CURRICULUM VITAE

Name	SANGITA BOSE
Qualification	• PhD in Computer Science (Pursuing), University of Calcutta (St. Xavier's College (Autonomous)) (2023-Present) • M. Sc. (Computer Science), University of Calcutta (2017) • B.Sc. in Computer Science (Hons.), University of Calcutta (2014)
Designation, Department and School	**Assistant Professor, Department of Computer Science & Engineering, School of Engineering**
Subject teach	• Artificial Intelligence • Machine Learning • Deep Learning • Data Science • Big Data Analytics • Internet of Things (IoT) • C Programming • Object-Oriented Programming (C++, Java, Python) • Data Structures and Algorithms • Design and Analysis of Algorithms • Computer Organization and Architecture • Operating Systems • Compiler Design • Automata Theory • Computer Networks • Database Management Systems (DBMS) • Software Engineering • Web Technologies (HTML, CSS, JavaScript, React, Angular) • PowerBI
Research Interest	• Deep Learning and Neural Networks • Explainable AI (XAI) • Reinforcement Learning • Generative AI (GANs, Diffusion Models) • Natural Language Processing (NLP) • AI Ethics and Fairness • AI for Healthcare • Data Mining and Knowledge Discovery • Predictive Analytics • Time Series Analysis • Data Visualization • High-Performance Data Processing • Scalable Machine Learning
Experience	1. Institution Name : Swami Vivekananda University Type: Assistant Professor Department of Computer Science & Engineering Duration: September 2023 to Present

	2. Institution Name: National Institute of Electronics & Information Technology (NIELIT), Barasat Govt. college Type: Full Time Lecturer & HOD Department of Computer Science/IT Duration: February 2023 to August 2023 3. Institution Name : Sister Nivedita University Type: Visiting Faculty Duration: February 2023 to August 2023 4. Institution Name : Institute of Genetic Engineering (IGE) Type: Assistant Professor Duration: September 2022 to January 2023 5. Institution Name : Sister Nivedita University Type: Visiting Faculty Duration: April 2022 to September 2022 6. Institution Name: National Institute of Electronics & Information Technology (NIELIT), Barasat Govt. college Type: Faculty Department of Computer Science/IT Duration: May 2015 to August 2022
Publications	**Conference Papers (National/International)** 1. Sangita Bose, Dr. Romit S Beed," A Smart Farming Production Approach Using Drones and IoT after COVID -19 situations", Computational Intelligence in Communications and Business Analytics (CICBA-2022). 2. S. Bose, P. Nag, S. Maji, P. Roy Choudhury, S. Chatterjee, Recent Advancement and Future Perspective of 6G Communication, In Proc of International Conference on Integrative Science and Engineering (ICISE) 2023,September 2023. 3. S. Bose, R. Beed, A Smart Farming Production Approach Using Drones and IoT after pandemic situations, In Proc of International Conference on Integrative Science and Engineering (ICISE) 2023,September 2023. 4. S. Bose, A. Dutta, Study and Development of Online Recommendation System for Healthcare Support, In Proc of International Conference on Integrative Science and Engineering (ICISE) 2023, September 2023. 5. S. Bose, J. Paul, Study and development of a Machine Learning-Based Intelligent Food Recommendation System, In Proc of International Conference on Integrative Science and Engineering (ICISE) 2023, September 2023. 6. A. Bose, R. Pal Das, S. Bose, Visualization of Figural Representation and Emotion Recognition Using Deep Learning, In Proc of International Conference on Integrative Science and Engineering (ICISE) 2023, September 2023. 7. S. Bose, Disease Prediction System using Machine Learning, In Proc of International Conference on Engineering Design and Computing (ICEDC)-2024, February 2024.

