

HALDIA INSTITUTE OF TECHNOLOGY

Department of Computer Science & Engineering

Research Activity (A.Y. 21-22, 222-23, 23-24)

Journal Publications

Academic Year	Name of Journal
2023-2024	<ol style="list-style-type: none"> 1. Sk Maidul Islam, Subhankar Joardar, and Arif Ahmed Sekh. "Fine grained image retrieval: A case study on Bangle." SN Computer Science. (Scopus) (Communicated in Review). 2. Sk Maidul Islam, Subhankar Joardar, and Arif Ahmed Sekh. "A survey on Fashion Image Retrieval." ACM Computing Surveys (2023). (SCIE, Scopus) (Impact factor: 16.6) DOI: https://doi.org/10.1145/3636552. (SCIE) [IF : 2.577] 3. Sumanta Kuila, Namrata Dhanda, Subhankar Joardar, "ECG signal classification using DEA with LSTM for arrhythmia detection", Multimedia Tools and Applications, Springer Nature, https://doi.org/10.1007/s11042-023-17095-x, OCT 2023. (SCIE) 4. Subhrananda Goswami, Sukumar Mondal, Subhankar Joardar and Chandan Bikas Das, "HS-WOA-MANET: a hybrid meta-heuristic approach-based multi-objective constraints for energy efficient routing protocol in mobile ad hoc networks", Journal of Reliable Intelligent Environments, https://doi.org/10.1007/s40860-023-00216-6, Springer Nature Switzerland, Dec 2023(IF: 5.26). (Scopus) 5. "Tahamina Yesmin, Dr. Harsh Lohiya, Pinaki Pratim Acharjya, ""An Analysis of Watershed Approach with Distance Transform and Laplacian of Gaussian Operator in Regard to Evaluating Medical Images"", International Journal of Computer Science and Mobile Computing, ISSN 2320-088X, Vol. 12, Issue. 10, October 2023, pp.1 – 9. DOI: https://doi.org/10.47760/ijcsmc.2023.v12i10.001 6. Dutta, S., Giri, A., Giri, D., Neogy, S., Dahal, K., & Chen, W., "Optimum Node Deployment Policy (ONDP) for WSN: Trade-of Between Maximization of Area Coverage and Lifetime," Wirel. Pers. Commun., Springer, 133(2), pp. 1055–1080 (2023). DOI: https://doi.org/10.1007/s11277-023-10804-7. [SCIE] 7. Sarcar, P., Giri, A. & Rout, M. "Secured DV-Hop localization scheme for WSN in environmental monitoring.", Wireless Netw (2023). https://doi.org/10.1007/s11276-023-03572-6 [SCIE] 8. Ray P, Giri D, Meng W, Hore S. GPOD: An Efficient and Secure Graphical Password Authentication System by Fast Object Detection. Multimedia Tools and Applications. 2023 Dec 12:1-50.. [SCIE] 9. S. Kuila, N.Dhanda, S. Joardar, "ECG signal classification using DEA with LSTM for arrhythmia detection", Multimedia Tools and Applications, Springer Nature, October, 2023. 10. Sanchita Saha, Arup Kumar Chattopadhyay, Anup Kumar Barman, Amitava Nag and Sukumar Nandi, "Secret Image Sharing Schemes: A Comprehensive Survey," in IEEE Access, vol. 11, pp. 98333-98361, 2023, doi: 10.1109/ACCESS.2023.3304055. [SCIE] 11. Sanchita Saha, Ashlesha Hota, Bikramjit Choudhury, Amitava Nag and Sukumar Nandi, "NTRU and Secret Sharing Based Secure Group Communication for IoT Applications," in IEEE Access, vol. 11, pp. 117341-117350, 2023, doi: 10.1109/ACCESS.2023.3325305. [SCIE] 12. Arup Kumar Chattopadhyay, Sanchita Saha, Amitava Nag and Sukumar Nandi. "Secret Sharing: A Comprehensive Survey, Taxonomy and Applications", Computer Science Review, (Accepted, Nov 2023). [SCIE] 13. P. Pradhan, C. Roy, S. Misra and S. Chattopadhyay, "Dec-Safe: Dynamic Decision Generation Mechanism for Delivering Safety Services in Vehicular Networks," in IEEE Transactions on Vehicular Technology, doi: 10.1109/TVT.2023.3292210. [SCI]

	<ol style="list-style-type: none"> 14. Mazumdar A et al. , “Machine Learning based Autism screening Tool - a modified approach” in Journal Multimedia Tools and Applications, Springer Nature doi :- 10.1007/s11042-024-18519-y Feb 2024 [SCIE] 15. Tirtharaj Sen, Pranabes Gangopadhyay, Janhabi Mukherjee, Hrick Karna Roy, Bidesh Chakraborty. “Classifying Patients on Kidney Function Test using Machine Learning Algorithms with Dimensionality Reduction Principles”, MOENIA JOURNAL, Vol-10, Issue-7, PAGE NO:80-94, DOI:10.37896/MOENIA10.7/308. [Scopus] 16. PranabesGangopadhyay, Tirtharaj Sen, Janhabi Mukherjee, Hrick Karna Roy, Bidesh Chakraborty. “Liver Disease Early Diagnosis When Coming Across Machine Learning, Deep Learning, and Federated Learning, A Review of Methods and Applications”, MOENIA JOURNAL, Vol-10, Issue-7, PAGE NO:198-212, DOI:10.37896/MOENIA10.7/319. [Scopus] 17. Dhal, K.G., Das, A., Sasmal, B. Ghosh, T.K. Eagle Strategy in Nature-Inspired Optimization: Theory, Analysis, Applications, and Comparative Study. Arch Computat Methods Eng (2023). https://doi.org/10.1007/s11831-023-10014-1. [SCIE] 18. Dhal, K.G., Das, A., Ray, S., Rai, R. and Ghosh, T.K., 2023. Archimedes optimizer-based fast and robust fuzzy clustering for noisy image segmentation. The Journal of Supercomputing, 79(4), pp.3691-3730. [SCIE]
