RCCIIT

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Convener-IIC, RCCIIT
Chief Convener, SBH 2024

CAS IEEE CIRCUITS AND SYSTEMS SOCIETY · IEEE Women in Engineering · IEEE Advancing Technology for Humanity · RAS ANTA STUDENT CHAPTER · ELECTRUTION OF TELECOMMUNICATION ENGINEERS · The Robotics Society

- Mr. Rafiqul Islam received a Certificate of Recognition from Ernst & Young (EY) for his outstanding contribution as a Mentor during the EY Techathon 4.0. He was recognized for providing invaluable guidance, continuous support, and dedicated mentorship to student participants during the Round 1 Executive Summary Submission. His efforts inspired and empowered aspiring innovators while enhancing students' problem-solving, analytical, and professional skills through industry-oriented mentorship. The recognition, awarded on 25th May 2024, highlights the department's strong engagement with industry-driven innovation and technology competitions.



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

- Prof. (Dr.) Mahamuda Sultana was recognized with a Certificate of Distinction for serving as a Resource Person in the Faculty Development Program (FDP) on "Advanced Machine Learning in Recent Trends", organized by the Department of Computer Science & Engineering, Guru Nanak Institute of Technology (GNIT), Kolkata, from 15th January 2024 to 19th January 2024. During the programme, she delivered expert sessions on advanced machine learning concepts, emerging AI technologies, and recent research trends. Her insightful lectures and technical expertise significantly enhanced the knowledge and research capabilities of the participating faculty members, researchers, and students.



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

CERTIFICATE
OF DISTINCTION

This is to acknowledge with gratitude

Prof. (Dr.) Mahamuda Sultana

for her valuable contribution as
RESOURCE PERSON
in the
Faculty Development Program (FDP)
on
"Advanced Machine Learning in Recent Trends"
held from 15th January 2024 to 19th January 2024.
Held at GNIT, Kolkata.

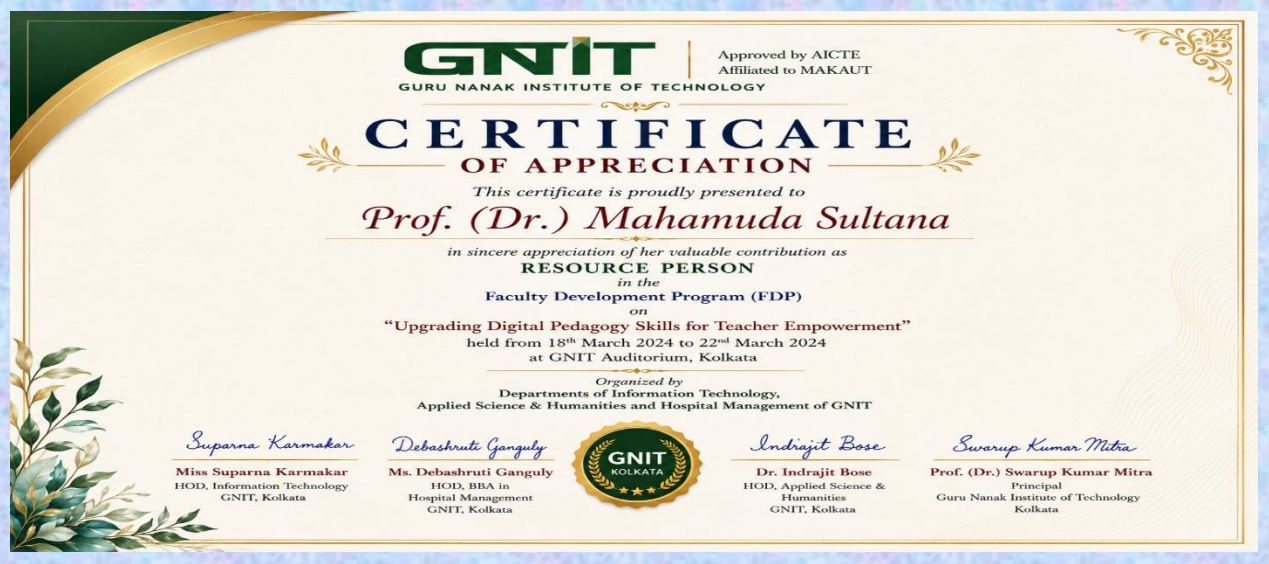
Organized by
Department of Computer Science & Engineering
Guru Nanak Institute of Technology, Kolkata

