

CODE SNIPPETS EXPRESS

Computer Science and Engineering



About The Department:

The Department of Computer Science and Engineering at Narula Institute of Technology, established in 2001, is a flagship department offering NBA-accredited B.Tech. and M.Tech. programs with intakes of 300 and 18 students, respectively. The department fosters a vibrant academic culture through regular seminars, workshops, and conferences in collaboration with leading professional bodies like IEEE-CS, IEEE-CIS, CSI, IE(I), and IETE. With strong ties to top multinational companies such as Infosys, TCS, and Accenture, the department ensures excellent placement opportunities, reflecting its unwavering commitment to nurturing ethical, skilled technocrats, leaders, and researchers.

Vision of the Department:

To develop responsible and socially conscious citizens with a perspective and global strong local commitment. The objective is to nurture individuals who think globally and act locally, emerging as effective change agents capable of addressing and future challenges present societal through knowledge, ethics, and innovation.

Mission of the Department:

Building and sustaining high quality and board area-based teaching and research program. Preparing students for Successful professional careers both in industry, academics and an entrepreneur. Provide service to the nation as a good human being.

Objective of the Department:

To create an environment to empower the students with solid foundation in mathematical, scientific, engineering, managerial, entrepreneurial fundamentals and incorporate research based curriculum thorough establishing continuous wide network with the industries in order to initiate long term academic excellence in the institution.



Message From Principal:

It gives me great pleasure to welcome you all to Narula Institute of Technology (NiT), a proud institution under the JIS Group Educational Initiatives. NiT is guided by a clear vision: "To lead in quality technical education, research, and innovation." Our goal is to cultivate a sustainable and continuously evolving learning ecosystem—one that is responsive to the ever-changing dynamics of the global socio-economic landscape.



Prof. (Dr.) Subhram Das
Principal, Narula Institute of Technology

Message From HOD:



Prof. (Dr.) Papri Ghosh
Head of the Department,
Computer Science and Engineering

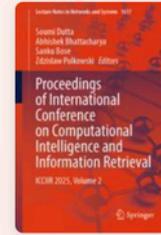
Welcome to the Department of Computer Science and Engineering at Narula Institute of Technology. As the Head of the Department, I am pleased to share our commitment to a progressive, student-centric academic environment that nurtures strong technical foundations, creativity, and ethical values. Our learning approach emphasizes hands-on experience, critical thinking, and innovation, with balanced focus on core computer science and emerging technologies such as artificial intelligence, machine learning, data analytics, cloud computing, and cybersecurity. Guided by dedicated faculty through projects, research, internships, and industry-oriented activities, students are well prepared for real-world challenges. I warmly invite students, parents, alumni, and industry partners to engage with our department and join us in shaping a future driven by knowledge and innovation.

JOURNAL/CONFERENCE PUBLICATION

[Home](#) > [Proceedings of International Conference on Computational Intelligence and Information Retrieval](#) > Conference paper

Scalable Solar Energy Prediction Using Machine Learning for Off-Grid Areas

Conference paper | First Online: 02 January 2026
pp 19–29 | [Cite this conference paper](#)



Proceedings of International Conference on Computational Intelligence and Information Retrieval
(ICCIIR 2025)

[Ayishi Manna](#), [Rajdeep Kar](#), [Rounak Kolay](#), [Sayan Karmakar](#), [Subhram Das](#), [Papri Ghosh](#) & [Md.](#)

[Access this chapter](#)

The conference paper “**Scalable Solar Energy Prediction Using Machine Learning for Off-Grid Areas**” by **Prof(Dr.) Papri Ghosh**, and **prof(Dr.) Subhram Das**, **Dr. Md. Ashifuddin Mondal**, **Ayishi Manna**, **Rajdeep Kar**, **Rounak Kolay** and **Sayan Karmakar** explores machine learning models for predicting solar energy generation in remote off-grid regions. Using historical solar and weather data, regression techniques such as Linear Regression, Decision Trees, Random Forest, and KNN are evaluated with MAE and RMSE metrics. The study highlights the potential of accurate solar prediction to support sustainable energy planning and deployment.