2022-2023	<ol style="list-style-type: none"> 1. Angana Chakraborty, Subhankar Joardar, Arif Ahmed Sekh, “Ensemble Classifier for Hindi Hostile Content Detection”, ACM Transactions on Asian and Low-Resource Language Information Processing, https://doi.org/10.1145/3591353,10th April, 2023[SCIE] (IF: 1.471) 2. Sk Maidul Islam, Subhankar Joardar, and Arif Ahmed Sekh. ” Ornament image retrieval using few shot learning.” International Journal of Multimedia Information Retrieval (2023), 12(2), p.30. (SCIE, Scopus) (Impact factor: 5.6) DOI: 10.1007/s13735-023-00299-0. [SCIE] 3. S. Kuila, N. Dhanda, S. Joardar, “ECG signal classification to detect heart arrhythmia using ELM and CNN”, Multimedia Tools and Applications , Springer Nature, https://doi.org/10.1007/s11042-022-14233-9, NOV, 2022. [SCIE] 4. Manasi Jana, Biswapati Jana, Subhankar Joardar, Local feature based self-embedding fragile watermarking scheme for tampered detection and recovery utilizing AMBTC with fuzzy logic”, Journal of King Saud University-Computer and Information Sciences. https://doi.org/10.1016/j.jksuci.2021.12.011, ISSN 1319-1578, Nov, 2022. [SCIE] 5. Sujit Kumar De, Kousik Bhattacharyaa, Partha Pratim Bhattacharya, Prasun Kumar Nayak and Subhankar Joardar (2022), Solution of a pollution sensitive supply chain model for novel strategic fuzzy game via Bernoulli Trial, Computers & Operations Research, Science direct, Impact Factor :4.008, https://doi.org/10.1016/j.cor.2022.105846, August, 2022. [SCI] 6. Tahamina Yesmin, Harsh Lohiya and Pinaki Pratim Acharjya, "Comparative Study and Analysis of Edge Detection Operators in Marker Controlled Watershed Transformation Algorithm on Various Medical Images", International Journal of Computer Applications, ISSN: 0975 – 8887, vol. 185(16), pp.1-17, June 2023. DOI: 10.5120/ijca2023922854 7. Jayeeta Majumder, Chittaranjan Pradhan,” An interpolation based Steganographic technique with least-significant-bit and pixel value differencing in a pixel block”, Indonesian Journal of Electrical Engineering and Computer Science (IJECS), Vol. 27, No. 2, August 2022, ISSN: 2502-4752, pp- 1074-1082. [SCOPUS] 8. Ray, P., Bera, A., Giri, D. et al. Style matching CAPTCHA: match neural transferred styles to thwart intelligent attacks. Multimedia Systems (2023). https://doi.org/10.1007/s00530-023-01075-0 [SCI] 9. Sumanta Kuila, Namrata Dhanda, Subhankar Joardar, “ECG Signal Classification to detect Heart Arrhythmia using ELM and CNN”, Multimedia Tools and Applications, Springer Nature, Accepted: 4 November 2022.[SCIE] 10. S. Jana, M. Mallik, A. Khan, A. K. Maji, and R. K. Pal, Design and Analysis of a Modified 3D Sudoku Solver, in IEEE Access, pp. 1-17, 2023. Print ISSN: 2169-3536, Online ISSN: 2169-3536, doi: 10.1109/ACCESS.2023.3256420(SCI)

	<ol style="list-style-type: none"> 11. Angana Chakraborty, Subhankar Joardar, Arif Ahmed Sekh, "Ensemble Classifier for Hindi Hostile Content Detection", ACM Transactions on Asian and Low-Resource Language Information Processing, https://doi.org/10.1145/3591353, 10th April, 2023 [SCIE] 12. Chakraborty S, Chatterjee K, Dey P. Discovering Tampered Image in Social Media Using ELA and Deep Learning. SN Computer Science. 2022 Sep;3(5):1-8. https://doi.org/10.1007/s42979-022-01311-w. [SCOPUS] 13. "Lakshmi B.S, N Ameen, A Kodavendla, Subir Chakraborty, I Barwani, Mrs Shikha, "" Big Data Analysis : Preserving Security and Privacy with Hybrid Cloud Computing Environment"", Journal of Aeronautical Materials, [Scopus, DOAJ, INSPEC]" 14. Sudeshna Sani, Abhijit Bera, Dipra Mitra, Dr. Kalyani Maity Das, "Covid-19 Detection using Chest X-ray Images based on Deep Learning", International Journal of software Science and Computational Intelligence, Volume-XIV, Issue-I, October 2022, DOI: 10.4018/IJSSCI.312556 [ESCI] 15. R. Saha, S. Misra, A. Chakraborty, C. Chatterjee and P. K. Deb, "Data-Centric Client Selection for Federated Learning Over Distributed Edge Networks," in IEEE Transactions on Parallel and Distributed Systems, vol. 34, no. 2, pp. 675-686, 1 Feb. 2023, doi: 10.1109/TPDS.2022.3217271. [SCI].
