

Dr. Sankhadeep Chatterjee

Assistant Professor Department of Artificial Intelligence Sardar Vallabhbhai National Institute of Technology Ichchhanath, Surat – 395007, Gujarat, India Journals: 23 (SCI/SCIE), 4 (Non-SCI) Conference Publications: 58 Book Chapters Published: 10 Awarded CSIR(SRF) 2021 GATE: 2015, 2017, NET (LS): 2018, 2019	Mobile: +91 81009 58655 Email: sankhadeep@aid.svnit.ac.in sdc.svnit@gmail.com Website: https://~/sankhadeepchatterjee Contact: 11, Paramahansa Dev Road P.O. Nabagram P.S. Uttara para, Dist. Hooghly West Bengal, India PIN - 712246
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Academic Background

- Ph.D. from Indian Institute of Engineering Science and Technology, Shibpur, 2024.
- Master of Technology in *Computer Science & Engineering* from University of Calcutta, Kolkata, 2017.
- Bachelor of Technology in *Computer Science & Engineering* from Maulana Abul Kalam Azad University of Technology (formerly known as West Bengal University of Technology), India, 2015.
- Higher Secondary (10 + 2) Examination in *Science* (Physics, Chemistry, Mathematics, Statistics) from Mahesh Sri Ramakrishna Ashram Vidyalaya (H.S.) (WBCHSE), 2011.
- Secondary (10th) Examination from Mahesh Sri Ramakrishna Ashram Vidyalaya (WBBSE), 2009.

Research Interest

Generative AI, Class Imbalance, Explainable AI, Multimodal Deep Learning, Representation Learning, Federated Learning, Active Learning, Affective Computing, Biomedical Data Analysis, Nature Inspired Computing, Metaheuristics

Work Experience

1. Assistant Professor (Grade-II), Department of Artificial Intelligence, Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat, since 10th October, 2025 till date.
2. Assistant Professor, Department of Computer Science and Technology, University of Engineering and Management, Kolkata, since 20th June, 2024 till 8th October, 2025.
3. Research Scholar, Department of Computer Science and Technology, Indian Institute of Engineering Science and Technology, Shibpur, since 21st October, 2020 till 19th June, 2024.
4. Assistant Professor, Department of Computer Science and Engineering, University of Engineering and Management, Kolkata, since 10th July, 2017 till 20th October, 2020.

Courses Taught

Deep Learning, Data Science & Data Analytics, Artificial Intelligence & Machine Learning, Soft Computing, Data Structure & Algorithms, Formal Language & Automata Theory, Compiler Design.

Research Publications

International Journal (SCI/SCIE Indexed)

1. **Sankhadeep Chatterjee**, Kushankur Ghosh, Saranya Bhattacharjee, Asit Kumar Das, Soumen Banerjee, “FedAR: Federated Artificial Resampling for Imbalanced Facial Emotion Recognition”, IEEE Transactions on Affective Computing, IEEE, December, 2024. (I.F. 9.6) (**SCIE Indexed**)
2. **Sankhadeep Chatterjee**, Kushankur Ghosh, Arghasree Banerjee, Soumen Banerjee, “Forecasting COVID-19 Outbreak Through Fusion of Internet Search, Social Media, and Air Quality Data: A Retrospective Study in Indian Context”, IEEE Transactions on Computational Social Systems, January 2022. (I.F. 5.0) (**SCIE Indexed**)
3. **Sankhadeep Chatterjee**, Saranya Bhattacharjee, Asit Kumar Das, Soumen Banerjee, “Imbalanced COVID-19 vaccine sentiment classification with synthetic resampling coupled deep adversarial active learning”, Machine Learning, Springer, May 2024. (I.F. 7.5) (**SCIE Indexed**)
4. Weiping Ding, Shouvik Chakraborty, Kalyani Mali, **Sankhadeep Chatterjee**, Janmenjoy Nayak, Asit Kumar Das, Soumen Banerjee, “An Unsupervised Fuzzy Clustering Approach for Early Screening of COVID-19 from Radiological Images”, IEEE Transactions on Fuzzy Systems, July 2021. (I.F. 12.02) (**SCI Indexed**)
5. **Sankhadeep Chatterjee**, Sarbartha Sarkar, Sirshendu Hore, Nilanjan Dey, Amira S. Ashour, Valentina E. Balas , “Particle Swarm Optimization Trained Neural Network for Structural Failure Prediction of Multi-storied RC Buildings”, Neural Computing and Applications, **Springer**, January 2016. (I.F. 1.57) (**SCIE Indexed**)
6. Sirshendu Hore, **Sankhadeep Chatterjee**, Sarbartha Sarkar, Nilanjan Dey, Amira S. Ashour, Dana B  las Timar, Valentina E. Balas , “Neural-based Prediction of Structural Failure of Multi Storied RC Buildings”, Structural Engineering and Mechanics, Vol. 58, No. 3, May, 2016, pp.459-473. (I.F. 0.93) (**SCI Indexed**)
7. **Sankhadeep Chatterjee**, Sarbartha Sarkar, Sirshendu Hore, Nilanjan Dey, Amira S. Ashour, Fuqian Shi, Dac-Nhuong Le, “Structural Failure Classification for Reinforced Concrete Buildings Using Trained Neural Network based Multi- Objective Genetic Algorithm, Structural Engineering and Mechanics, Techno Press (2017),(I.F. 1.012) (**SCI Indexed**).
8. Shouvik Chakraborty, **Sankhadeep Chatterjee**, Nilanjan Dey, Amira Ashour, Ahmed S. Ashour, Fuqian Shi, Kalyani Mali, “Modified Cuckoo Search Algorithm in Microscopic Image Segmentation of Hippocampus”, Microscopy Research and Technique, Wiley (May, 2017), (I.F. 1.13)(**SCI Indexed**).
9. **Sankhadeep Chatterjee**, Nilanjan Dey, Fuqian Shi, Amira S. Ashour, Simon James Fong, Soumya Sen, “Clinical application of modified Bag-of-Features coupled Hybrid Neural based classifier in Dengue Fever Classification using Gene Expression Data”, Medical & Biological Engineering & Computing, Springer, August 2017. (I.F. 1.916) (**SCI Indexed**)
10. **Sankhadeep Chatterjee**, Nilanjan Dey, Soumya Sen, “Soil Moisture Quantity Prediction using Optimized Neural Supported model for Sustainable Agricultural Applications”, Sustainable Computing: Informatics and Systems, Elsevier, September 2018. (I.F. 1.19) (**SCIE Indexed**)
11. **Sankhadeep Chatterjee**, Bimal Dutta, Nilanjan Dey, “Hybrid Neural Network based rainfall prediction supported by Flower Pollination Algorithm ”, Neural Network World, November, 2018. (**SCIE Indexed**)
12. Saubhik Paladhi, **Sankhadeep Chatterjee**, Takaaki Goto, Soumya Sen, “AFARTICA: A Frequent Item-Set Mining Method Using Artificial Cell Division Algorithm”, Journal of Database Management (JDM), 30(3), July, 2019. (**SCIE Indexed**)
13. Arghasree Banerjee, Mayukh Bhattacharjee, Kushankur Ghosh, **Sankhadeep Chatterjee**, “Synthetic Minority Oversampling in addressing imbalanced Sarcasm Detection in Social Media”, Multimedia Tools and Applications, Springer, May 2020. (I.F. 2.7) (**SCIE Indexed**)
14. Abhisek Haldar, **Sankhadeep Chatterjee**, Ankit Kotia, Niranjana Kumar, Subrata Kumar Ghosh, “Analysis of Rheological Properties of MWCNT/SiO₂ Hydraulic Oil Nanolubricants Using Regression and Artificial Neural Network”, International Communications in Heat and Mass Transfer, Elsevier, June 2020. (I.F. 4.127) (**SCIE Indexed**)
15. Mousomi Roy, Shouvik Chakraborty, Kalyani Mali, Deepayan Roy, **Sankhadeep Chatterjee**, “A robust image encryption framework based on DNA computing and chaotic environment”, Microsystem Technologies, Springer, January 2021. (I.F. 1.737) (**SCI Indexed**)

