

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 gives me immense pleasure to introduce this edition of the **CSE@GNIT Bulletin**, a reflection of the vibrant academic, research, and co-curricular activities of the Department of Computer Science & Engineering. This newsletter showcases the dedication, creativity, and achievements of our students and faculty throughout the year.

Our department remains committed to fostering academic excellence through innovative teaching, industry collaboration, research, technical events, and skill enhancement initiatives. These efforts continue to prepare our students to meet the challenges of the ever-evolving technological landscape.

I extend my heartfelt appreciation to our faculty members, students, alumni, and industry collaborators for their valuable contributions and unwavering support. I hope this edition serves as a source of inspiration and motivates everyone to continue striving for excellence in learning, research, and innovation.

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 this edition of the **CSE@GNIT Bulletin**, showcasing the achievements, innovations, and activities of the Department of Computer Science & Engineering at Guru Nanak Institute of Technology. This newsletter reflects our commitment to academic excellence, research, innovation, and student development.

Inside, you will find highlights of technical events, workshops, research activities, placement achievements, and the accomplishments of our students and faculty. Each success reflects the dedication, creativity, and collaborative spirit of our department. We hope this edition inspires our readers, celebrates our shared achievements, and motivates everyone to continue learning, innovating, and striving for excellence.

As we continue our journey of growth and excellence, we remain committed to fostering a culture of curiosity, collaboration, and lifelong learning. We thank all our students, faculty members, alumni, and industry partners for their continued support and contributions, and we look forward to achieving many more milestones together.

Ms. Debapriya Sengupta

Assistant Professor

Chief Editor, CSE@GNIT Bulletin

Department of Computer Science & Engineering

Guru Nanak Institute of Technology

VISION, MISSION & PEO OF THE DEPARTMENT

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



Established in **2003**, the Department of Computer Science & Engineering at Guru Nanak Institute of Technology has been dedicated to nurturing competent engineers through quality education, innovation, and research. The department provides a dynamic academic environment that encourages students to develop strong technical knowledge, practical skills, and professional ethics.

The curriculum is designed to meet the demands of the rapidly evolving technology landscape, with emphasis on emerging fields such as Artificial Intelligence, Machine Learning, Data Science, Cybersecurity, Cloud Computing, and the Internet of Things (IoT). Well-equipped laboratories, project-based learning, technical workshops, and industry interactions provide students with valuable hands-on experience and real-world exposure.

Beyond academics, the department actively promotes research, innovation, and lifelong learning. Students are encouraged to participate in hackathons, research projects, technical competitions, internships, publications, and professional society activities. With experienced faculty, modern infrastructure, excellent placement support, and a culture of continuous improvement, the department strives to develop skilled professionals, innovative thinkers, and responsible leaders who can contribute meaningfully to society and the ever-growing field of technology.

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

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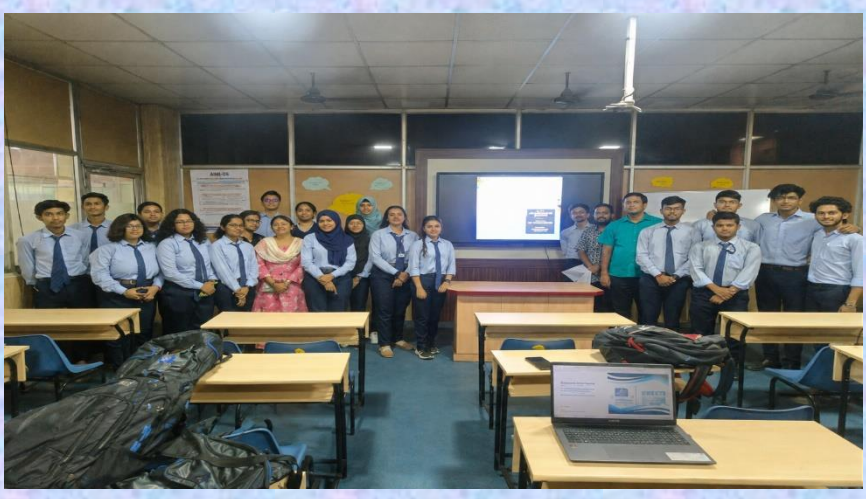
Email: info.gnit@jisgroup.org
Website: http://www.gnit.ac.in