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

GNIT KOLKATA

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

- Prof. (Dr.) Mahamuda Sultana was also honored with a Certificate of Appreciation for her valuable contribution as a Resource Person in the Faculty Development Program (FDP) on "Upgrading Digital Pedagogy Skills for Teacher Empowerment", held from 18th March 2024 to 22nd March 2024 at the GNIT Auditorium, Kolkata. The programme was jointly organized by the Departments of Information Technology, Applied Science & Humanities, and Hospital Management, Guru Nanak Institute of Technology. Through her engaging sessions, she highlighted modern digital teaching methodologies, technology-enabled learning practices, and innovative pedagogical approaches, enabling educators to effectively integrate digital tools into the teaching-learning process.



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Approved by AICTE
Affiliated to MAKAUT

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 Program (FDP)
on
"Upgrading Digital Pedagogy Skills for Teacher Empowerment"
held from 18th March 2024 to 22nd March 2024
at GNIT Auditorium, Kolkata

Organized by
Departments of Information Technology,
Applied Science & Humanities and Hospital Management of GNIT

Suparna Karmakar
Miss Suparna Karmakar
HOD, Information Technology
GNIT, Kolkata

Debashruti Ganguly
Ms. Debashruti Ganguly
HOD, BBA in
Hospital Management
GNIT, Kolkata