[Home](#) > [Proceedings of International Conference on Computational Intelligence and Information Retrieval](#) > Conference paper

Revolutionizing Accessibility: A Machine Learning Approach to Braille Conversion

Conference paper | First Online: 02 January 2026
pp 217–227 | [Cite this conference paper](#)



Proceedings of International Conference on Computational Intelligence and Information Retrieval
(ICCIIR 2025)

[Anwsha Biswas](#), [Neha Majee](#), [Prince Kumar](#), [Sagar Ghorai](#), [Subhram Das](#), [Papri Ghosh](#) & [Md.](#)

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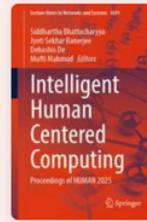
The conference paper “**Revolutionizing Accessibility: A Machine Learning Approach to Braille Conversion**” by **Prof (Dr.) Papri Ghosh**, and **prof(Dr.) Subhram Das**, **Dr. Md. Ashifuddin Mondal**, **Anwsha Biswas**, **Neha Majee**, **Prince Kumar** and **Sagar Ghorai** proposes a machine learning-based system for accurate English–Braille and Braille–English conversion. Using deep learning models, the method achieves high translation accuracy and supports both digital and print Braille formats, enhancing accessibility for visually impaired individuals.



[Home](#) > [Intelligent Human Centered Computing](#) > Conference paper

A Novel Numerical Representation–Based Approach for Protein Sequence Comparison Using Inter–Coefficient Difference and FFT

Conference paper | First Online: 02 January 2026
pp 292–300 | [Cite this conference paper](#)



Intelligent Human Centered Computing
(HUMAN 2025)

[Debrupa Pal](#) ✉, [Papri Ghosh](#), [Subhram Das](#) & [Aurpan Majumder](#)

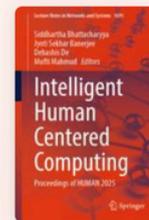
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The conference paper “A Novel Numerical Representation–Based Approach for Protein Sequence Comparison Using Inter–Coefficient Difference and FFT” by Prof(Dr.) Papri Ghosh, Prof(Dr.) Subhram Das , Debrupa Pal and Aurpan Majumder proposes an efficient method for comparing protein sequences using numerical encoding of amino acid properties. By applying FFT–based spectral analysis and Inter Coefficient Difference reduction, the approach generates descriptors for phylogenetic tree construction through UPGMA. The results show that the hydropathy index provides better sequence comparison performance than molecular weight, making the method effective for large protein datasets.

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SVEMI: An Innovative Method for PCOS Detection Using an Adapted Ensemble Machine Learning Approach

Conference paper | First Online: 02 January 2026
pp 230–241 | [Cite this conference paper](#)



Intelligent Human Centered Computing
(HUMAN 2025)

[Dishani Roy](#), [Papri Ghosh](#) ✉ & [Subhram Das](#)

[Access this chapter](#)

The conference paper “SVEMI: An Innovative Method for PCOS Detection Using an Adapted Ensemble Machine Learning Approach” by Prof (Dr.) Papri Ghosh , prof (Dr.) Subhram Das and Ms.Dishani Roy proposes a machine learning–based framework for early detection of Polycystic Ovary Syndrome (PCOS). The method, SVEMI, integrates soft voting ensemble learning with mutual information feature selection to improve prediction accuracy using a reduced feature set. Experimental results show that SVEMI achieves 96.79% accuracy, outperforming existing approaches and offering a reliable strategy for PCOS diagnosis.

CONFERENCE ACCEPTANCE



Paper titled **“Transfer Learning–based Deep Feature Extraction with XGBoost and xAI for Melanoma Detection”** by **Ms. Ritwika Mukherjee**, Shilpa Roy, Kushal Mondal, Swastik Nayek, Anish Halder and Tathagata Chatterjee has been accepted at the 4th IEEE International Conference on Interdisciplinary Approaches in Technology and Management for Social Innovation (IATMSI). A transfer learning–based deep feature extractor integrated with XGBoost and explainable AI enables precise, interpretable, and trustworthy melanoma detection for reliable AI–driven diagnostics.