STUDENT CHAPTER ACTIVITIES AND TECHNICAL EVENTS

The Department of Computer Science and Engineering continued its commitment to academic excellence and professional development through a series of activities organized under various professional societies and student chapters during the academic session **2024–25**. These initiatives provided students with opportunities to gain technical knowledge, industry exposure, entrepreneurial skills, and career guidance.

On **9th August 2024**, the **SESI Student Chapter** conducted an **Inter/Intra Institutional Start-up Competition and Reward Best Start-ups."**, encouraging students to transform innovative ideas into viable business ventures while fostering an entrepreneurial spirit.



The **Institution of Engineers (India)** hosted a **technical seminar on "Back Propagation Learning on Neural Network"** on **25 September 2024**, introducing students to the fundamentals of neural networks and their applications in artificial intelligence and machine learning.





The series concluded with a **career guidance seminar** titled **"Guide to Pursuing an MBA After B.Tech with a Focus on Entrepreneurship"** on **4 December 2024**, where experts shared valuable insights into management education, higher studies, entrepreneurship, and diverse career opportunities.

Through these professional society activities, the department successfully nurtured technical competence, innovation, leadership, and industry readiness among students, reinforcing its vision of holistic professional development.



TECHVERSE 3.0

Techverse 3.0 was the annual technical festival organized by the Department of Computer Science and Engineering at Guru Nanak Institute of Technology (GNIT). The two-day event was held on 5th and 6th November 2024 at the GNIT campus.

The festival provided an engaging platform for students from different institutions to showcase their technical knowledge, creativity, innovation, and problem-solving abilities. Techverse 3.0 featured a variety of activities, including technical competitions, exhibitions, project demonstrations, presentations, and other technology-oriented events.

The event encouraged students to explore emerging technologies, exchange ideas, and develop practical skills through active participation. It also promoted collaboration, healthy competition, innovation, and interdisciplinary learning among

students.Techverse 3.0 served as an important platform for fostering technological awareness and innovation, while providing students with opportunities to demonstrate their talents and gain valuable experience beyond the classroom.








SUBHADIP
MERIUM




GURUNANAK INSTITUTE OF TECHNOLOGY




SHUTTER




CHVERSE 3·0


TECHVERSE 3·0

FACULTY INNOVATIONS: WORKING MODELS AND PROTOTYPES

1. IoT Based Energy Efficient Anti-Sprouting by Ethylene Removal and Tuber Moth Repellent System in Household Potato Cold Storage

Faculty Name: Sourish Mitra

The *IoT-Based Energy-Efficient Anti-Sprouting by Ethylene Removal and Tuber Moth Repellent System in Household Potato Cold Storage* project focuses on developing an intelligent and sustainable storage solution for preserving potatoes at the household level. The system integrates IoT-based monitoring, controlled ethylene removal, eco-friendly pest protection, and dynamic cooling to address common problems associated with long-term potato storage. A K_2MnO_4-based ethylene removal mechanism helps suppress potato sprouting, while diatomaceous earth provides an environmentally friendly approach to controlling tuber moth infestation. Unlike conventional cold-storage systems, the proposed system dynamically adjusts cooling according to storage conditions, thereby reducing unnecessary electricity consumption. By combining smart monitoring with energy-efficient preservation techniques, the system aims to extend potato shelf life, reduce spoilage and food waste, improve storage safety, and provide a low-cost and sustainable alternative for household food preservation. The project has also resulted in the publication of an IEEE conference paper titled *"IoT Based Energy Efficient Anti-Sprouting by Ethylene Removal and Tuber Moth Repellent System in Household Potato Cold Storage"* with DOI: 10.1109/APCI65531.2025.11137113.