	8. S. Bose, A. Mondal, Cognitive Transfer Learning: Leveraging Human-Like Learning Strategies for Machine Intelligence, In Proc of International Conference on Engineering Design and Computing (ICEDC)-2024, February 2024.
	9. S. Bose, R. Mondal, Ephemeral Learning Machines: Adaptable Models for Rapidly Changing Data Environments, In Proc of International Conference on Engineering Design and Computing (ICEDC)-2024, February 2024.
	10. S. Bose, M. Mandal, Meta-Reasoning Agents: Self-Aware Systems for Autonomous Decision-Making, In Proc of International Conference on Engineering Design and Computing (ICEDC)-2024, February 2024.
	11. S. Bose, A. Chatterjee, Fashion Trend forecasting with machine learning: predicting consumer preferences for personalized recommendation Proc of International Conference on Engineering Design and Computing (ICEDC)-2024, February 2024.
	12. S. Bose, S. Saha, Graph neural network for culinary pairing; enhancing flavor harmony in food recommendation, In Proc of International Conference on Engineering Design and Computing (ICEDC)-2024, February 2024.
	13. S. Bose, N. Kumari, Eco aware Machine learning: Minimizing Environmental Footprints in Model training, In Proc of International Conference on Engineering Design and Computing (ICEDC)-2024, February 2024.
	14. S. Bose, S. Pramanick, Quantum-inspired neural networks: A hybrid approach to enhance computational efficiency, In Proc of International Conference on Engineering Design and Computing (ICEDC)-2024, February 2024.
	15. S. Bose, P. Gorai, Neuromyotonic Fusion: Integrating Symbolic Reasoning with Deep Learning Architectures, In Proc of International Conference on Engineering Design and Computing (ICEDC)-2024, February 2024.
	16. S. Bose, S. Midya, Dynamic Object Recognition in Visual Search: A Real Time Machine Learning Framework, In Proc of International Conference on Engineering Design and Computing (ICEDC)-2024, February 2024.
	17. S. Bose, S. Acharjya, Leaf Disease Detection using Machine Learning: A Review and Comparative Analysis, In Proc of International Conference on Engineering Design and Computing (ICEDC)-2024, February 2024.
	18. S. Bose, S. Marick, Disease Prediction System using Machine Learning, In Proc of International Conference on Engineering Design and Computing (ICEDC)-2024, February 2024.
	19. S. Bose, S. Ghosh, Face recognition-grounded attendance monitoring system for educational institution, In Proc of International Conference on Engineering Design and Computing (ICEDC)-2024, February 2024.
	20. S. Bose, S. Chakraborty, S. Paul, S. Debnath, P. Chakraborty, Dynamic Pricing Strategies in E-commerce: A Reinforcement Learning Approach for Real-time Adaptation, In Proc of International Conference on Integrative Science and Engineering (ICISE) 2024, June 2024.
	21. S. Bose, S. Marick, Ensemble Methods for Robust Food Recommendations: Aggregating Models for Improved Diversity and Accuracy, In Proc of International Conference on Integrative Science and Engineering (ICISE) 2024, June 2024.

22. S. Bose, S. Midya, Deep Style Embeddings for Fashion Recommendation: Bridging the Gap between Visual Aesthetics and User Preferences, In Proc of International Conference on Integrative Science and Engineering (ICISE) 2024, June 2024.

23. S. Bose, D. Mondal, S. Ghosh, T. Chowdhury, S. Guha, S. Saif, Neuroevolutionary Strategies: Combining Evolutionary Algorithms with Deep Learning for Model Design, In Proc of International Conference on Integrative Science and Engineering (ICISE) 2024, June 2024.

24. S. Bose, A. Biswas, S. Mondal, S. Das, J. Chakraborty, S. Bhattacharjee, Explainable AI in Culinary Arts: Interpretable Models for Transparent Food Recommendations, In Proc of International Conference on Integrative Science and Engineering (ICISE)2024, June 2024.