16. Shouvik Chakraborty, Mousomi Roy, **Sankhadeep Chatterjee**, Kalyani Mali, Soumen Banerjee, "Detection of HIV-1 progression phases from transcriptional profiles in ex vivo CD4+ and CD8+ T cells using meta-heuristic supported Artificial Neural Network", *Multimedia Tools and Applications*, Springer, January 2022. (I.F. 2.7) (**SCIE Indexed**)
17. **Sankhadeep Chatterjee**, Asit Kumar Das, Janmenjoy Nayak, Danilo Pelusi, "Improving Facial Emotion Recognition using Residual Autoencoder coupled Affinity based Overlapping Reduction", *Mathematics*, MDPI, January 2022. (**SCIE Indexed**)
18. Diptaraj Sen; Saubhik Paladhi; Jaroslav Frnda; **Sankhadeep Chatterjee**; Soumen Banerjee; Jan Nedoma, "Associative Classifier Coupled With Unsupervised Feature Reduction for Dengue Fever Classification Using Gene Expression Data", *IEEE Access*, 2022. (**SCIE Indexed**)
19. **Sankhadeep Chatterjee**, Soumyajit Maity, Mayukh Bhattacharjee, Soumen Banerjee, Asit Kumar Das, "Variational Autoencoder based Imbalanced COVID-19 detection using chest X-Ray Images", *New Generation Computing*, Springer, 2022. (**SCIE Indexed**)
20. **Sankhadeep Chatterjee**, Saranya Bhattacharjee, Kushankur Ghosh, Asit Kumar Das, Soumen Banerjee, "Class Biased Sarcasm Detection using BiLSTM Variational Autoencoder based Synthetic Oversampling", *Soft Computing*, Springer, 2022. (**SCIE Indexed**)
21. **Sankhadeep Chatterjee**, Soumyajit Maity, Kushankur Ghosh, Asit Kumar Das, Soumen Banerjee, "Majority biased facial emotion recognition using residual variational autoencoders", *Multimedia Tools and Applications*, Springer, July 2023. (**SCIE Indexed**)
22. Adarsh Singh, Bappaditya Mandal, Bishakha Biswas, **Sankhadeep Chatterjee**, Soumen Banerjee, Debasis Mitra, Robin Augustine, "Microwave Antenna-Assisted Machine Learning: A Paradigm Shift in Non-Invasive Brain Hemorrhage Detection", *IEEE Access*, IEEE, February, 2024. (I.F. 3.4) (**SCIE Indexed**)
23. Abhisek Halder, **Sankhadeep Chatterjee**, Ankit Kotia, Niranjana Kumar, Subrata Kumar Ghosh, "Modelling and optimization of thermal conductivity for MWCNT-SiO₂(20:80)/hydraulic oil-based hybrid nanolubricants using ANN and RSM", *Journal of Thermal Analysis and Calorimetry*, Springer, December, 2024. (I.F. 3.0) (**SCIE Indexed**)