2.Mobile Controlled IOT based Robo Car

Faculty Name: Moloy Dhar

The *Mobile Controlled IoT-Based Robo Car* project focuses on developing a smart robotic vehicle that can be operated remotely using a smartphone through an internet-based IoT connection. The system integrates a microcontroller, motor driver, communication module, and sensors to enable real-time control and monitoring of the robo car. Users can remotely control its movements, including forward, backward, left, right, and stop, through a mobile application. Integrated sensors provide live information such as obstacle detection and vehicle status, improving safety and user awareness during operation. The project demonstrates the practical integration of IoT, mobile communication, embedded systems, and robotics for remote automation and surveillance applications. Overall, the system highlights the potential of IoT-enabled robotic vehicles in areas such as smart monitoring, remote inspection, security, and automated control, providing an effective example of how connected technologies can be applied to real-world challenges.

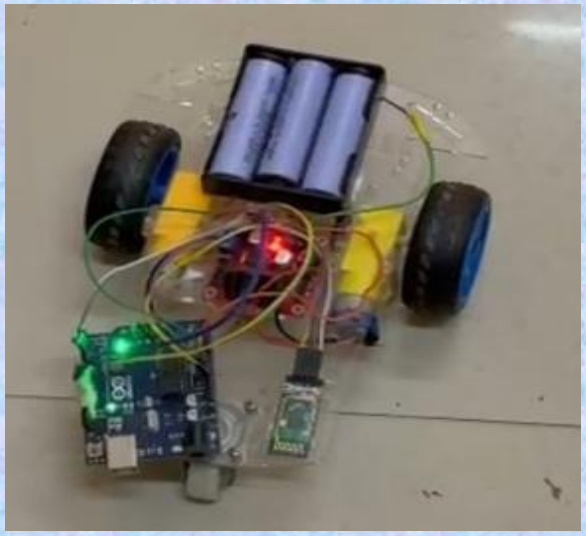


3.Bluetooth controlled vehicle

Faculty Name: Sourish Mitra

The *Bluetooth-Controlled Vehicle* project focuses on the design and development of a wireless robotic vehicle that can be operated remotely using a Bluetooth-enabled mobile device. The system integrates an Arduino microcontroller, motor driver, and Bluetooth communication module to receive commands from the user and control the vehicle's movement in different directions. The project provides students with hands-on

experience in embedded systems, wireless communication, microcontroller programming, and robotics. It demonstrates how hardware and software components can work together for real-time vehicle control and highlights the practical applications of Bluetooth technology in wireless automation and robotic systems.



STUDENT AND MENTORS ACHIEVEMENT



SMART INDIA HACKATHON 2024 (Software Edition-22

Project Title: *AgriVision AI: Intelligent Crop Health and Yield Prediction: 36-Hour Innovation Sprint*

Award: Hackathon finalist

Student(s): CSE (2022-26): Sauradeep Sarkar, Yash Vijay Sain, Abhishek Kumar Thakur, Raj Kumar Singh (Leader), Unnati Narayan, Sneha Mishra

Faculty Mentor(s): Dr. Ananjan Maiti, Dipankar Basu, Ms. Manasmita Bose

Date: 11-12th December, 2024

Place: Ramaiah University of Applied Science, Bangalore



Annual Regional Meet 2024





Project Title: ACM Regional Networking Meet
Description: Expanding horizons at ARM 2024! ACM India East & North-East's regional meet at TCS Kolkata offered insightful sessions, expert panel discussions, and meaningful networking opportunities, hosted in collaboration with the ACM Kolkata Chapter at ACM Tata Consultancy Services.
Student(s): CSE (2022-26): Raj Kumar Singh (Leader), Unnati Narayan, Sneha Mishra
Faculty Mentor(s): Dr. Ananjan Maiti
Date: November 2024
Place: ACM TCS Kolkata





BIZATHON 2024 The Ultimate Business Ideathon by Ecell, IIT(ISM)Dhanbad Concetto





Project Title: *EduPlay: Gamifying Education Reimagined*

Description: National finalist and 1st Runner-Up at Bizathon 2024, a business strategy marathon organized by E-Cell, IIT(ISM) Dhanbad. The team presented a full working gaming prototype aimed at re-imagining the education system.