2021-2022	<ol style="list-style-type: none"> 1. Partha Pratim Bhattacharya, Kousik Bhattacharya, Sujit Kumar De, Prasun Kumar Nayak and Subhankar Joardar, "A fuzzy strategic game solution for a green supply chain model", The International Journal of Research on Intelligent Systems for Real Life Complex Problems, Applied Intelligence, Springer Nature 2022, April 2022, https://doi.org/10.1007/s10489-022-03447-x. [SCIE] 2. Sk Maidul Islam, Subhankar Joardar, Debi Prosad Dogra, and Arif Ahmed Sekh. "DSSN: dual shallow Siamese network for fashion image retrieval." Multimedia Tools and Applications (2022), pp. 1-17. (SCIE, Scopus) (Impact factor: 2.577) DOI: 10.1007/s11042-022-14204-0. [SCIE] 3. S. Kuila, N. Dhanda, S. Joardar, "ECG signal classification and arrhythmia detection using ELM-RNN", Multimedia Tools and Applications, Springer Nature, , https://doi.org/10.1007/s11042-022-11957-6, March, 2022. [SCIE] 4. Subhrananda Goswami, Sukumar Mondal and Subhankar Joardar, "Energy consumption of Reactive and proactive protocols in Mobile Ad Hoc Network in fuzzy inference system", International Research Journal of basic and Applied Science, Vol 6, issue 1, Dec 2021, ISBN 2455-6718, [SCOPUS] 5. Sk Maidul Islam, Subhankar Joardar, Debi Prosad Dogra, Arif Ahmed Sekh, "Ornament Image Retrieval Using Multimodal Fusion", SN Computer Science (2021), A SPRINGER NATURE JOURNAL, July, 2021. https://doi.org/10.1007/s42979-021-00734-1. [SCOPUS] 6. S. Kuila, N. Dhanda, S. Joardar, "ECG Signal Classification for Arrhythmia detection using DEA and ELM", Journal of Theoretical and Applied Information Technology, July 2021, Vol. 99, No. 14, pp 3403-3416. [SCOPUS] 7. Sumanta kuila, Namrata Dhanda, Subhankar Joardar (2020), Feature extraction of Electrocardiogram signal using machine learning classification, International Journal of Electrical and Computer Engineering (IJECE) ISSN: 2088-8708, VOL 10, No 6 (Scopus Indexed). DOI: http://doi.org/10.11591/ijece.v10i6.pp6598-6605, Dec, 2020 [SCOPUS] 8. Tahamina Yesmin And Pinaki Pratim Acharjya, "Medical Image Processing Technique For Analysing Ct Scan Images By Using Improved Marker-Controlled Watershed Algorithm", Stochastic Modeling & Applications, ISSN: 0972-3641, Vol. 26. No. 3 (January - June, Special Issue 2022, Part - 2), pp. 1372-1378, 2022. [NON-SCI] 9. Somdeep Das, Pinaki Pratim Acharjya, Hiranmoy Mondal, Mauparna Nandan, "Machine Learning Approach To Augment Performance Of ISED Level-1 Students Through Their Online Learning Behaviour" International Journal of Mechanical Engineering, ISSN: 0974-5823, Vol. 7 No. 1 January, 2022. [NON-SCI]. 10. Shantanu Mukherjee, Sandip Roy and Pinaki Pratim Acharjya, "Software

	<p>Security Testing Types and their Evaluation against the Testing Metrics”, International Journal of Mechanical Engineering, ISSN: 0974-5823, Vol. 7 No. 1 January, 2022.[NON-SCI].</p> <p>11. D. Pandey G. A. Ogunmola, W. Enbeyle, M. Abdullahi, B. K. Pandey and S. Pramanik, “Covid-19: A Framework for Effective Delivering of Online Classes during Lockdown”, Human Arenas, 2021, https://doi.org/10.1007/s42087-020-00175-x[SCOPUS]</p> <p>12. R. Ghosh and S. Pramanik, “A Novel Performance Evaluation of Resourceful Energy Saving Protocols of Heterogeneous WSN to Maximize Network Stability and Lifetime, International Journal of Interdisciplinary Telecommunications and Networking, vol. 13, issue 2, 2021.[ESCI]</p> <p>13. R. Ghosh, S. Mohanty, P. K. Pattnaik and S. Pramanik, “Performance Analysis Based on Probability of False Alarm and Miss Detection in Cognitive Radio Network”, International Journal of Wireless and Mobile Computing, vol. 20, no. 4, https://doi.org/10.1504/IJWMC.2021.117530, 2020.[SCOPUS]</p> <p>14. R. Jayasingh, J. Kumar R.J.S, D. B. Telagathoti, K. M. Sagayam and S. Pramanik, “Speckle noise removal by SORAMA segmentation in Digital Image Processing to facilitate precise robotic surgery”, International Journal of Reliable and Quality E-Healthcare, vol. 11, issue 1, DOI: 10.4018/IJRQEH.295083, 2022.