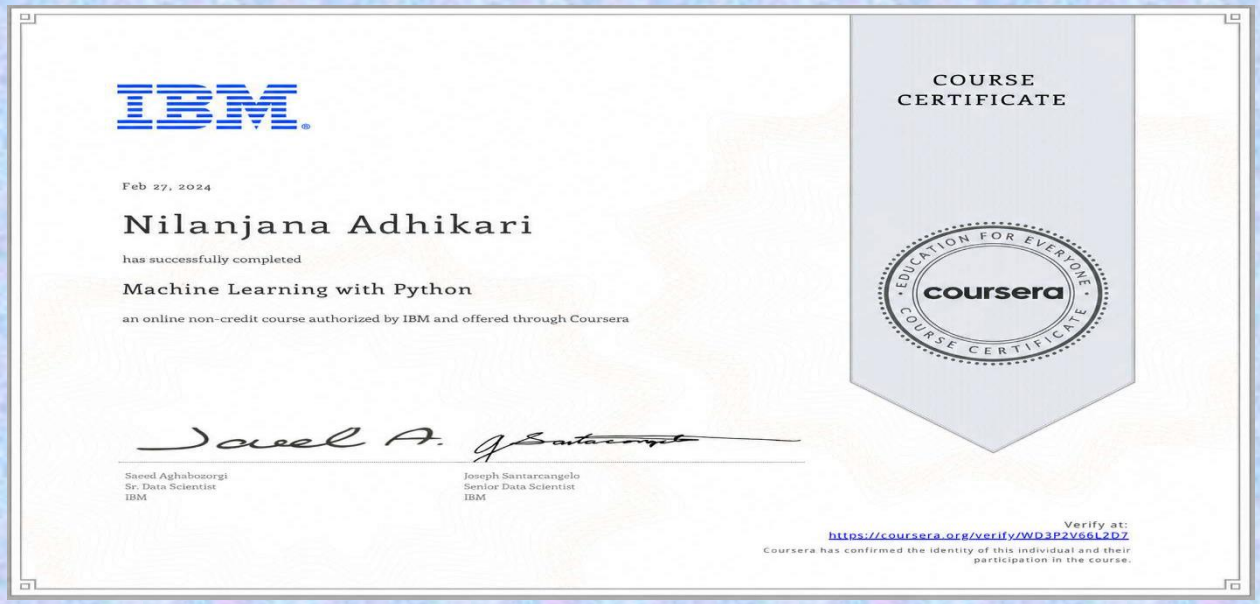
GNIT KOLKATA

Indrajit Bose
Dr. Indrajit Bose
HOD, Applied Science &
Humanities
GNIT, Kolkata

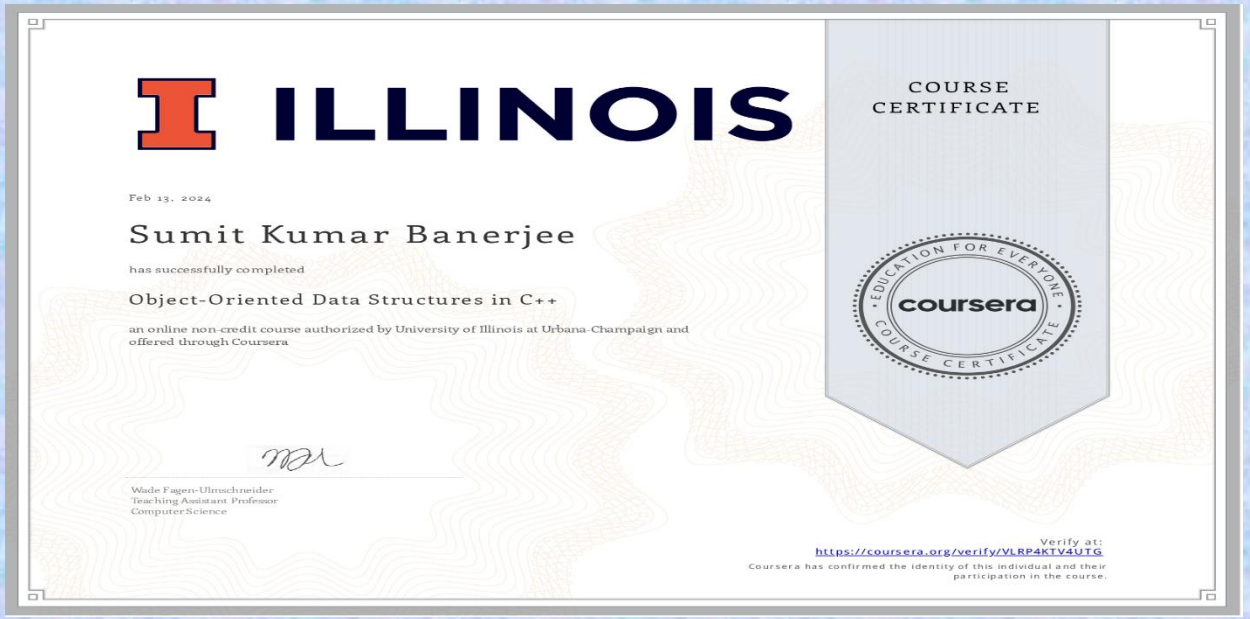
Swarup Kumar Mitra
Prof. (Dr.) Swarup Kumar Mitra
Principal
Guru Nanak Institute of Technology
Kolkata