International Journal (Non-SCI)

1. Soumen Banerjee, B. Rana, S. K. Parui, **Sankhadeep Chatterjee**, Nilanjan Dey. "HMSIW based Miniaturized Sensing Antennas for S- and C- Band Applications", *IEEE Sensors Letters*, 1(1), pp. 1 - 5, (2017)
2. Sirshendu Hore, Souvik Chakraborty, **Sankhadeep Chatterjee**, Nilanjan Dey, Amira S. Ashour, Le Van Chung, and Dac-Nhuong Le. "An Integrated Interactive Technique for Image Segmentation using Stack based Seeded Region Growing and Thresholding." *International Journal of Electrical and Computer Engineering (IJECE)* 6, no. 6 (2016) (I.F. 0.22) (**SCOPUS Indexed**).
3. **Sankhadeep Chatterjee**, Sarbartha Sarkar, Nilanjan Dey, Amira S. Ashour, Soumya Sen, Aboul Ella Hassanien. "Application of Cuckoo Search in Water Quality Prediction using Artificial Neural Network", *International Journal of Computational Intelligence Studies (Inderscience)*, June 2017.
4. **Sankhadeep Chatterjee**, Sarbartha Sarkar, Nilanjan Dey, Soumya Sen. "Non-dominated Sorting Genetic Algorithm - II induced Neural Supported Prediction of Water Quality with Stability Analysis", *Journal of Information & Knowledge Management, Special Issue on Big Data, Machine Learning, Analytics and Cloud Computing*, 2017. (Accepted) (**SCOPUS Indexed**) (Accepted)

Book Chapters

1. Sirshendu Hore, **Sankhadeep Chatterjee**, Nilanjan Dey, Amira S. Ashour, Valentina E. Balas, "A Vulnerability Analysis Mechanism Utilizing Avalanche Attack Model for Dependency Based Systems". *Advances in Computing Applications - Select Proceedings of ICACM 2016, 08/2016*; Springer (Information Systems and Applications), ISBN: 978-981-10-2630-0.

2. Sirshendu Hore, **Sankhadeep Chatterjee**, Shouvik Chakraborty, Rahul Kumar Shaw, “Analysis of Different Feature Description Algorithm in Object Recognition”. Feature Detectors and Motion Detection in Video Processing, A volume in the Advances in Multimedia and Interactive Technologies (AMIT) Book Series, IGI Global, 2017.
3. **Sankhadeep Chatterjee**, Sarbartha Sarkar, Nilanjan Dey, Amira S. Ashour, Soumya Sen, “Hybrid Non-dominated Sorting Genetic Algorithm - II-Neural Network approach toward Water Quality Classification”, *Advancements in Applied Metaheuristic Computing*, IGI Global, June 2017.
4. Shouvik Chakraborty, **Sankhadeep Chatterjee**, Nilanjan Dey, Amira Ashour, Kalyani Mali, “Intelligent Computing in Medical Imaging: A Study”, *Advancements in Applied Metaheuristic Computing*, IGI Global, June 2017.
5. Shouvik Chakraborty, **Sankhadeep Chatterjee**, Ajanta Das, Kalyani Mali, “Penalized Fuzzy C-Means-Enabled Hybrid Region Growing in Segmenting Medical Images”, *Hybrid Machine Intelligence for Medical Image Analysis*, Springer Singapore, June 2019.
6. Sankhadeep Chatterjee, Subham Dawn, Sirshendu Hore, “Artificial Cell Swarm Optimization”, *Frontier Applications of Nature Inspired Computation*, Springer, 2020.
7. Shouvik Chakraborty, **Sankhadeep Chatterjee**, Kalyani Mali, “An Optimized Intelligent Dermatologic Disease Classification Framework Based on IoT”, *Intelligent Computing: Image Processing Based Applications*, Springer, 2020.
8. Kyamelia Roy, Sheli Sinha Chaudhuri, Probhakar Roy, **Sankhadeep Chatterjee**, Soumen Banerjee, “Transfer Learning Coupled Convolution Neural Networks in Detecting Retinal Diseases Using OCT Images”, *Intelligent Computing: Image Processing Based Applications*, Springer, 2020.
9. Shouvik Chakraborty, Kalyani Mali, Sankhadeep Chatterjee, Soumya Sen, “Preprocessing and Discrimination of Cytopathological Images”, *Medical Internet of Things*, Taylor & Francis, 2021.
10. Shouvik Chakraborty, Kalyani Mali, Sankhadeep Chatterjee, “Edge Computing based Conceptual Framework for Smart Health Care Applications using Z-Wave and Homebased Wireless Sensor Network”, *Mobile Edge Computing*, Springer, 2021.