[SCOPUS]</p> <p>15. Giri, A., Dutta, S. & Neogy, S. An "Optimized Fuzzy Clustering Algorithm for Wireless Sensor Networks." Wireless PersCommun 126, 2731–2751 (2022). https://doi.org/10.1007/s11277-022-09839-z. [SCI]</p> <p>16. Giri, A., Dutta, S., Neogy, S. et al. "Adaptive Cross-Layer Routing Protocol for Optimizing Energy Harvesting Time in WSN." Wireless PersCommun 122, 825–843 (2022). https://doi.org/10.1007/s11277-021-08927-w. [SCI]</p> <p>17. "Mrinmoy Sen, Indrajit Banerjee and Tuhina Samanta. Received signal strength based power map generation in 2-D obstructed wireless sensor network. Int. J. Information and Communication Technology. (in press, 2022). doi:10.1504/IJICT.2022.10046848.[SCOPUS]</p> <p>18. "Swarnajit Bhattacharya, Mrinmoy Sen, “Attendance System with Face Recognition and Image Processing (AI and ML) using Python”, IJIRE, Vol. 3, Issue-2 (March-April 2022), pp. 249-262.[NON-SCI]</p> <p>19. Swarnajit Bhattacharya, Soumya Roy, Mrinmoy Sen, Uday Maji, “IoT based smart soil health management system with remote monitoring and control system”, IJEAST, vol. 7, issue 2, (June, 2022), pp. 114-123. doi: 10.33564/IJEAST.2022.v07i02.015.[NON-SCI]</p> <p>20. S. Kuila, N. Dhanda, S. Joardar, “ECG SIGNAL CLASSIFICATION FOR ARRHYTHMIA DETECTION USING DEA AND ELM”, Journal of Theoretical and Applied Information Technology, July 2021, Vol. 99, No. 14, pp 3403-3416.[SCOPUS]</p> <p>21. "S. Kuila, N. Dhanda, S. Joardar, “ECG signal classification and arrhythmia detection using ELM-RNN”, Multimedia Tools and Applications, Springer Nature, March 2022. Vol. 81, No. 18, pp 25233-25249.[SCI]</p> <p>22. ‘Q-Safe: QoS-Aware Pricing Scheme for Provisioning Safety-as-a-Service’, Patrali Pradhan, Chandana Roy, Sudip Misra, IEEE Transactions on Services Computing, November, 2021. DOI: 10.1109/TSC.2021.3131658.[SCI]</p> <p>23. "S. Jana, A. Dey, A. K. Maji, and R. K. Pal, “A novel hybrid genetic algorithm-based firefly mating algorithm for solving sudoku,” Innovations in Systems and Software Engineering, pp. 1–15, 2021.[ESCI]</p> <p>24. Mamata Dalui, Bidesh Chakraborty, Nilanjana Das, and Biplab K. Sikdar, “NSRT diagram for identification of SACA and TACA rules in null-boundary”, International journal of Modern Physics C, 33(06), Jan 2022.[SCI]</p> <p>25. Bidesh Chakraborty, Mamata Dalui and Biplab K. Sikdar, “Synthesis of Scalable Single Length Cycle, Single Attractor Cellular Automata in Linear Time,” Complex Systems, 30(3), 2021 pp. 415–439.[ESCI]</p> <p>26. Maloy Dhar, and Bidesh Chakraborty, “A Video Based Human Detection and Activity Recognition – A Deep Learning Approach”, Turkish Journal of Computer and Mathematics Education, Vol-11, No-01, 2020.[NON-SCI]</p>
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Conference Publications

Academic Year	Name of Conference
2023-2024	<ol style="list-style-type: none"> 1. Manasi Jana, Biswapati Jana, Shubhankar Joardar, Sharmistha Jana, and Tzu Chuen Lu, "Secured Reversible Data Hiding Scheme with NMI Interpolation and Arnold Transformation, International Conference on Network Security and Blockchain Technology (ICNSBT 2023), the proceedings published in Lecture Notes in Networks and Systems, springer. ISBN 978-981-99-4432-3, https://doi.org/10.1007/978-981-99-4433-0. 2. Angana Chakraborty, Subhankar Joardar and Arif Ahmed Sekh, "Comparative Analysis of Different BERT-Based Machine Learning Models for Hostile Hindi Content Detection", 3rd Applied Signal Processing Conference (ASPCON), the proceedings published in IEEE, ISBN 979-8-3503-2587-4 3. Subhrananda Goswami, Sukumar Mondal, Subhankar Joardar and Chandan Bikash Das, "Adaptive Trust-based Optimal Route Selection Algorithm in MANET using Sooty Tern Optimization Algorithm", 7th International Conference on Electronics, Communication and Aerospace Technology (ICECA 2023), the proceedings published in IEEE explore, ISBN: 979-8-3503-4059-4, July 2023. 