Student(s): CSE (2022-26): Raj Kumar Singh (Leader) (500122010014), Unnati Narayan (500122020027), Sneha Mishra (500122020022)

Faculty Mentor(s): Mr. Sourish Mirta

Date: 19th October-20th October, 2024

Place: IIT (ISM) Dhanbad

Samatva 2024

Project Title: *CodeClash: Winning Samatva 2024*

Description: Winner of the Competitive Coding Contest at Samatva 2024.

Student(s): CSE (2022-26): Raj Kumar Singh (Leader) (500122010014), Unnati Narayan (500122020027), Sneha Mishra (500122020022)

Faculty Mentor(s): Ms. Nilanjana Adhikary

Date: 19th-20th September, 2024

Place: Guru Nanak Institute of Technology, Kolkata



TATA IMAGINATION CHALLENGE 2024

Project Title: *Imagine Change: Societal Innovation Challenge*

Description: The Tata Imagination Challenge 2024 is a premier, multi-stage competition inviting college students and Tata employees across India to submit innovative ideas that solve real-world problems and improve societal systems.

Student(s): CSE (2022-26): Unnati Narayan (500122020027)

Faculty Mentor(s): Dr. Sayan Nath

Date: 26th October, 2024 - 10th November, 2024

Place: Virtual Mode



EUREKA PITCHING COMPETITION 2024 College Edition by EDC of GNIT and E-CELL OF IIT Bombay

Project Title: *AquaSense Pitch: Cache Crew's Startup Story*

Description: EUREKA Pitching Competition 2024 — College Edition, organized by EDC of GNIT in collaboration with E-Cell IIT Bombay, provided a platform for aspiring entrepreneurs to present innovative startup ideas, refine business models, gain expert feedback, and compete for recognition at a prestigious entrepreneurial forum.

Student(s): CSE (2022-26): Sauradeep Sarkar (500122020012), Yash Vijay Sain(500122020025), Abhishek Kumar(500122020011) Thakur, Raj Kumar Singh (Leader) (500122010014), Unnati Narayan (500122020027), Sneha Mishra (500122020022)

Faculty Mentor(s): Dr. Ananjan Maiti, Mr. Dipankar Basu, Ms. Sayani Chandra

Date: 1st October, 2024

Place: Guru Nanak Institute of Technology, Kolkata



TECHCRAFT 2024

Project Title: *Emerging Technologies for a Connected Future – A Computer Science Project Exhibition*

Description: TECHCRAFT 2024, a Computer Science Project Exhibition at Abacus Institute of Engineering and Management, saw the team present a connectivity-focused computing solution before academic evaluators, earning 2nd Runner-up honours for clarity and technical grounding.

Student(s): CSE (2024-28): Aniket Banerjee (500124010016), Debanga Mondal (500124010066), Misty Kumari (500124010119)

Faculty Mentor(s): Mr. Nirupam Saha

Date: 18th November, 2024

Place: Abacus Institute of Engineering and Management, Kolkata



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

- Prof. (Dr.) Sangeeta Bhattacharya was honoured with a Certificate of Appreciation for serving as a Resource Person in the Short-Term Training Programme (STTP) on "Dialogue Between Methods and Methodology in Social Sciences with SPSS and Python Packages," organized by Sister Nivedita University, Kolkata. The programme was held from 20–21 September 2024, recognizing her academic expertise and contribution to professional training in research methodology and data analysis.



- Prof. (Dr.) Mahamuda Sultana was honoured with a Certificate of Appreciation for serving as a Resource Person in the Short-Term Training Programme (STTP) on "Dialogue Between Methods and Methodology in Social Sciences with SPSS and Python Packages," organized by Durgapur Women's College. The session was held on 20 September 2024, recognizing her contribution to academic training and knowledge sharing in research methodology, SPSS, and Python-based data analysis.