FACULTY PROFESSIONAL DEVELOPMENT

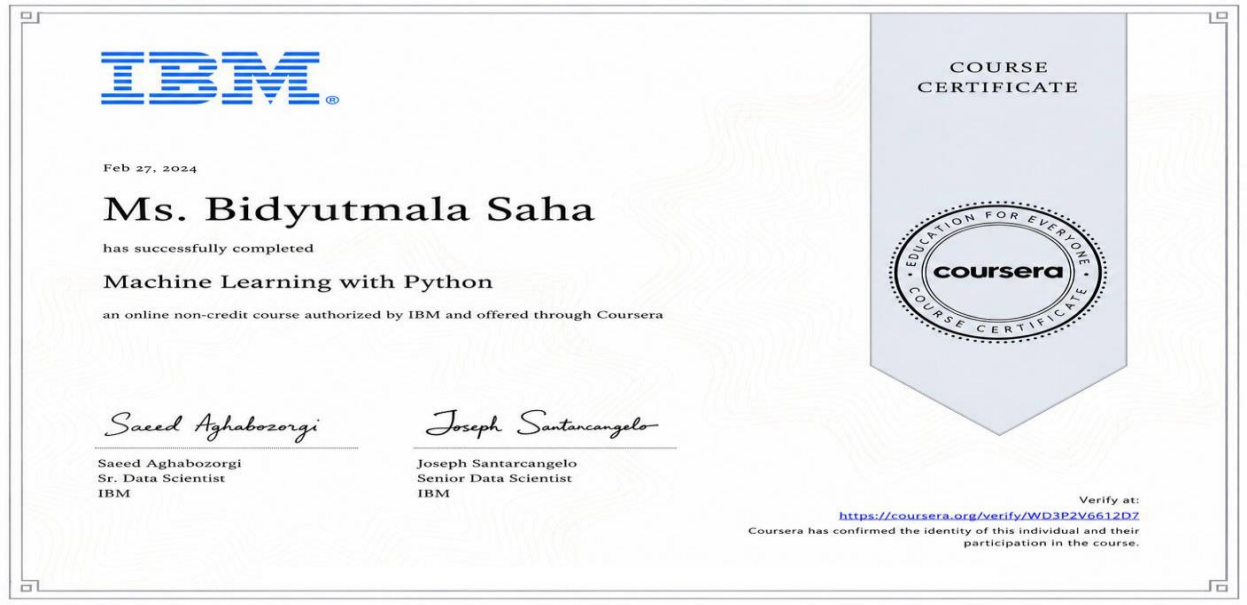
- Ms. Nilanjana Adhikari successfully earned a Coursera Course Certificate in "Machine Learning with Python," an online non-credit course authorized by IBM and offered through Coursera. This achievement reflects her commitment to continuous professional development and strengthening her practical skills in Machine Learning and Python programming.



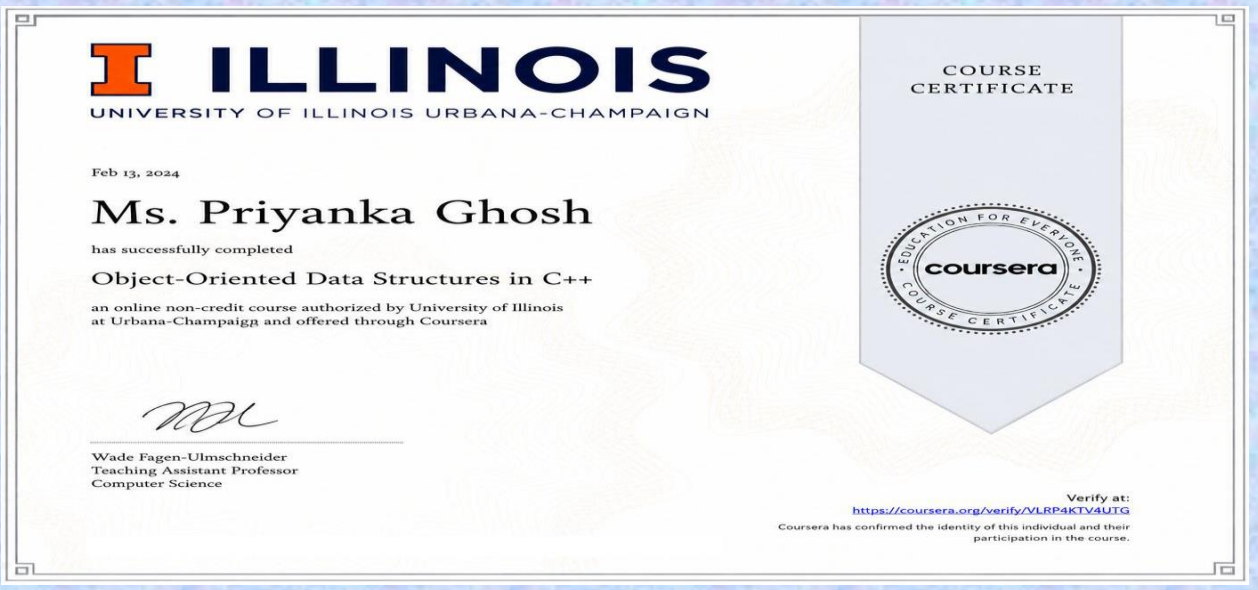
- Mr. Sumit Kumar Banerjee successfully earned a Coursera Course Certificate in "Object-Oriented Data Structures in C++," an online non-credit course authorized by the University of Illinois Urbana-Champaign and offered through Coursera. This achievement reflects his commitment to continuous professional learning and strengthening his expertise in programming, object-oriented concepts, and data structures.