4. Subhrananda Goswami, Sukumar Mondal, Subhankar Joardar and Chandan Bikash Das, "An Energy-Efficient Optimal Routing Model for Mobile Ad Hoc Network Using Mine Blast Algorithm", 2023 International Conference in Advances in Power, Signal, and Information Technology(APSIT2023), the proceeding published in IEEE explore, August 2023, DOI: 10.1109/APSIT58554.2023.1020170. 5. Angana Chakraborty, Subhankar Joardar and Arif Ahmed Sekh, "BSVM: BERT-Based Support Vector Machine for Hindi Hostile Content Detection", 4th International Conference on Communication, Devices and Computing (ICCDC 2023), the proceeding published in lecture notes Electrical Eng., Vol. 1046, ISBN: 978-981-99-2709-8, DOI : 10.1007/978-981-99-2710-4, July, 2023. 6. Jheelam Mondal and Subhankar Joardar, "A Comparative Study to detect Cervical Dysplasia by using Pap Smear Images", 4th International Conference on Communication, Devices and Computing (ICCDC 2023), the proceeding will be published in lecture notes Electrical Eng., Vol. 1046, ISBN: 978-981-99-2709-8, DOI : 10.1007/978-981-99-2710-4, July, 2023. 7. Santanu Koley, Jayeeta Majumdar, Mihir Baran Bera and Pinaki Pratim Acharjya, "Multi-Tenancy Architecture for Augmented Security in Cloud Computing", Proc. 5th International Conference on Inventive Research in Computing Applications ICIRCA 2023 (IEEE), organized by RVS College of Engineering and Technology, Coimbatore, India, pp. 1102-1106, 3rd to 5th August, 2023. DOI: 10.1109/ICIRCA57980.2023.10220638 8. Santanu Koley, Jayeeta Majumdar, Mihir Baran Bera and Pinaki PratimAcharjya, "Multi-Tenancy Architecture for Augmented Security in Cloud Computing", Proc. 5th International Conference on Inventive Research in Computing Applications ICIRCA 2023 (IEEE), organized by RVS College of Engineering and Technology, Coimbatore, India, pp. 1102-1106, 3rd to 5th August, 2023. DOI: 10.1109/ICIRCA57980.2023.10220638 9. Mrinmoy Sen. A Novel Video Encryption Scheme using Giant Sudoku for Secured Data Transmission (accepted in springer LNNS) 10. Mrinmoy Sen. Analyzing the Effectiveness of Different Machine Learning Approaches towards Solving Sudoku Puzzle (accepted in springer LNNS) 11. "Majumder, J, (2023). Multi-Tenancy Architecture for Augmented Security in Cloud Computing. In: 5th International Conference on Inventive Research in Computing Applications organized by RVS College of Engineering and Technology, Coimbatore, India. ICIRCA 2023. https://ieeexplore.ieee.org/abstract/document/10220638" 12. Jayeeta majudmer (2024), "Protecting Rose Leaves from Diseases: A Deep Learning Strategy", in IEMSC 2024 by IEM Kolkata 13. Rimpa Samanta, Namrata Dhanda, Sumanta Kuila , "HANDWRITTEN ENGLISH CHARACTER RECOGNITION SYSTEM USING DEEP NEURAL

	<p>NETWORK”, International Conference on Integrating AI, Spirituality, Health Care & Management for Sustainable Well Being, Organized By Amity Institute of Information Technology, Amity University Lucknow , September 2023.</p> <ol style="list-style-type: none"> 14. Sunanda Jana, A Novel Video Encryption Scheme using Giant Sudoku for Secured Data Transmission (accepted in springer LNNS) 15. Angana Chakraborty, Subhankar Joardar, Arif Ahmed Sekh. BSVM: BERT-Based Support Vector Machine for Hindi Hostile Content Detection, 4th International Conference on Communication, Devices and Computing (ICCDC 2023), pp.57-68 [SPRINGER] 16. Sunen Chakraborty, Paramita Dey, Kingshuk Chatterjee. "Digital Image Tampering Detection Using Deep Learning: A Survey", 4th International Conference on Communication, Devices and Computing (ICCDC 2023), pp. 197-216. [SPRINGER] 17. Jheelam Mondal, Subhankar Joardar. "A Comparative Study to Detect Cervical Dysplasia by using Pap Smear Images", 4th International Conference on Communication, Devices and Computing (ICCDC 2023), pp.113-124 [SPRINGER] 18. CNN-based Rice Nitrogen Status Estimation using UAV Integrated Multispectral Camera Images” authored by Rituparna Saha, Sudip Misra, Chandranath Chatterjee and Amit Biswas (2023) was accepted in “ASPCON 2023 IEEE Conference”, organized at Haldia Institute of Technology, Haldia, West Bengal, India from November 24-25, 2023."