25. Sangita Bose, Romit S Beed, Clustering-based Multivariate Prediction Model for Infectious Disease Forecasting in India,9th International Conference on Data Management, Analytics & Innovation, January,2025

26. Sourav Malakar, Sangita Bose, Saptarsi Goswami, A clustering-based prediction approach for new cases of COVID-19 in India,9th International Conference on Data Management, Analytics & Innovation, January,2025

Journal Publications

1. S. Bose S. Samanta, S. Chatterjee, B. Chakraborty, P. Halder, "An Analysis and Discussion of Human Sentiment Based on Social Network Information", International Journal of HIT Transaction on ECCN, Volume 7, Issue-1A (2021), Page 62-71, ISSN: 0973-6875 DOI: 10.5281/zenodo.5892855

Book Chapters

1. Sangita Bose, Department of Computer Science, Swami Vivekananda University, "Sustainable and Predictive Analytics Model", Chapter 12, pp. 143-156, January 2024, [ISBN Number: 978-93-5967-752-1].

2. Sangita Bose, Department of Computer Science, Swami Vivekananda University, "Applications of Internet of Things (IoT) in Smart Cities", Chapter 1, pp. 9-19, Chapter 15, pp. 221-218, May 2024, [ISBN Number: 978-81-974233-0-7].

3. Sangita Bose, Department of Computer Science, Swami Vivekananda University, "The Evolution and Future of Generative AI: From Theory to Practice.", Chapter 1, pp. 9-11, August 2024, [ISBN Number: 978-81-974233-5-2].

4. Sangita Bose, Department of Computer Science, Swami Vivekananda University, "Application of Machine Learning in Smart Education Technology", Chapter 1, pp. 9-12, Chapter 7, pp. 37-41, October 2024, [ISBN Number: 978-81-974233-2-1].

PATENT

1. **Title of the Invention:** Blockchain crowdfunding Platform
 Application No: 202431091485 A
 Publication Date: 29/11/2024
 2. **Title of the Invention:** Youtube Clone Video Library
 Application No: 202431093720 A

Publication Date: 06/12/2024

3. **Title of the Invention:** An intelligent gender identification method based on facial images using compound modules **Application No:** 20243191480 A

Publication Date: 29/11/2024

4. **Title of the Invention :** Brain Tumor Prediction using Machine Learning

Application No: 202431092982 A

Publication Date: 06/12/2024

5. **Title of the Invention :** Cardiovascular Diseases Prediction using Multimodal Methodology in Deep Learning

Application No: 202431093353 A

Publication Date: 06/12/2024

6. **Title of the Invention :** Crime pattern analysis and rate prediction

Application No: 202431093827 A

Publication Date: 06/12/2024

7. **Title of the Invention :** Data analysis using machine learning on geo location data

Application No: 202431094195 A

Publication Date: 06/12/2024

8. **Title of the Invention :** Motion Maze-where Gestures Lead to Gaming Adventures

Application No: 202431094152 A

Publication Date: 06/12/2024

9. **Title of the Invention:** Parameter monitoring of incubator using IoT and Cloud

Application No: 202431094855A

Publication Date: 13/12/2024

10. **Title of the Invention:** Face mask detection in real time

Application No: 202431095248 A

Publication Date: 13/12/2024

11. **Title of the Invention:** Virtual Trial Room

Application No: 202431095278 A

Publication Date: 13/12/2024

12. **Title of the Invention:** A Heart arrhythmia prediction using Artificial neural network

Application No: 202431095820 A

Publication Date: 13/12/2024

13. **Title of the Invention:** Anti-fraud system for credit card transaction using machine learning & data science

Application No: 202431096209 A

Publication Date: 20/12/2024

14. **Title of the Invention:** Precision in Estimation of Crop Yields using Machine Learning

Application No: 202431095882 A

Publication Date: 20/12/2024

16. **Title of the Invention:** Analyzing customer bank churn using ensemble learning models