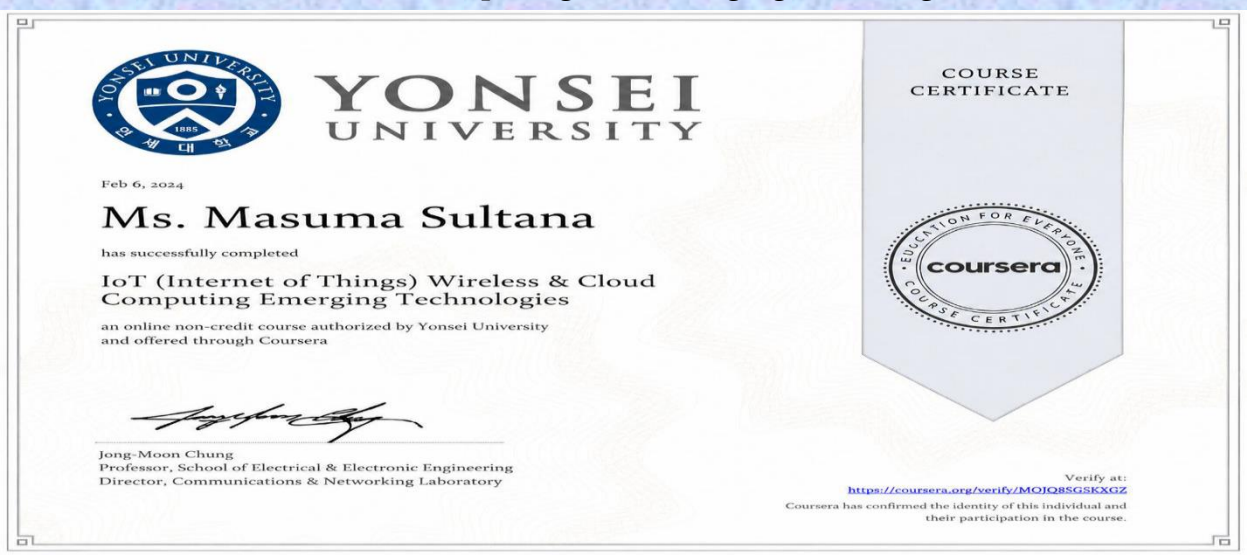
- Ms. Bidyutmala Saha successfully earned a Coursera Course Certificate in "Machine Learning with Python," an online non-credit course authorized by IBM and offered through Coursera. This achievement highlights her commitment to continuous professional development and enhancing her practical expertise in Machine Learning and Python programming.



- Ms. Priyanka Ghosh successfully earned a Coursera Course Certificate in "Object-Oriented Data Structures in C++," an online non-credit course authorized by the University of Illinois Urbana-Champaign and offered through Coursera. This achievement reflects her commitment to continuous professional learning and strengthening her expertise in programming, object-oriented concepts, and data structures.



- Ms. Masuma Sultana successfully earned a Coursera Course Certificate in “IoT (Internet of Things) Wireless & Cloud Computing Emerging Technologies,” an online non-credit course authorized by Yonsei University and offered through Coursera. This achievement reflects her commitment to continuous professional learning and enhancing her expertise in Internet of Things, wireless communication, cloud computing, and emerging technologies.



- Ms. Debapriya Sengupta successfully earned a Coursera Course Certificate in “Object-Oriented Data Structures in C++,” an online non-credit course authorized by the University of Illinois Urbana-Champaign and offered through Coursera. This certification reflects her commitment to continuous professional development and strengthening her expertise in object-oriented programming and data structures.