Conference

1. **Sankhadeep Chatterjee**, Sirshendu Hore, Saubhik Paladhi, Nilanjan Dey, “Counting All Possible Simple Paths Using Artificial Cell Division Mechanism for Directed Acyclic Graphs”, 2nd International Conference on Computing for Sustainable Global Development. INDIACom-2015, March 2015. (**IEEE Conference**)
2. **Sankhadeep Chatterjee**, Raktim Chakraborty, Nilanjan Dey, Sirshendu Hore, “A Quality Prediction Method for Weight Lifting Activity”, Michael Faraday IET International Summit 2015 (MFIIS 2015): An IET International Conference Focused Area Power-Control-Automation, September 2015.
3. Sirshendu Hore, **Sankhadeep Chatterjee**, Rahul Kr. Shaw, Nilanjan Dey, Jitendra Virmani, “Detection of Chronic Kidney Disease: A NN-GA based Approach”, CSI - 2015; 50th Golden Jubilee Annual Convention, At Delhi, Volume: **Springer** - AISC, November 2015.
4. Sirshendu Hore, **Sankhadeep Chatterjee**, V. Santhi, Nilanjan Dey, Amira S. Ashour, Valentina E. Balas, Fuqian Shi, “Indian Sign Language Recognition using Optimized Neural Networks”, 2015 International Conference on Information Technology and Intelligent Transportation Systems (ITITS 2015), At Xi'an, China, Volume: 455 of the series **Springer** AISC, pp 553-563, November 2016.
5. **Sankhadeep Chatterjee**, Subhadeep Ghosh, Subham Dawn, Sirshendu Hore, Nilanjan Dey, “Forest Type Classification: A Hybrid NN-GA Model Based Approach”, Third International Conference on Information System Design and Intelligent Applications, At Vishakhapatnam, Volume: **Springer** - AISC, January 2016.
6. **Sankhadeep Chatterjee**, Sirshendu Hore, Nilanjan Dey, Sayan Chakraborty, Amira S. Ashour, “Dengue Fever Classification using Gene Expression Data: A PSO based Artificial Neural Network Approach”. 5th International Conference on Frontiers in Intelligent Computing: Theory and Applications; **Springer**, June 2016.

7. **Sankhadeep Chatterjee**, Nilanjan Dey, Amira S. Ashour, Cornelia Victoria Anghel Drugarin, “Electrical Energy Output prediction using Cuckoo Search supported Artificial Neural Network”. World Conference on Smart Trends in Systems, Security and Sustainability (WS4 2017) At London, Volume: **Springer** LNNS series, February 2017.
8. **Sankhadeep Chatterjee**, Rhitaban Nag, Nilanjan Dey, Amira S. Ashour, “Efficient Economic Profit Maximization: Genetic Algorithm based Approach”. World Conference on Smart Trends in Systems, Security and Sustainability (WS4 2017) At London, UK, Volume: **Springer** LNNS series, February 2017.
9. **Sankhadeep Chatterjee**, Rhitaban Nag, Soumya Sen, Amitrajit Sarkar, “Towards Golden Rule of Capital Accumulation: A Genetic Algorithm Approach”. 16th International Conference on Computer Information Systems and Industrial Management Applications (CISIM 2017), Bialystok, Poland.
10. **Sankhadeep Chatterjee**, Soumen Banerjee, Kaustav Guha Mazumdar, Soumyadip Bose, Soumya Sen, “Non-dominated Sorting Genetic Algorithm-II supported Neural Network in Classifying Forest Types”, International Conference on Electronics, Materials Engineering & Nano-Technology (IEMENTech), Kolkata, 2017 (**IEEE Conference**).
11. **Sankhadeep Chatterjee**, Soumen Banerjee, Kaustav Guha Mazumdar, Soumyadip Bose, Soumya Sen, “Cuckoo Search coupled Artificial Neural Network in Detection of Chronic Kidney Disease”, International Conference on Electronics, Materials Engineering & Nano-Technology (IEMENTech), Kolkata, 2017 (**IEEE Conference**).
12. **Sankhadeep Chatterjee**, Simona Dzitac, Soumya Sen, Noemi Rohatinovici, Nilanjan Dey, Valentina Emilia Balas, “Hybrid Modified Cuckoo Search-Neural Network in Chronic Kidney Disease Classification”, 14th International Conference on Engineering of Modern Electric Systems (EMES), June 1-2, 2017, Oradea, Romania (**IEEE Conference**).
13. **Sankhadeep Chatterjee**, Nilanjan Dey, Soumya Sen, Amira S. Ashour, Simon James Fong, Fuqian Shi, “Modified Cuckoo Search based Neural Networks for Forest Types Classification”, 2nd International Conference on Information Technology and Intelligent Transportation Systems (ITITS 2017), At Xian, China Volume: IOS Press - Frontiers in Artificial Intelligence and Applications, May 2017.
14. **Sankhadeep Chatterjee**, Sarbartha Sarkar, Nilanjan Dey, Soumya Sen, Takaaki Goto, Narayan C Debnath, “Water Quality Prediction: Multi Objective Genetic Algorithm coupled Artificial Neural Network based approach”, IEEE 15th International Conference of Industrial Informatics INDIN’2017, Emden, Germany, July 2017, (**IEEE Conference**).
15. Shouvik Chakraborty, **Sankhadeep Chatterjee**, Nilanjan Dey, Amira Ashour, Ahmed S. Ashour, Fuqian Shi, “Gradient Approximation in Retinal Blood Vessel Segmentation”, 4th IEEE UPCon, 2017, (**IEEE Conference**).
16. Shouvik Chakraborty, Kalyani Mali, **Sankhadeep Chatterjee**, Soumen Banerjee, Koustav Guha Mazumdar, Mainak Debnath, Pikorab Basu, Soumyadip Bose, Kyamelia Roy, “Detection of Skin disease using Metaheuristic supported Artificial Neural Networks”, UEM Congress 2017, Chulalongkorn University, Bangkok, Thailand, July, 2017, (**IEEE Conference**).
17. Mousomi Roy, Shouvik Chakraborty, Kalyani Mali, **Sankhadeep Chatterjee**, Soumen Banerjee, Agniva Chakraborty, Rahul Biswas, Jyotirmoy Karmakar, Kyamelia Roy, “Biomedical image enhancement based on Modified Cuckoo Search and Morphology”, UEM Congress 2017, Chulalongkorn University, Bangkok, Thailand, July, 2017, (**IEEE Conference**).
18. Shouvik Chakraborty, Kalyani Mali, **Sankhadeep Chatterjee**, Soumen Banerjee, Aayush Sah, Sayan Pathak, Suparba Nath, Debkumar Roy. “Bio-medical Image Enhancement using Hybrid Metaheuristic coupled Soft Computing Tools”, 2017 IEEE 8th Annual Ubiquitous Computing, Electronics and Mobile Communication Conference (UEMCON), New York, September, 2017.
19. Mousomi Roy, Shouvik Chakraborty, Kalyani Mali, **Sankhadeep Chatterjee**, Soumen Banerjee, Shibjit Mitra, Rajarshee Naskar, Anubaab Bhattacharjee. “Cellular Image Processing using Morphological Analysis”, 2017 IEEE 8th Annual Ubiquitous Computing, Electronics and Mobile Communication Conference (UEMCON), New York, September, 2017.