DURGAPUR WOMEN'S COLLEGE

Mahatma Gandhi Road, Durgapur – 713209
West Bengal, India

CERTIFICATE

OF APPRECIATION

This is to appreciate and acknowledge

Prof. (Dr.) Mahamuda Sultana

for serving as

RESOURCE PERSON

in the

Short-Term Training Programme (STTP) on

"Dialogue Between Methods and Methodology in Social Sciences with SPSS and Python Packages"

Date of Session
20 September 2024

Programme Duration
20 September 2024 to 21 September 2024

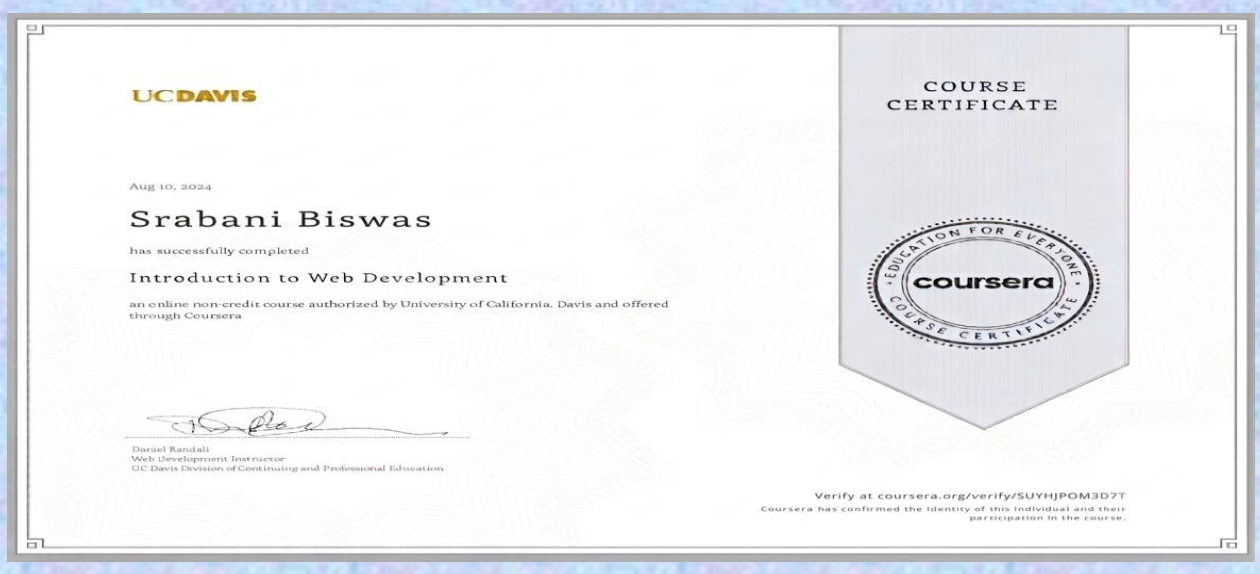
COMMITMENT TO EXCELLENCE IN EDUCATION

Mahamuda Kanjilal
Dr. Mahananda Kanjilal
Principal
Durgapur Women's College

Amitayu Chakraborty
Dr. Amitayu Chakraborty
IQAC Coordinator
Durgapur Women's College

FACULTY PROFESSIONAL DEVELOPMENT

- Ms. Ipsita Saha successfully earned a Coursera Course Certificate in "An Introduction to Interactive Programming in Python (Part 1)," an online non-credit course authorized by Rice University and offered through Coursera. This achievement reflects her commitment to continuous professional learning and strengthening her skills in Python programming and interactive application development.



- Dr. Srabani Biswas earned a Coursera Course Certificate in "Introduction to Web Development," an online non-credit course authorized by the University of California, Davis (UC Davis). The certification reflects her initiative to expand her knowledge of web development concepts and technologies and her commitment to continuous professional learning.