FACULTY RESEARCH & SCHOLARLY PUBLICATIONS

Publication Highlights | January–June 2024

International Journal Publications — 15
International Conference Publications — 4
Book Chapters — 1

International Journal Publications

01 | Srabani Biswas, Ipsita Saha, Abanti Deb
A Plant Disease Identification Using a Novel Time-Effective CNN Architecture | *Multimedia Tools and Applications, Springer* | March 2024 | DOI: 10.1007/s11042-024-18822-8

02 | Ipsita Saha
An Adoption of Sustainable Business Model: An Empirical Study Identifying the Success Factors of IT Service Sector Organizations | *International Journal of Technology Management & Sustainable Development* | March 2024 | DOI: 10.1386/tmsd_00080_1

03 | Suman Bhattacharya, Mahamuda Sultana, Nilanjana Adhikari, Arghadip Biswas, Suman Saha, Trishita Mukherjee, Sayantan Roy Chowdhury, Vaskar Paul, Kaustav Chatterjee
A Deep Learning Framework for Speaker's Confidence Level Analysis | *Journal of Technology, Vol. 12, Issue 3* | March 2024 | Link: Journal of Technology

04 | Sayan Nath, Bidyutmala Saha, Sourish Mitra, Ayan Das, Sayantanee Santra
Integrated Aided Learning System for Deaf-Dumb People | *Journal of Technology, Vol. 12, Issue 3* | March 2024 | Link: Journal of Technology

05 | Bidyutmala Saha, Sayan Nath, Sourish Mitra, Aritra Chakraborty, Monotopa Bhattacharya, Angana Kundu, Supriyaja Roy, Prayashi Bhattacharya
A Review on Fog and Cloud Computing | *Journal of Xidian University, Vol. 18, Issue 4* | April 2024 | Link: Journal of Xidian University

06 | Ipsita Saha, Srabani Kundu, Sayani Chandra
Role of Fog Computing, Cloud Computing and Big Data for Healthcare Applications in Line with Industry 4.0 | *Journal of Technology, Vol. 12, Issue 6* | June 2024 | Link: Journal of Technology

07 | Sumit Kumar Banerjee, Priyanka Chakraborty, Rafiqul Islam
AI Based Geospatial Vehicle Prediction | *Journal of Systems Engineering and Electronics, Vol. 36, Issue 6* | June 2024 | Link: Journal of Systems Engineering and Electronics

08 | Sumit Kumar Banerjee
Dynamic Multi-class Leaf Problem Identification Based on Deep Learning | *Journal of Technology, Vol. 12, Issue 6* | June 2024 | Link: Journal of Technology

09 | Moloy Dhar, Pallabi Das, Nirupam Saha
Comparison Based on 6 Different Architectures About Image Captioning | *Journal of Technology, Vol. 12, Issue 5* | May 2024 | Link: Journal of Technology

10 | Moloy Dhar
Delivery Allocation of Essential Medicines Using Particle Swarm Optimization | *Journal of Technology, Vol. 12, Issue 6* | June 2024 | Link: Journal of Technology

11 | Moloy Dhar, Suparna Biswas
Oral Cancer Detection Using Deep Learning Technique: A Novel Approach | *Journal of Technology, Vol. 12, Issue 6* | June 2024 | Link: Journal of Technology

12 | Pallabi Das, Madhurendra Singh, Aditya Anand, Devesh Kumar, Nainshi Kumari, Ravi Kumar, Adrija Saha
Stock Market Price Prediction Using Machine Learning Based Technical Analysis | *Journal of Systems Engineering and Electronics, Vol. 34, Issue 6* | June 2024 | Link: Journal of Systems Engineering and Electronics

13 | Mandira Banik, Subhankhi Paul, Nandini Sawdagar, Shreya Mukherjee, Tanushka Ghosh
Pocket Health Care | *Journal of Technology, Vol. 12, Issue 4* | June 2024 | Link: Journal of Technology