Paper titled **“Transforming Agricultural Disease Surveillance through ML–IoT Systems Empowered by xAI Interpretability”** by **Ms. Ritwika Mukherjee**, Sailaswar Mahanta, Anirban Guha Roy, Soumyadip Mohanta, Pintu Mondal and Tathagata Chatterjee has been accepted at the IEEE Contemporary Computing Innovations Conference 2026, highlighting an explainable ML–IoT framework for accurate, transparent, and intelligent agricultural disease monitoring.



Paper titled **“Finding Orthogonal Polyhedron Segmentation using 3D Straight Skeleton”** by **Dr. Anukul Maity**, **Ms. Ritwika Mukherjee**, Aditya Naha, Abir Mallick, Dipankar Hira and Moupiya Ghosh at the International Conference on Signal Analysis for Smart Systems (SIGNASS–2026), presenting an advanced computational geometry approach for precise orthogonal polyhedron segmentation using 3D straight skeleton methods.



Paper titled **“CNN–Powered Brain Tumor Classification and Detection Using MRI based on Deep Learning Methods”** by **Ms. Bingshati Mondal**, **Ms. Ritwika Mukherjee**, Sekh Aship, Sanjida Khatun, Mukesh Kumar and Priyanshu Kumar has been accepted for Poster Presentation at the International Conference on Signal Analysis for Smart Systems (SIGNASS–2026), showcasing a deep learning–driven CNN framework for accurate, automated brain tumor detection from MRI to enhance early diagnosis and intelligent clinical decision support.



Paper titled **“SMOTE–Enhanced Random Forest Classifier with Bayesian Optimization for Lung Cancer Prediction”** by **Ms. Ritwika Mukherjee**, **Dr. Md Ashifuddin Mondal**, Arnanil Mitra, Arko Pal, Sankhyayan Dey and Sourayan Sur has been accepted for Poster Presentation at the International Conference on Signal Analysis for Smart Systems (SIGNASS–2026), presenting an optimized, imbalance–aware machine learning framework for accurate and reliable lung cancer prediction.



Paper titled **“Evaluating Next-Generation Nanobiosensors for Detecting Dangerous Biological Markers in Diseases”** by Prof. (Dr.) Papri Ghosh, Prof. (Dr.) Subhram Das , Ipsita Saha , Srabani Biswas and Sayani Chandra has been accepted at the 6th International Conference on Innovative Research in Renewable Energy Technologies (IRRET-2026), highlighting advanced nanobiosensor technologies for sensitive and reliable detection of critical disease biomarkers.



Paper titled **“Nano-IoT Sensor Networks and Hybrid Scheduling Strategies for Sustainable Smart Farming: A Layered Approach”** by Prof. (Dr.) Papri Ghosh , Prof.(Dr.) Subhram Das , Sudarshan Nath and Dharampal Singh has been accepted at the 6th International Conference on Innovative Research in Renewable Energy Technologies (IRRET-2026), presenting a layered Nano-IoT framework with hybrid scheduling for efficient, sustainable, and intelligent smart farming systems.



Paper titled **“Plasmonic Coupling in Silver Nanoparticle Dimers: 3D-FDTD Simulation Study of Distance-Dependent Optical Response”** by Prof. (Dr.) Papri Ghosh, Prof. (Dr.) Subhram Das , Dr. Md. Ashifuddin Mondal , Shamik Bardhan , Anjishnu Dey and Saanjali Mitral presents a comprehensive 3D-FDTD analysis revealing how inter-particle distance governs plasmonic coupling and optical response in silver nanoparticle dimers, advancing nanoscale photonic and sensing applications.



Paper titled **“Core-Shell Non-Noble Plasmonic Alloy-Semiconductor Hybrids for Visible-Light Photocatalysis: Design, Tunability, and Charge Dynamics”** by Prof.(Dr.) Papri Ghosh, Prof. (Dr.) Subhram Das , Dr. Md. Ashifuddin Mondal , Shreyasi Saha Roy , Avilash Roy , Ranabir Paul and Ayan Mishra presents advanced core-shell plasmonic hybrid designs with tunable optical properties and optimized charge dynamics for efficient visible-light-driven photocatalytic applications.



Paper titled **“A Real-time Smart Home Security System for Alert-based Intrusion Detection using YOLO and FaceNet”** by Dr. Soma Chatterjee has been accepted at the 6th International Conference on Emerging Systems and Intelligent Computing (ESIC-2026), KIIT Deemed-to-be University, Bhubaneswar, presenting an AI-powered real-time surveillance framework for intelligent intrusion detection and smart home security.