- Mr. Pijush Dutta earned a Coursera Course Certificate in "Interfacing with the Arduino," an online non-credit course authorized by the University of California, Irvine (UCI). The certification highlights his efforts to enhance his practical knowledge of Arduino, embedded systems, and hardware–software interfacing, contributing to continuous technical and professional development.



- Nirupam Saha attained a Coursera Course Certificate in "Building Web Applications in Django," an online non-credit course authorized by the University of Michigan. The certification demonstrates her initiative in developing expertise in Django-based web application development and strengthening her practical skills in modern web technologies.



FACULTY RESEARCH & SCHOLARLY PUBLICATIONS

Publication Highlights | July–December 2024

International Journal Publications — 3
International Journal Publications (Other Peer-Reviewed) — 5
International Conference Publications — 12
Book Chapters — 6
Books — 2

International Journal Publications — SCI/ESCI/Scopus/WoS Indexed

01 | Nilanjana Adhikari, Suman Bhattacharya, Mahamuda Sultana
A Modified ResNet152v2 Framework for Bird Species Classification | *Innovations in Systems and Software Engineering, Springer, Vol. 21, pp. 1199–1212* | October 2024 | DOI: 10.1007/s11334-024-00583-0

02 | Jyotirmoy Gupta, Amit Kumar Majumder, Diganta Sengupta, Mahamuda Sultana, Suman Bhattacharya
Investigating Computational Models for Diagnosis and Prognosis of Sepsis Based on Clinical Parameters: Opportunities, Challenges, and Future Research Directions | *Journal of Intensive Medicine, Vol. 4, Issue 4* | October 2024 | DOI: 10.1016/j.jointm.2024.04.006

03 | Partha Shankar Nayak, Dipankar Basu, Ranjan Banerjee
Beyond Traditional Security: A Defense Analysis of Modern Cyber Threats | *Revista Electronica de Veterinaria, Vol. 25, No. 1, pp. 1011–1014* | September 2024 | DOI: 10.69980/redvet.v25i1.781

International Journal Publications — Other Peer-Reviewed

01 | Ranjan Banerjee, Dipankar Basu, Debmalya Mukherjee, Partha Shankar Nayak, Shuvrajit Nath
Harnessing the Power of AI for Positive Change: How Business Can Drive Sustainability and Social Progress | *Cahiers Magellan-NS, Vol. 6, No. 2* | July 2024

02 | Dia Nandy, Arghyadeep Maiti, Moloy Dhar, Barna Barman, Anish Aich
Implementing a Three-Step Security Protocol for Advanced Online Election Systems: A Novel Approach | *American Journal of Operations Management and Information Systems, Vol. 9, Issue 2* | September 2024 | DOI: 10.11648/j.ajomis.20240902.12

03 | Oishee Paul, Jyoti Das, Krittika Mondal, Paramita Dolui, Mahamuda Sultana, Suman Bhattacharya, Nilanjana Adhikari
A Machine Learning Model for Crop Yield Prediction | *Telecom Business Review, Vol. 17, Issue 1* | September 2024

04 | Bidyutmala Saha, Paramita Sarkar, Sayan Nath, Sanket Ganguly, Namrata Singh, Swarnadeep Mitra
Ant Colony Optimization in Cloud Computing: A Review | *Zenodo Repository, Version v1* | November 2024 | DOI: 10.5281/zenodo.14227161

05 | Bidyutmala Saha, Nilanjana Adhikari, Sayan Nath, Udayan Mal, Srijon Deyasin, Nupur Ghosh
Ant Colony Optimization: A Review | *Journal of Technology, Vol. 12, Issue 11* | December 2024

International Conference Publications

01 | Rooprekha Baksi, Ananjan Maiti, Chiranjib Dutta, Jyoti Sekhar Banerjee, Mufti Mahmud
The Impact of AI-Enhanced Chatbots on Psychological Support for Higher Education Students | *3rd International Conference on Human-Centric Smart Computing (ICHCSC-2024)* | July 2024 | DOI: 10.1007/978-981-96-3420-0_36