20. Shouvik Chakraborty, Kalyani Mali, **Sankhadeep Chatterjee**, Sumit Anand, Aavery Basu, Soumen Banerjee, Mitali Das, Abhishek Bhattacharya. "Image based Skin Disease Detection using Hybrid Neural Network coupled Bag-of-Features", 2017 IEEE 8th Annual Ubiquitous Computing, Electronics and Mobile Communication Conference (UEMCON), New York, September, 2017.
21. Shouvik Chakraborty, Kalyani Mali, **Sankhadeep Chatterjee**, Soumen Banerjee, Kyamelia Roy, Nairik Dutta, Navoniloy Bhaumik, Sourav Mazumdar. "Dermatological effect of UV rays owing to Ozone layer depletion", 4th International Conference on Opto-Electronics and Applied Optics, 2017 (OPTRONIX - 2017) September, 2017. (IEEE Conference)
22. Subrata Datta, Shouvik Chakraborty, Kalyani Mali, Soumen Banerjee, Kyamelia Roy, **Sankhadeep Chatterjee**, Madhurima Chakraborty, Sanchari Bhattacharjee. "Optimal usage of Pessimistic Association Rules in cost effective decision making", 4th International Conference on Opto-Electronics and Applied Optics, 2017 (OPTRONIX - 2017) September, 2017. (IEEE Conference)
23. Shouvik Chakraborty, Kalynai Mali, Soumen Banerjee, Kyamelia Roy, **Sankhadeep Chatterjee**, Debanjan Saha, Sushobhan Dutta, Swatilekha Majumder, ".Bag-of-Features based classification of Dermoscopic Images", 4th International Conference on Opto-Electronics and Applied Optics, 2017 (OPTRONIX - 2017) September, 2017. (IEEE Conference)
24. Shouvik Chakraborty, Kalyani Mali, **Sankhadeep Chatterjee**, Soumen Banerjee, Kyamelia Roy, Kamelia Deb, Sayan Sarkar, Neha Prasad, "An Integrated Method for Automated Biomedical Image Segmentation". 4th International Conference on Opto-Electronics and Applied Optics, 2017 (OPTRONIX - 2017) September, 2017. (IEEE Conference)
25. **Sankhadeep Chatterjee**, Bimal Dutta, Soumya Sen, Nilanjan Dey, Narayan C. Debnath, "Rainfall Prediction using Hybrid Neural Network approach". 2nd International Conference on Recent Advances in Signal Processing, Telecommunications & Computing (SigTelCom) - 2018, January 29th - 31st, 2018 Ho Chi Minh, Vietnam. (IEEE Conference)
26. Suseta Datta, **Sankhadeep Chatterjee**, "An efficient Indoor Occupancy Detection System using Artificial Neural Network". EHACON - 2018, 6-7 April, 2018, Springer.
27. Chayan Kumar Kayal, Sougato Bagchi, Debraj Dhar, Tirtha Maitra, **Sankhadeep Chatterjee**, "Hepatocellular Carcinoma Survival Prediction Using Deep Neural Network". EHACON - 2018, 6-7 April, 2018, Springer.
28. Debraj Dhar, Sougato Bagchi, Chayan Kumar Kayal, Soham Mukherjee, **Sankhadeep Chatterjee**, "Quantitative Rainfall Prediction: Deep Neural Network based approach". EHACON - 2018, 6-7 April, 2018, Springer.
29. Radhika Ray, Siddhartha Haldar, Subhadeep Biswas, Ruptirtha Mukherjee, Shayan Banerjee, **Sankhadeep Chatterjee**, "Prediction of Benzene Concentration of Air in Urban Area Using Deep Neural Network". EHA-CON - 2018, 6-7 April, 2018, Springer.
30. **Sankhadeep Chatterjee**, Nilanjan Dey, Amira S. Ashour, Soumya Sen, Fuqian Shi, "Structural Failure Prediction in Multi Storied Reinforced Concrete Buildings using Cuckoo Search Optimization Combined with Neural Network", 3rd International Conference on Information Technology and Intelligent Transportation Systems (ITITS 2018), At Xian, China Volume: IOS Press - Frontiers in Artificial Intelligence and Applications.
31. Anubhav Guha, Soham Ghosh, Ayushi Roy, **Sankhadeep Chatterjee**, "Epileptic Seizure Recognition Using Deep Neural Network", The first International Conference on Emerging Technology in Modeling and Graphics (IEMGRAPH, 2018), 6-7 September, 2018, Springer.
32. Siddhartha Haldar, Ruptirtha Mukherjee, Pushpak Chakraborty, Shayan Banerjee, Shreyaasha Chaudhury, **Sankhadeep Chatterjee**, "Improved Epilepsy Detection method by addressing Class Imbalance Problem", IEEE 9th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON), 2018, 1-2 November, 2018, University of British Columbia, Vancouver, Canada.
33. Pallavi Saha, **Sankhadeep Chatterjee**, Santanu Roy, Soumya Sen, "Normal Pressure Hydrocephalus detection using Active Contour coupled Ensemble based classifier", 3rd International Conference on Data Management, Analytics & Innovation, Kuala Lumpur, Malaysia, October, 2018, Springer. (In Press)