STUDENTS ACHIEVEMENT

Tanmay Raj Bera from 2nd year secured 1st Position (Winner) in the Men's Volleyball Tournament at INFINITO 2K25, held at Netaji Subhash Engineering College on 10–11 January 2026, delivering outstanding performance, leadership, and teamwork to lead his team to a well-deserved championship victory.

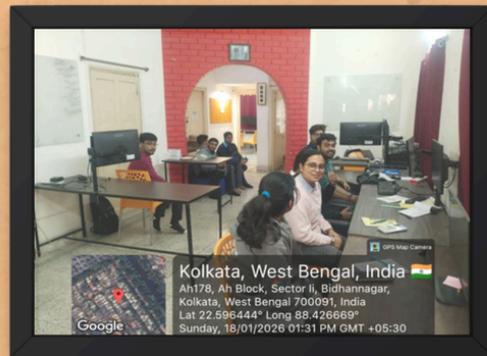


Ayantika Roy from second year secured 3rd Position in the Fashion Show category at JIS Spirit 2026 – Phase II on 8th January 2026, representing Narula Institute of Technology with confidence, creativity, and elegance, and earning recognition for her outstanding stage presence, artistic expression, and versatile excellence beyond academics.

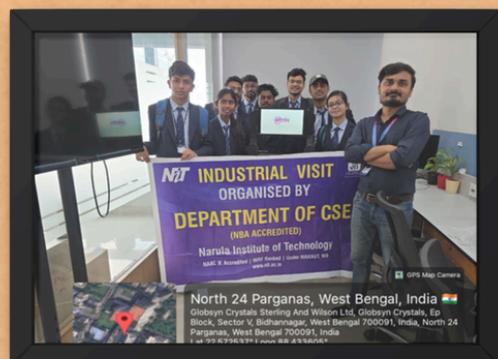
INDUSTRIAL VISIT



The Department of **Computer Science and Engineering**, Narula Institute of Technology organized an **Industrial Visit** on January 18, 2026, at **Capsule Labs, Kolkata**, where students gained practical exposure to Artificial Intelligence, Machine Learning, industry practices, and career opportunities, strengthening their industry awareness and technical motivation.



The Department of **Computer Science and Engineering**, Narula Institute of Technology organized an **industrial visit** on January 14, 2026, to **Aeonix Research and Innovations LLP, Kolkata**, where students gained hands-on exposure to robotics and IoT technologies through expert-led demonstrations and interactive sessions, enhancing their technical knowledge, industry awareness, and real-world application understanding.



ACM REGIONAL MEET



Our two faculty members, **Ms. Swarnali Daw** and **Mr. Tanmoy Ghosh** along with 4 students from our institution participated in the **ACM Regional Meet held on 31st January 2026 at TCS Wanderers, Sector V**. The event offered valuable insights through expert talks and technical sessions, providing exposure to emerging trends in computing and industry practices. The interaction with ACM professionals and peers enriched the learning experience and motivated students toward professional growth and active engagement in ACM activities.



SEMINAR ON TECHNOLOGICAL ADVANCEMENT AND SKILL DEVELOPMENT



Felicitated by Prof. (Dr.) Papri Ghosh, HOD, CSE Dept, NiT



Dr. Ritu Maity (HOD AI Dept. CTC Bhubaneswar) delivering session on
"Technological Advancement and Skill Development".

The Department of Computer Science and Engineering, Narula Institute of Technology, organized a seminar titled **"Technological Advancement and Skill Development"** on January 16, 2026, at the C. V. Raman Auditorium. The session, delivered by Dr. Ritu Maity, highlighted emerging technologies, real-world AI applications, and the importance of continuous skill development. Attended by over 200 B.Tech students, the seminar provided valuable insights into industry trends, career opportunities, and bridging the gap between academic learning and industry requirements, successfully motivating students toward future career growth.