02 | Ipsita Saha, Srabani Kundu, Sunipa Roy, Namrata Singh, Amit Kundu, Rahul Baidya, Sadhan Kumar Ghosh
An AI-Based Automated System for Classifying and Identifying Electronic Waste Using Deep Learning Methods | *International Conference on Sustainable Waste Management (ICSWM-2024)* | September 2024

03 | Sajib Chowdhury, Shubhajit Chatterjee, Srabani Biswas, Ipsita Saha, Sayani Chandra
Classification of Routing Algorithms in Wireless Sensor Networks: A Comparative Analysis | *Third International Conference on Innovations in Software Architecture and Computational Systems (ISACS 2024)* | September 2024

04 | Priyanka Ghosh, Dr. Debdutta Pal, Piyali Katwa, Bhaskar Maity
CryptoGen: Cryptographic Key Generation Using a Genetic Algorithm | *International Conference on Data Mining and Information Security (ICDMIS 2024)* | October 2024

05 | Moumita Samanta, Ananjan Maiti, Mahamuda Sultana, Suman Bhattacharya
Dynamic Prompt Evolution for Continuous Optimization of Large Language Model Interactions

| *International Postgraduate Computer Science Research Symposium (IPCRS 2024)* | November 2024

06 | Moloy Dhar, Soumyanil Dey, Soham Bhattacherjee
Image Captioning Using VGG-16 and VGG-19: A Mixed Model Approach | *International Conference on Smart Systems and Wireless Communication (SSWC2024)* | November 2024 | DOI: 10.1007/978-981-96-1348-9_16

07 | Pallabi Das, Rajashree Nayak, Moloy Dhar, Md. Noor Islam, Muskan Mishra, Sreya Dan
XAI-CAD: An Explainable CAD Framework for the Classification of Diabetic Retinopathy | *International Conference on Big Data Analytics in Bioinformatics (DABCon-2024)* | November 2024 | DOI: 10.1109/DABCon63472.2024.10919334

08 | Tusar Kanti Roy, Bhaskar Ghosh, Tahdia Tahmid, Ashraf-uz-zaman, Mumtahina Mantasha, Ipsita Saha, Sadhan Kumar Ghosh
Exploring Smart Solid Waste Management Practices in Urban Planning: A Literature Review | *14th International Conference of Sustainable Waste Management & Circular Economy and IPLA Global Forum 2024* | November 2024

09 | Priyanka Chakraborty, Bidyutmala Saha, Sayan Nath, Sumit Kumar Banerjee
Hybrid Transfer Learning Based Pomegranate Fruit Disease Classification | *2nd International Conference on Recent Advances in Artificial Intelligence & Smart Applications (RAAISA 2024)* | December 2024

10 | Nilanjana Adhikari, Suman Bhattacharya, Mahamuda Sultana, Ananjan Maiti, Diganta Sengupta
Identification of Bird via Acoustics for Bird Species Population Monitoring and Conservation | *International Conference on Big Data Analytics in Bioinformatics* | December 2024

11 | Ipsita Saha, Amit Kundu, Sadhan Kumar Ghosh
A Deep Learning Model to Recognize and Classify Plastic Waste | *14th International Conference of Sustainable Waste Management & Circular Economy and IPLA Global Forum 2024* | November 2024

Book Chapters

01 | Sourish Mitra, Moloy Dhar, Avali Banerjee, Santanu Sen
An IoT-Based Smart Baby Cradle Monitoring System by Providing Proper Care, Comfort and Protection of a Baby Health | *Vision Viksit Bharat 2047 – Paving India's Path to Growth and Development* | Saheed Anurup Chandra Mahavidyalaya | August 2024

02 | Sayan Nath, Suman Bhattacharya, Mahamuda Sultana
Eco-Tech System Adoption of Industry 4.0 | *Vision Viksit Bharat 2047 – Paving India's Path to Growth and Development* | Saheed Anurup Chandra Mahavidyalaya | August 2024