14 | Bidyutmala Saha, Sourish Mitra, Sayan Nath, Sandipan Mukhopadhyay, Shampurna Rakshit, Riddhi Lahiri, Diprit Turul, Ujan Ghosh
Distributed Denial of Service Attack for Virtual Cloud Computing: A Review | *Gradiva Review Journal, Vol. 10, Issue 3* | March 2024 | Link: Departmental Record

15 | Priyanka Chakraborty, Rafiqul Islam, Nirupam Saha
Oral Disease Classification Using Convolution Neural Network with Dilation | *Gradiva Review Journal, Vol. 10, Issue 3* | March 2024 | Link: Departmental Record

International Conference Publications

01 | Bipronil Ghosh, Anuska Mukherjee, Debjoty Chandra, Nilanjana Adhikari, Suman Bhattacharya, Mahamuda Sultana, Sourish Mitra, Sayan Nath
Botanic Renaissance: Empowering Ayurveda through YOLOv8 – A Technological Symphony of Plant Identification, Commerce, and Conservation | *Recent Innovation in Science, Communication & Computation 2024, JIS University* | February 2024 | Link: Departmental Record

02 | Ipsita Nayak, Moulima Mukherjee, Satyam Kumar Chhetri, Shivam Chaudhary, Mahamuda Sultana, Suman Bhattacharya, Nilanjana Adhikari
Stock Price Prediction: A Comparative Study Using Various Models of Machine Learning and Deep Learning | *Recent Innovation in Science, Communication & Computation 2024, JIS University* | February 2024 | Link: Departmental Record

03 | Arnab Chowdhury, Priyanshu Chakraborty, Tridha Das, Rishav Gupta, Adarsh Pandey, Dipanjan Biswas, Mahamuda Sultana, Suman Bhattacharya
Yield Prediction and Agricultural Crop Recommendation – A Machine Learning Approach | *Recent Innovation in Science, Communication & Computation 2024, JIS University* | February 2024 | Link: Departmental Record

04 | Nilanjana Adhikari, Suman Bhattacharya, Mahamuda Sultana
Single-Frame Image Based Multi-Variant Bird Species Identification and Classification | *5th Doctoral Symposium on Computational Intelligence (DoSCI-2024), Springer LNSS Series* | May 2024 | ISBN: 978-981-97-7317-6

Book Chapters

01 | Sumit Kumar Banerjee, Nilanjana Adhikari, Mahamuda Sultana, Suman Bhattacharya
Fish Species Identification and Classification: A Deep Learning Approach | *Futuristic Trends in Artificial Intelligence, IIP Series, Vol. 3, Book 6* | May 2024 | DOI: 10.58532/V3BAAI6P7CH1

FACULTY PATENTS & INNOVATIONS

01 | Sourish Mitra, Prof. (Dr.) Santanu Kumar Sen, Dr. Saptarshi Das, Biswajit Chaki Choudhury, Saptadeepa Mitra, Shaswata Pyne, Rupnath Shaw, Supriyo Maity
A Water Quality Monitoring and Management System for Aquaculture | Patent No.:

202431017526 | Published: March 2024 | Status: Published | Assignee: Guru Nanak Institute of Technology

02 | Rupak Chakraborty, Sourish Mitra, Bidyutmala Saha, Rafiqul Islam, Nirupam Saha
Artificial Intelligence-Based Plants Guarding System | Patent No.: 202431017527 | Published: March 2024 | Status: Published | Assignee: Guru Nanak Institute of Technology

03 | Srabani Biswas, Ipsita Saha, Abanti Deb, Sayani Chandra
Computer Implemented Method and System for Faster Detection of Diseased Leaves from Images of Plant Leaves | Patent No.: 202431046357 | Published: June 2024 | Status: Published | Assignee: Guru Nanak Institute of Technology

04 | Dr. Mahamuda Sultana, Dr. Suman Bhattacharya, Sourish Mitra, Bipronil Ghosh, Debjoty Chandra, Debanjan Halder, Ankita Saha, Anuska Mukherjee
System for Identification of Different Medicinal Plants/Raw Materials | Patent No.: 202431047223 | Published: June 2024 | Status: Published | Assignee: Guru Nanak Institute of Technology

TECHVERSE 2.0: Celebrating Technology, Creativity & Innovation

The Department of Computer Science & Engineering successfully organized TECHVERSE 2.0, a vibrant annual technical fest held on 8–9 February 2024 at Guru Nanak Institute of Technology. The two-day event brought together approximately 700 participants, creating an energetic platform for students to showcase their technical skills, creativity, problem-solving abilities, and innovative ideas.