34. Shouvik Chakraborty, Kalyani Mali, **Sankhadeep Chatterjee**, Saptarsi Goswami, Amlan Chatterjee, Soumya Sen, “Automated Breast Cancer Identification by analyzing Histology Slides using Metaheuristic Supported Supervised Classification coupled with Bag-of-Features”, Fourth International Conference on Research in Computational Intelligence and Communication Networks (ICRCICN 2018), November, 2018. (**IEEE Conference**)
35. Shouvik Chakraborty, Kalyani Mali, Aishwarya Raman, **Sankhadeep Chatterjee**, Soumya Sen, Hanaa Hachimi, “Contrast Optimization using Elitist Metaheuristic Optimization and Gradient Approximation for Biomedical Image Enhancement”, Amity International Conference on Artificial Intelligence (AICAI’19), December, 2018, Dubai. (**IEEE Conference**)
36. Mousomi Roy, Shouvik Chakraborty, Kalyani Mali, Reshmi Debnath, **Sankhadeep Chatterjee**, Soumya Sen, “A Study on the Applications of the Biomedical Image Encryption Methods for Secured Computer Aided Diagnostics”, Amity International Conference on Artificial Intelligence (AICAI’19), December, 2018, Dubai. (**IEEE Conference**)
37. **Sankhadeep Chatterjee**, Sanmitra Kumar, Jeet Saha and Soumya Sen, “Hybrid Regression Model for Soil Moisture Quantity Prediction”, IEEE 5th International Conference on Opto-Electronics and Applied Optics (OPTRONIX - 2019), 18-20 March, 2019, Kolkata, India. (**IEEE Conference**) (In Press)
38. Mousomi Roy, Shouvik Chakraborty, Kalyani Mali, Sourav Mitra, Ishita Mondal, Rabidipto Dawn, Dona Das and **Sankhadeep Chatterjee**, “A Dual Layer Image Encryption using Polymerase Chain Reaction Amplification and DNA Encryption”, IEEE 5th International Conference on Opto-Electronics and Applied Optics (OPTRONIX - 2019), 18-20 March, 2019, Kolkata, India. (**IEEE Conference**) (In Press)
39. Mousomi Roy, Shouvik Chakraborty, Kalyani Mali, Raja Swarnakar, Kushankur Ghosh, Arghasree Banerjee and **Sankhadeep Chatterjee**, “Data Security Techniques based on DNA Encryption”, eHaCON - 2019, 17 - 25 August, 2019, Springer. (In Press)
40. Mousomi Roy, Shouvik Chakraborty, Kalyani Mali, Arghasree Banerjee, Kushankur Ghosh and **Sankhadeep Chatterjee**, “Biomedical Image Security using Matrix Manipulation and DNA Encryption”, eHaCON - 2019, 17 - 25 August, 2019, Springer. (In Press)
41. Kushankur Ghosh, Arghasree Banerjee, **Sankhadeep Chatterjee**, Soumya Sen, “Imbalanced Twitter Sentiment Analysis using Minority Oversampling”, 2019 IEEE 10th International Conference on Awareness Science and Technology (iCAST), October, 2019. (**IEEE Conference**)
42. Sayan Saha, Kaushik Majumder, Bitan Chakraborty, **Sankhadeep Chatterjee**, “Differential Evolution coupled Neural based Prediction of Soil Water Content”, IEMPOWER - 2019.
43. Kushankur Ghosh, Arghasree Banerjee, Mayukh Bhattacharjee, **Sankhadeep Chatterjee**, “Improved Twitter Sarcasm Detection by addressing Imbalanced Class Problem”, OPTRONIX-2020, Springer.
44. Arghasree Banerjee, Kushankur Ghosh, Arya Sarkar, Mayukh Bhattacharjee, **Sankhadeep Chatterjee**, “Effects of Class Imbalance Problem in Convolutional Neural Network based Image Classification”, OPTRONIX-2020, Springer.
45. Kushankur Ghosh, Arya Sarkar, Arghasree Banerjee, **Sankhadeep Chatterjee**, “Performance Improvement of Convolutional Neural Network using Random Under Sampling”, OPTRONIX-2020, Springer.
46. **Sankhadeep Chatterjee**, Asit Kumar Das, Kushankur Ghosh, Arghasree Banerjee, Mayukh Bhattacharjee, Soumen Banerjee, “Performance Improvement of Artificial Neural Networks by Addressing Class Overlapping Problem”, OPTRONIX-2020, Springer.
47. Mayukh Bhattacharjee, Kushankur Ghosh, Arghasree Banerjee, **Sankhadeep Chatterjee**, “Multilabel Sentiment Prediction by addressing Imbalanced Class Problem using Oversampling”, OPTRONIX-2020, Springer.
48. Shouvik Chakraborty, Kalyani Mali, Arghasree Banerjee, Mayukh Bhattacharjee, **Sankhadeep Chatterjee**, “Image Segmentation based on Galactic Swarm Optimization”, OPTRONIX-2020, Springer.
49. Shouvik Chakraborty, Kalyani Mali, Kushankur Ghosh, Arya Sarkar, **Sankhadeep Chatterjee**, “A Biomedical Image Segmentation Approach using Darwinian Particle Swarm Optimization and Thresholding”, OPTRONIX-2020, Springer.