Photo Session with our Resource person, (HOD, AI Dept. CTC Bhubaneswar)

SHIKSHAK SWAGATAM



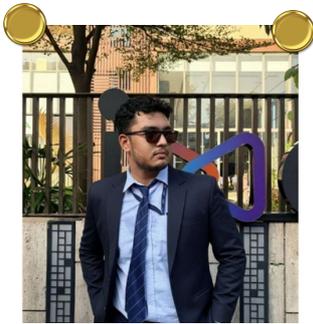
Shikshak Swagatam, the Faculty Development Programme of the JIS Group of Institutions, was inaugurated at Narula Institute of Technology with enthusiastic participation from over 225 faculty members across JIS institutions. The inaugural session blended cultural and academic elements, beginning with Saraswati Vandana and the celebration of Makar Sankranti, followed by the presence of distinguished dignitaries from JIS Group and Narula Institute of Technology. The programme featured insightful academic sessions on JIS educational initiatives, research methodology and publication ethics, digital teaching platforms, and outcome-based education through Bloom's Taxonomy. Overall, the inaugural day successfully promoted collaborative learning, professional development, and academic excellence, reinforcing the JIS Group's vision of innovation, quality education, and holistic faculty growth.



INTERNSHIP (3RD YEAR)



The students of our department have actively participated in internships across various esteemed organizations and tech domains. Their dedication and hands-on experience reflect a strong commitment to professional growth and practical learning. Some of these students from 3rd Year are: -



Soumyadipta Seal
(CODEC Technologies)



Samapti Kundu
(Edu-Skills)



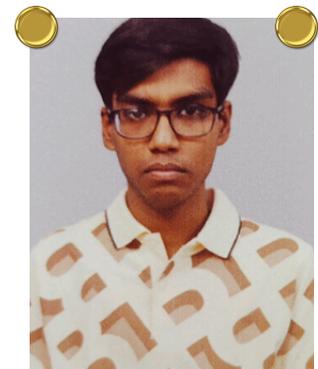
Archi Kumari Panja
(Edu-Skills)



Dishari Ghosh
(Edu-skills)



Somrita Bala
(Edu-skills)



Kaniska Kumar Shaw
(Edu-skills)



Rishi kumar manjhi
(Edu-skills)



ATMADEEP KARAR
(Edu-skills)

INTERNSHIP (4TH YEAR)



The Final-year students are also pushing their limits to engrave the last year of their Graduation in a golden frame. Some of them are: -



Soumyajit Dalal
(Edu-Skills)

PLACEMENTS



The final-year students of Narula Institute of Technology have achieved a significant milestone by successfully securing placements at Cognizant through the campus recruitment drives, reflecting their hard work and academic excellence.



Gunjan Saha
LTI Mindtree



Ananya Kumar
TCS Ninja



Arshavi Roy
TCS Ninja



Indranil Mallick
TCS Ninja



Jaytanu Kundu
TCS Ninja



Monjima Dey
TCS Ninja



NAZIYA BEGUM
TCS Ninja



PANCHATAPA MANDAL
TCS Ninja



Raktima Chakraborty
TCS Ninja



Ranita Ghanta
TCS Ninja



Ritika Mishra
TCS Ninja



Shreyasi Saha Roy
TCS Ninja

PLACEMENTS



Soumalya Roy
TCS Ninja



Srija Mullick
TCS Ninja



Suchandrika Banerjee
TCS Ninja



Vaibhav Mishra
TCS Ninja



Adrija Sengupta
Accenture



Anish Halder
Accenture



ARPAN DAS
Accenture



Baishali Chatterjee
Accenture



Bikram Koley
Accenture



Ritama Sharma



Sohinee Mondal

Editor-in-Chief

From the Editor's Desk, we welcome the month of January, our Department of Computer Science and Engineering continues to thrive with innovation, learning, and collaboration. This edition celebrates the achievements of our students and faculty, showcases exciting research, and offers a glimpse into upcoming opportunities. Together, we step forward with curiosity and determination, shaping the future of technology

Student Co-Ordinator

As student of the CSE department at Narula Institute of Technology, we've genuinely appreciated how our curriculum goes beyond textbooks—it's packed with practical exposure, cutting-edge tools, and real-world projects that truly prepare us for the tech industry. Whether it's working on machine learning models or solving complex algorithmic problems, every semester feels like a step closer to becoming a confident, innovative engineer.



Hemanta Ghosh
3rd year