<p>2022-2023</p>	<ol style="list-style-type: none"> 1. Sk Maidul Islam, Subhankar Joardar, and Arif Ahmed Sekh, “NecklaceFIR: A Large Volume Benchmarked Necklace Dataset for Fashion Image Retrieval”, First International Symposium on Artificial Intelligence (ISAI 2022), Haldia Institute of Technology during February 17–22, 2022, India, The proceeding has been published in Communications in Computer and Information Science, Vol – 1695, pp-180-190 ISBN 978-3-031-22484-3, https://doi.org/10.1007/978-3-031-22485-0, DEC, 2022. (1) 2. Sk Maidul Islam , Subhankar Joardar , and Arif Ahmed Sekh, “RingFIR: A Large Volume Earring Dataset for Fashion Image Retrieval” , 5th IAPR International Conference on Computer Vision & Image Processing (CVIP 2020) , IIIT, Allahabad, The Proceeding has been published by Communications in Computer and Information Science, Springer Nature Singapore Pte Ltd. 202, CCIS 1377, pp. 100–111. 3. Tahamina Yesmin, Harsh Lohiya, Pinaki Pratim Acharjya, "Detection and Segmentation of Brain Tumor by Using Modified Watershed Algorithm and Thresholding to Reduce Over-Segmentation", in Proc. 2023 IEEE International Conference on Contemporary Computing and Communications (InC4), pp. 1-6 , organized by Dept of CSE, CHRIST (Deemed to be University), School of Engineering and Technology, Kengeri Campus, Bangalore, India, April 21st – 22nd 2023. doi: 10.1109/InC457730.2023.10262891. 4. Majumder, J., Pradhan, C. (2023). CAPTCHA-Based Image Steganography to Achieve User Authentication. In: Khanna, A., Polkowski, Z., Castillo, O. (eds) Proceedings of Data Analytics and Management. Lecture Notes in Networks and Systems, vol 572. Springer, Singapore. https://doi.org/10.1007/978-981-19-7615-5_54 5. P Ray, R Mukherjee, M Sasmal, SmartGP: A Framework For A Two-Factor Graphical Password Authentication Using Smart Devices, 2nd International Conference on Frontiers in Computing and Systems (COMSYS-2022), 2022.[Springer] 6. P Ray, R Mukherjee, M Sasmal, SmartGP: A Framework For A Two-Factor Graphical Password Authentication Using Smart Devices, 2nd International Conference on Frontiers in Computing and Systems (COMSYS-2022), 2022.[Springer]. 7. Puja Sarkar, Parag Jyoti Kalita, Mugdhatanu Dev Goswami, Sanchita Saha and Amitava Nag, "Secure Sharing of Student Credentials Using Blockchain", 4th International Conference on Communication, Devices and Computing (ICCDC

	<p>2023), pp. 633- 645, Lecture Notes in Electrical Engineering book series (LNEE, volume 1046), published by Springer.</p> <ol style="list-style-type: none"> 8. Patrali Pradhan, Recommender System for Autonomous Vehicle Safety Provisioning Safety-as-a-Service 5th Regional Science and Technology Congress, 2023. 9. Patrali Pradhan Edge Intelligence-Based Safety-as-a-Service Platform,Patrali Pradhan, Chandana Roy, Sudip Misra, Samiran Chattopadhyay, IEEE ICC 2023, Rome, Italy, May-June, 2023 10. S. Jana, N. Dutta, A. K. Maji, R. K. Pal, A Novel Time-Stamp Based Audio Encryption Scheme using Sudoku Puzzle, 2nd International Conference on Frontiers in Computing and Systems (COMSYS-2021), pp.159-169, 2022.[Springer] 11. S. Jana, E. S. Sharma, A. Khan, A. K. Maji, R. K. Pal, Generating a Suitable Hash Function using Sudoku for Blockchain Network, 3rd International Conference on Frontiers in Computing and Systems (COMSYS-2022) .[Springer] 12. Angana Chakraborty, Subhankar Joardar, Arif Ahmed Sekh. BSVM: BERT-Based Support Vector Machine for Hindi Hostile Content Detection, 4th International Conference on Communication, Devices and Computing (ICCDC 2023) (Accepted) [SPRINGER] 13. Rajesh Mukherjee, AsishBera, Debotosh Bhattacharjee, and MitaNasipuri. "Human gender classification based on hand images using deep learning." In International Symposium on Artificial Intelligence, pp. 314-324. Springer, Cham, 2022. 14. P Ray, R Mukherjee, M Sasmal, SmartGP: A Framework For A Two-Factor Graphical Password Authentication Using Smart Devices, 2nd International Conference on Frontiers in Computing and Systems (COMSYS-2022), 2022.[Springer] 15. Jheelam Mondal, Subhankar Joardar. "A Comparative Study to Detect Cervical Dysplasia by using Pap Smear Images", 4th International Conference on Communication, Devices and Computing (ICCDC 2023) (Accepted) [SPRINGER] 16. Shaon Bandyopadhyay, Abhijit Sarkar, Abhirup Paria, Biswajit Jana. (Jan, 2023). Deep Learning Approaches for Analysis and Detection of Tomato Leaf Diseases. In Communications in Computer and Information Science (pp. 265–273). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-22485-0_24 [Scopus] 17. Shaon Bandyopadhyay, Abhijit Sarkar, Abhirup Paria, Biswajit Jana. (Jan, 2023). Deep Learning Approaches for Analysis and Detection of Tomato Leaf Diseases. In Communications in Computer and Information Science (pp. 265–273). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-22485-0_24 [Scopus] 18. Abhirup Paria, Susovan Jana (2022). Prediction of Crops Production Using Random Forest Regression. In: Mandal, L., Tavares, J.M.R.S., Balas, V.E. (eds) Proceedings of International Conference on Computational Intelligence, Data Science and Cloud Computing. Algorithms for Intelligent Systems. Springer, Singapore. https://doi.org/10.1007/978-981-19-1657-1_8 [Scopus] 19. Das S, Mondal P, Quraishi MI, Kar S, Sekh AA. Freshness Quality Detection of Tomatoes Using Computer Vision. InInternational Symposium on Artificial Intelligence 2022 (pp. 243-255). Springer, Cham.