The fest commenced with an inauguration ceremony featuring traditional lamp-lighting, followed by addresses from the Principal, Registrar (Acting), Heads of Departments, and faculty members. The event also witnessed the launch of the departmental newsletter and wall magazine, marking an important moment for the department's academic and creative activities.

TECHVERSE 2.0 featured a diverse range of competitions and activities, including Treasure Hunt, Model Display, Idea-scape, Bishop's Battle (Chess), 8 Ball Pool, Craftopia, and Web Builders. The Treasure Hunt challenged participants to solve riddles and discover hidden clues across the campus, while the Model Display provided students with an opportunity to present innovative models based on recent technological trends.

The Idea-scape event encouraged students to develop and present innovative solutions to real-world problems through technical presentations. Projects explored diverse themes including AI in healthcare, augmented reality-based military training, millet-based energy bars, sustainable food concepts, and other emerging ideas. The event emphasized innovation, technical feasibility, novelty, business value, and presentation skills.

The creative spirit of TECHVERSE 2.0 was further showcased through Craftopia, where students and participants exhibited paintings, handicrafts, jewellery, and other creative works. The Web Builders competition tested participants' knowledge of modern web development, particularly the MERN stack and UI/UX design, through a quiz and practical interface-design challenge.

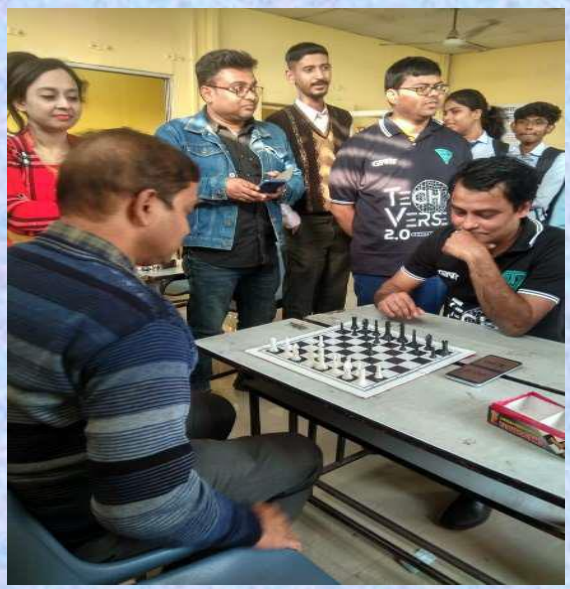
The event concluded with prize distributions recognizing the achievements of the participants. With its blend of technology, innovation, creativity, gaming, and healthy competition, TECHVERSE 2.0 provided students with a valuable platform to learn, collaborate, compete, and express their talents beyond the classroom. The successful participation of around 700 students made TECHVERSE 2.0 a memorable celebration of the department's commitment to technical excellence and holistic student development.






GNIT
TECH VERSE 2.0














TECHVERSE2.0



JIS Innovation Award 2024

Mr. Moloy Dhar, Assistant Professor, Department of Computer Science and Engineering, Guru Nanak Institute of Technology (GNIT), was honored with the JIS Innovation Award 2024 for his valuable contributions to research and innovation. The award was presented as part of the JIS Innovation Award ceremony held on 5 June 2024 for the Academic Year 2022–23. His recognition reflects his active involvement in research, scholarly publications, and innovation.



JIS Samman 2024

Mr. Moloy Dhar, Assistant Professor, Department of Computer Science and Engineering, Guru Nanak Institute of Technology (GNIT), was felicitated with the prestigious JIS Samman 2024 in recognition of his valuable contribution and dedication to academic and institutional activities. The award ceremony was held as part of the JIS Samman 2024 celebration, providing a platform to acknowledge and appreciate the achievements of distinguished members of the JIS family.