Application No: 202431096223 A

Publication Date: 20/12/2024

17. **Title of the Invention:** Plant disease detection application

Application No: 202431096218 A

Publication Date: 20/12/2024

18. **Title of the Invention:** Plant Leaf Disease Detection Using Deep Learning

	Application No: 202431095911 A **Publication Date:** 20/12/2024 19. **Title of the Invention:** Hybrid Compiler **Application No:** 202431039789 A **Publication Date:** 19/07/2024
Academic Awards	• An Analysis and Discussion of Human Sentiment Based on Social Network Information (2020)-ICEMC 2020[HALDIA INSTITUTE OF TECHNOLOGY] • Intermediate Level (04/2019 - 05/2019) [British Council] • Completed Skill Nation Certificate Course on various topics of Computer Science
Journal Reviewer	APPLIED BIOLOGICAL RESEARCH [For Conference "GLOBAL HEALTHCON 2023; Challenges & explications"] https://www.indianjournals.com/ijor.aspx?target=ijor:abr&type=home
Other salient features	**Professional Memberships & Affiliations** • **Membership in academic bodies (IEEE)** • **Participation in university committees** • **Reviewer/editorial board roles for journals** **Conference Participation & Invited Talks** • **Papers presented at national/international conferences** • **Keynote addresses and invited lectures** • **Organizing or chairing conferences/workshops** **Social Community & Extension Activities** • **Outreach programs** • **Student career counselling & guidance** • **Engagement with industry & government bodies** **Administrative Roles** • **Positions held (HOD, Program Coordinator)** • **Contributions to curriculum development** • **Leadership in university initiatives** **Technical & Soft Skills** • **Expertise in relevant software/tools** • **Leadership, Teamwork and communication skills**
Symposium/Workshop/ Conference/Seminar/Webinar	**Certificate of Participation** • Two Day National Webinar on "Applications of Computational Statistics in modern era", Department of Computer Centre Vidyasagar University, West Bengal, India, September 02-03, 2021 • International Webinar on Artificial Intelligence & Data Science Organised by: Department of Software Development, B.Voc Studies & IQAC, Asutosh College Kolkata - 700026,11th & 12th June, 2021, Certificate No: IWAIDS/ASU/SD/179 • Advanced Materials Synthesis, Characterization and Photovoltaic Application", IMPS College of Engineering & Technology (Approved by AICTE & Affiliated to MAKAUT) held on July 9th, 2020 • "The Process of Software Development in Modern Technology", IMPS College of Engineering & Technology(Approved by AICTE & Affiliated to MAKAUT), held on June 27th, 2020.

	• "Role of Data Science in studying Covid-19 pandemic", organised by Department of Computer Science in collaboration with IQAC, Bethune College,13.07.2020 • Understanding Deep Nets", 21th August , 2020, organized by Department of Computer Science, Behala College, Kolkata West Bengal • ONE-DAY WEBINAR on Future generation Computing and Applications: Smart Devices, School Of Mobile Computing & Communication, Jadavpur University, Kolkata & Government College Of Engineering & Ceramic Technology, Kolkata, 19th September, 2020 • NEP 2020 - The Future Roadmap for Higher Education', Globsyn Business School in association with the Confederation of Indian Industry (CII), Eastern Region, September 9 (Thursday), 2021 • Artificial Intelligence and Machine Learning" held virtually using GotoMeeting platform organized by Department of Computer Science and Technology & Department of Electrical Engineering of Global Institute of Science and Technology, Haldia, India from 21st of September, 2020 to 26th of September, 2020. • Webinar on Neural Networks and a brief insight into Deep Learning by Comp. Sc. Dept. Scottish Church College in collaboration with IQAC, Jul 10, 2020 • National Webinar on "Role Of Ethics and Values in Human Life" Organized by Department of Management, Synergy Institute Of Engineering & Technology, Dhenkanal, Odisha on 06.07.2021. Future Generation Computing and Applications: Cloud Computing" on the 26th of September 2020, Organized by School of Mobile Computing & Communications, JU & Government College of Engineering and Ceramic Technology, Kolkata.
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