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Book Chapter Publications

Academic Year	Name of the Book Chapter
2023-2024	<ol style="list-style-type: none"> 1. Pinaki Pratim Acharjya, Subhankar Joardar, Santanu Koley, Subhabrata Barman, "A Study on Evaluation and Analysis of Edge Detection Operators", Source Title: Meta-Learning Frameworks for Imaging Applications, Sepember 2023, pp. 65 -102, IGI Global, DOI: 10.4018/978-1-6684-7659-8.ch004 2. Pinaki Pratim Acharjya, Subhankar Joardar, Santanu Koley, Subhabrata Barman, "A Study on Evaluation and Analysis of Edge Detection Operators", Source Title: Meta-Learning Frameworks for Imaging Applications, Sepember 2023, pp. 65 - 102, IGI Global, DOI: 10.4018/978-1-6684-7659-8.ch004 3. Tuhin Kumar Bera, Pinaki Pratim Acharjya, "An Investigation Into the Use of Deep Learning to Recognize Human Activity", in book " AI and Its Convergence With Communication Technologies, ISBN13: 9781668477021, ISBN10: 1668477025, EISBN13: 9781668477038 , pp. 212-262, IGI Global: International Academic publisher, Sept. 2023. DOI: 10.4018/978-1-6684-7702-1.ch008. 4. Keshav Kumar, Krishan Kundan Kumar, Ritam Chatterjee, Ritam Kundu, Santanu Koley, Pinaki Pratim Acharjya, "Sustainable Cloud Computing: An Intelligent Data Retrieving Technique and Safety Measures", in Improving Security, Privacy, and Trust in Cloud Computing, pp. 85-112, ISBN13: 9798369314319, EISBN13: 9798369314326, IGI Global: International Academic publisher, February, 2024.DOI: 10.4018/979-8-3693-1431-9.ch004 5. Pinaki Pratim Acharjya, Subhankar Joardar, Santanu Koley, Subhabrata Barman, "A study on evaluation and analysis of edge detection operators used in image processing", in Meta-Learning Frameworks for Imaging Applications, pages 65-102, ISBN13: 9781668476598, ISBN10: 1668476592, EISBN13: 9781668476611, ISBN13 Softcover: 9781668476604, IGI Global: International Academic publisher, Sept. 2023. DOI: 10.4018/978-1-6684-7659-8.ch004. 6. Keshav Kumar, Krishan Kundan Kumar, Ritam Chatterjee, Ritam Kundu, Santanu Koley, Pinaki Pratim Acharjya (2024), "An Intelligent Data Retrieving Technique and Safety Measures for Sustainable Cloud Computing", IGI Global, DOI: 10.4018/979-8-3693-1431-9.ch003, ISBN13: 9798369314319, EISBN13: 9798369314326. 7. Sunanda Jana, Mrinmoy Sen, Abhinandan Khan, Arnab Kumar Maji, and Rajat Kumar Pal, Analyzing the Effectiveness of Different Machine Learning Approaches towards Solving Sudoku Puzzle, 2nd International Conference on Data, Electronics and Computing (ICDEC-2023), 15th - 16th December, 2023. (Accepted for publication in Springer Lecture Notes in Networks and Systems (LNNS)) 8. Sunanda Jana, Swarnajit Bhattacharya, Mrinmoy Sen, Abhinandan Khan, Arnab Kumar Maji, and Rajat Kumar Pal, Yet Another Move towards Securing Video Using Sudoku in Fernet. (Accepted in Wiley Scrivener Boock chapter for publication) (Scopus Indexed) 9. Sunanda Jana, Mrinmoy Sen, Abhinandan Khan, Arnab Kumar Maji, and Rajat

	<p>Kumar Pal, A Novel Video Encryption Scheme using Giant Sudoku for Secured Data Transmission, Applied Computing for Software and Smart Systems (ACSS-2023), no 14, Springer Nature Singapore. Doi: 10.1007/978-981-99-7783-3_14.