03 | Ananjan Maiti, Sayan Acharya, Rooprekha Baksi, Mahamuda Sultana, Suman Bhattacharya
Student-Centered Approaches in NEP 2020: A Paradigm Shift from Rote Learning to Critical Thinking in Indian Education | *Vision Viksit Bharat 2047 – Paving India's Path to Growth and Development* | Saheed Anurup Chandra Mahavidyalaya | August 2024

04 | Moloy Dhar, Sourish Mitra, Suparna Biswas, Subhasree Bhattacharjee, Santanu Kr. Sen
Captioning Image Using Deep Learning: A Novel Approach | *Vision Viksit Bharat 2047 – Paving India's Path to Growth and Development* | Saheed Anurup Chandra Mahavidyalaya | August 2024

05 | Chiranjib Dutta, Ananjan Maiti, Indranil Sarkar, Karnapali Mukhopadhyay
Comprehensive Diagnosis of Polycystic Ovary Syndrome through Medical Imaging Techniques and Their Clinical Implications | *Vision Viksit Bharat 2047 – Paving India's Path to Growth and Development* | Saheed Anurup Chandra Mahavidyalaya | August 2024

06 | Mahamuda Sultana, Suman Bhattacharya, Nilanjana Adhikari, Diganta Sengupta, Debashis De
Artificial Intelligence for Sustainable Ocean Health | *Artificial Intelligence and Edge Computing for Sustainable Ocean Health, The Springer Series in Applied Machine Learning* | Springer International Publishing | September 2024 | DOI: 10.1007/978-3-031-64642-3_1

Books

01 | Dr. Ananjan Maiti, Dr. Rooprekha Baksi
Mastering Impactful Scientific Writing: A Comprehensive Guide for Authors and Reviewers | *Evincepub Publishing* | November 2024 | ISBN: 978-9363554726

02 | Dr. Sayan Nath, Ms. Bidyutmala Saha, Ms. Mandira Banik
Introduction to Blockchain | *Blue Duck Publication* | November 2024 | ISBN: 978-9346181990

03 | Moloy Dhar, Priyanka Ghosh, Pallabi Das
Operating Systems and Data Base Management System | *Natals Publication* | December 2024 | ISBN: 978-93-6581-440-8s

FACULTY PATENTS & INNOVATIONS

01 | Sourish Mitra, Santanu Kumar Sen, Biswajit Chaki Choudhuri
IoT Based Solar Powered Multipurpose Vehicle Used for Cricket Ground's Dew Soaking and Moisture Drying | Grant No.: 548255 | Published/Granted: 21 August 2024 | Status: Granted | Assignee: Guru Nanak Institute of Technology

02 | Dr. Sayan Nath, Dr. Suman Bhattacharya, Dr. Mahamuda Sultana, Nilanjana Adhikari
Blockchain Based Medical Data Storage Device | Design Patent No.: 6384163 | Published: 20 August 2024 | Status: Published | Assignee: Guru Nanak Institute of Technology

03 | Dr. Ananjan Maiti, Dola Saha, Chiranjib Dutta, Dr. Aveek Chattopadhyaya
Automated Crop Protection and Soil Monitoring Device | Patent No.: 202431051761 | Published: 12 July 2024 | Status: Published | Assignee: Guru Nanak Institute of Technology

04 | Srabani Biswas, Ipsita Saha, Sayani Chandra
Wearable Safety Device for Emergency Situations | Patent No.: 202431071420 | Published: 04 October 2024 | Status: Published | Assignee: Guru Nanak Institute of Technology

05 | Mr. Moloy Dhar, Mr. Sourish Mitra, Mr. Nirupam Saha, Mr. Biswajit Chaki Choudhuri
A Filtration and Water Recycling System | Patent No.: 202431089690 | Published: 13 December 2024 | Status: Published | Assignee: Guru Nanak Institute of Technology

06 | Nilanjana Adhikari, Suman Bhattacharya, Mahamuda Sultana, Sayan Nath, Priyashri Batabyal, Arka Karmakar
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