50. Mousomi Roy, Shouvik Chakraborty, Kalyani Mali, Deepayan Roy, **Sankhadeep Chatterjee**, “An Image Security Method based on Low Dimensional Chaotic Environment and DNA Encoding”, OPTRONIX-2020, Springer.
51. Kushankur Ghosh, Arghasree Banerjee, **Sankhadeep Chatterjee**, Mayukh Bhattacharjee, Arya Sarkar, “Oversampling using Fuzzy Rough Set Theory in Imbalanced Neural based Diabetic patient Readmission Prediction: A hybrid approach”, International Conference on Computer Communication and Informatics (ICCCI -2021), IEEE.
52. Arghasree Banerjee, Kushankur Ghosh, **Sankhadeep Chatterjee**, Diptaraj Sen, “FOFO: Fused Oversampling Framework by addressing Outliers”, 2021 International Conference on Emerging Smart Computing and Informatics (ESCI), IEEE.
53. Debashis Majumdar, Mayukh Bhattacharjee, Sudipta Basu Pal, **Sankhadeep Chatterjee**, Rajiv Ganguly, “A Comparative Study Based on Long Short-Term Memory Networks for Assessing Photovoltaic Power”, Computational Intelligence in Pattern Recognition, CIPR-2021, Springer.
54. Sunanta Sarkar, Amit Ghosh, **Sankhadeep Chatterjee**, “Multi-sensor data fusion for Occupancy detection using Dempster-Shafer Theory”, International Conference on Computational Intelligence in Data Mining (ICCIDM-2021), Springer.
55. Arghasree Banerjee, Kushankur Ghosh, Rahul Sen, Aritro Chakraborty, Sudipta Roy Chowdhury, **Sankhadeep Chatterjee**, “NO PHISHING! Noise Resistant Data Resampling in Majority biased detection of Malicious Websites”, IEMIS-2022, Springer.
56. Soumyajit Maity, Rohit Prasan Mandal, Saranya Bhattacharjee, **Sankhadeep Chatterjee**, “Variational Autoencoder based Imbalanced Alzheimer detection using Brain MRI Images”, IEM-ICDC - 2021, Springer.
57. Saranya Bhattacharjee, Soumyajit Maity, Rahul Sen, **Sankhadeep Chatterjee**, “Class biased Sarcasm detection using Variational LSTM Autoencoder”, IEM-ICDC - 2021, Springer.
58. Souvik Panda, Saranya Bhattacharjee, Soumyajit Maity, Ankur Das, **Sankhadeep Chatterjee**, Asit Kumar Das, “Imbalanced Leaf Disease Classification through Transfer Learning-based Deep Feature Resampling”, International Conference on Data Mining (ICDMIN-2023), Montreal, Canada.

Conferences/Workshops/Symposiums Attended

1. Participated in “ETHICAL HACKING” workshop conducted by ‘Kyrion Digital Securities’ collaborated with “AIISEC” (IIT KGP) in 2012.
2. Attended “Mobile Robotics Workshop” conducted from 8th March 2013 to 10th March 2013 and received “ExpertRating” certification on Embedded Robotics.
3. Attended “5th International Conference on Frontiers of Intelligent Computing: Theory and applications (FICTA)” (Springer - AISC), 16 - 17 September, 2016.
4. Attended 2nd International Conference on Computing for Sustainable Global Development. INDIACom-2015, Delhi, March 2015. (**IEEE Conference**)
5. Attended International Conference on Electronics, Materials Engineering & Nano-Technology (IEMENTech), Kolkata, 2017 (**IEEE Conference**)
6. Attended Biospectrum 2017, International Conference on Biotechnology and Biological Sciences, Kolkata, India 25-26 August, 2017 (**Springer Conference**)
7. Attended 4th International Conference on Opto-Electronics and Applied Optics, 2017 (OPTRONIX - 2017) 2 - 3 November, 2017.
8. Attended Short Term Training Programme on “Networking Principles Management and Administration” organised by National Institute of Technical Teachers’ Training and Research, Kolkata (NITTTR, Kolkata), 18 - 29 June, 2018.
9. Attended 2nd International Conference on Biotechnology & Biological Sciences, BIOSPECTRUM 2018, Springer, 27-28 July 2018 at Kolkata

10. Attended IEEE 5th International Conference on Opto-Electronics and Applied Optics (OPTRONIX - 2019), 18-20 March, 2019, Kolkata, India.
11. Attended Faculty Development Program on “Development of IoT and its Applications” organised by Department of IT, IEST, Shibpur, 17th - 21st, 2019.
12. Organising Committee member of IEEE 2022 World AI IoT Congress, 6 - 9 June, 2022, (Seattle, USA)

Awards/Academic Achievements

- Awarded “Seal of Excellence” by European Commission for Horizon Europe Marie Skłodowska-Curie Actions call 2024 (Project Title: ‘Data-limited Explainable Generative AI for Medical Data Analysis’)
- Awarded Council of Scientific & Industrial Research-Senior Research Fellowship (CSIR-SRF 2019) by Govt. of India.
- Qualified UGC-NET 2018(December), 2019(December) (Lecturership)
- Received National fellowship during Master of Technology on the basis of GATE - 2015, (2015 - 2017).
- Completed Bachelor of Technology in Computer Science & Engineering under TFW scheme by Govt. of West Bengal, (2011 - 2015).
- Qualified JEST - 2015 (AIR - 219) in Theoretical Computer Science.
- Qualified GATE - 2015, GATE - 2017
- Received Second Best Paper award for “Prediction of Benzene Concentration of Air in Urban Area Using Deep Neural” Network in EHACON - 2018
- Received Best Paper award for “Improved Epilepsy Detection method by addressing Class Imbalance Problem” at IEEE 9th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON), 2018, 1-2 November, 2018, University of British Columbia, Vancouver, Canada.
- Received Best Paper award for “A Dual Layer Image Encryption using Polymerase Chain Reaction Amplification and DNA Encryption”, IEEE 5th International Conference on Opto-Electronics and Applied Optics (OPTRONIX - 2019), 18-20 March, 2019, Kolkata, India.

Reviewing Activities

Journal

- IEEE *Access* (SCI Indexed)
- IEEE *Sensors Letters*
- *Current Bioinformatics* (SCI Indexed)
- *Journal of Medical Imaging and Health Informatics* (SCI Indexed)
- *Journal of Experimental & Theoretical Artificial Intelligence* (Taylor & Francis) (SCIE Indexed)
- *International Journal of Ambient Computing and Intelligence* (IJACI) (Scopus Indexed)
- *Journal of Industrial Information Integration* (Scopus)
- *Journal of King Saud University - Computer and Information Sciences* (Scopus)
- *International Journal of Information System Modeling and Design* (IJISMD) (Scopus Indexed)
- *International Journal of Synthetic Emotions* (IJSE)

- International Journal of Rough Sets and Data Analysis (IJRSDA)
- International Journal of Information Technology and Management (IJITM) (Inderscience)
- International Journal of Green Computing
- Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization (Taylor & Francis)
- Multimedia Tools & Applications (Springer)

Conference / Special Issues

- Acted as Sub-Reviewer in “5th International Conference on Frontiers of Intelligent Computing: Theory and applications (FICTA)” (Springer - AISC), 16 - 17 September, 2016.
- Acted as Reviewer in “The 3rd International Conference on Fuzzy Systems and Data Mining”, (FSDM - 2017) Nov. 24-27, 2017, National Dong Hwa University, Hualien, Taiwan.
- Acted as Reviewer in “Second International Conference on Smart Trends for Information Technology and Computer Communications”, (SmartCom - 2017) Aug. 18-19, 2017, Pune, India.
- Acted as Reviewer in “4th International Conference on Opto-Electronics and Applied Optics, 2017” (OPTRONIX - 2017) September, 2017, Kolkata, India. (IEEE Conference)
- Acted as Reviewer in “The 4th International Conference on Fuzzy Systems and Data Mining”, (FSDM - 2018) 16th-19th November, 2018, Bangkok, Thailand.
- Acted as Reviewer for Special Issue on Ambient Advancements in Intelligent Computational Sciences (A2ICS-2017), For Journal of Intelligent & Fuzzy Systems- Applications in Engineering and Technology.
- Acted as Reviewer in “IEEE 5th International Conference on Opto-Electronics and Applied Optics” (OPTRONIX - 2019). 18-20 March, 2019, Kolkata, India.

Program Committee Member

- Acted as Organizing Committee Member of 4th International Conference on Opto-Electronics and Applied Optics, 2017 (OPTRONIX - 2017) 2-3 November, 2017.
- Member of Technical Program Committee of “The 4th International Conference on Fuzzy Systems and Data Mining” Nov. 16-19, 2018, Bangkok, Thailand.
- Program Committee Member of 2nd International Conference on Advanced Informatics for Computing Research, Shimla, India, 2018.
- Program Committee Member of International Conference and Workshops on Pervasive Computing Advances and Applications-PerCAA-2019.
- Program Committee Member of 3rd International Conference on Advanced Informatics for Computing Research (ICAICR - 2019)

Memberships of Professional Societies

- Student Member of Institute of Electrical and Electronic Engineers (IEEE) (Membership No. 94343243).
- Member of IEEE Big Data Community.
- Member of IEEE Cloud Computing Community.
- Member of IEEE Internet of Things Community.

- Member of IEEE Smart Cities Community.
- Member of International Association of Engineers (IAENG), Hong Kong (Membership No. 191118).
- Member of IAENG Society of Artificial Intelligence.
- Member of IAENG Society of Bioinformatics.
- Member of IAENG Society of Computer Science.
- Member of IAENG Society of Data Mining.

Extracurricular Activities

- District Runner up in Air India ‘Rank Award’, 2008 - 2009.
- Champion in Quiz competition organised by Petroleum Conservation Research Association (Ministry of Petroleum & Natural Gas, Govt. of India) in 2009.
- Bagged the First position in Kolkata Book Fair Quiz Organised by Guild in 2009 & 2011

Personal Information

Nationality	Indian
Date of Birth	February 21, 1994
Gender	Male
Language Spoken	English, Bengali, Hindi

(Sankhadeep Chatterjee)

Date : November 13, 2025

Place : Kolkata, India