</p> <ol style="list-style-type: none"> 10. Pinaki Pratim Acharjya, Subhankar Joardar, Santanu Koley, Subhabrata Barman, "A Study on Evaluation and Analysis of Edge Detection Operators", Source Title: Meta-Learning Frameworks for Imaging Applications, September 2023, pp. 65 - 102, IGI Global, DOI: 10.4018/978-1-6684-7659-8.ch004 11. Pinaki Pratim Acharjya, Subhankar Joardar, Santanu Koley, Subhabrata Barman, "A study on evaluation and analysis of edge detection operators used in image processing", in Meta-Learning Frameworks for Imaging Applications, pages 65-102, ISBN13: 9781668476598, ISBN10: 1668476592, EISBN13: 9781668476611, ISBN13 Softcover: 9781668476604, IGI Global: International Academic publisher, Sept. 2023. DOI: 10.4018/978-1-6684-7659-8.ch004 12. Sunanda Jana, Mrinmoy Sen, Abhinandan Khan, Arnab Kumar Maji, and Rajat Kumar Pal, Analyzing the Effectiveness of Different Machine Learning Approaches towards Solving Sudoku Puzzle, 2nd International Conference on Data, Electronics and Computing (ICDEC-2023), 15th - 16th December, 2023. (Accepted for publication in Springer Lecture Notes in Networks and Systems (LNNS)) 13. Sunanda Jana, Swarnajit Bhattacharya, Mrinmoy Sen, Abhinandan Khan, Arnab Kumar Maji, and Rajat Kumar Pal, Yet Another Move towards Securing Video Using Sudoku in Fernet. (Accepted in Wiley Scrivener Book chapter for publication) (Scopus Indexed) 14. Sunanda Jana, Mrinmoy Sen, Abhinandan Khan, Arnab Kumar Maji, and Rajat Kumar Pal, A Novel Video Encryption Scheme using Giant Sudoku for Secured Data Transmission, Applied Computing for Software and Smart Systems (ACSS-2023), no 14, Springer Nature Singapore. Doi: 10.1007/978-981-99-7783-3_14. 15. "An Integrated Autism Management Platform for readiness of inclusive schooling" – Mazumdar A., Chatterjee B., Banerjee M. accepted and submitted to IIP Book Series "IIPV3EBS02_G21 Futuristic Trends in Social Sciences" under Volume 3, 2023 [accepted for publication] 16. Smart Plant-Based Wastewater Treatment for Agricultural Irrigation Systems” for the book “Smart Agritech: Potential of Robotics, AI and Internet of Things (IoT) in Agriculture (SAPRAIA)” was accepted by Wiley-Scrivener Publisher, 2023; authored by Rituparna Saha and Amit Biswas. 17. Rituparna Saha Federated Learning: A Secure Distributed Machine Learning Approach for IoT Technology" accepted for the book chapter "Next-Generation Systems Secure Computing" to be published by Wiley-Scrivener, USA. 18. Sabyasachi Samanta, Priyatosh Jana, Abhijit Sarkar, Soumen Ghosh (Aug, 2023), Visual Cryptographic Shares Using Color Components, In Handbook of Research on Thrust Technologies’ Effect on Image Processing (pp. 448–462). IGI Global. https://doi.org/10.4018/978-1-6684-8618-4.ch027 [Scopus]
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22. **Sunanda Jana**, Esha Sen Sharma, Abhinandan Khan, Arnab Kumar Maji, and Rajat Kumar Pal, Generating a Suitable Hash Function using Sudoku for Blockchain Network, 3rd International Conference on Frontiers in Computing and Systems (COMSYS-2022), vol 690, pp.161-170, 2023.
23. Sen, M., **Jana, S.**, Bhattacharya, S., & Maity, G. (2023). AI-Based DBMS Controlled Speech Recognition Model for Some Common Computing Commands. In S. Koley, S. Barman, & S. Joardar (Eds.), Novel Research and Development Approaches in Heterogeneous Systems and Algorithms (pp. 143-154). IGI Global. <https://doi.org/10.4018/978-1-6684-7524-9.ch008>
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2022-2023	<ol style="list-style-type: none"> 1. Dr. Subhankar Joardar, DR. PINAKI PRATIM ACHARJYA, Copyright Title: Title: Stochastic Method to Achieve Security Using Time Variant Key Mechanism. Status: Registered, Date of Registration: 12.08.2022, Dairy No: 82/2022-CO/L, Date of filing: 01/01/2022. 2. Dr. Pinaki Pratim Acharjya, Copyright Title: Title: Stochastic Method to Achieve Security Using Time Variant Key Mechanism. Status: Registered, Date of Registration: 12.08.2022, Dairy No: 82/2022-CO/L, Date of filing: 01/01/2022. 3. Dr. Pinaki Pratim Acharjya, A novel method to analyze liver cancer growth using reliability estimation to failure and computational weight optimization of associated factors. Status: Published, Date of Publication: 08.07.2022, File number: 202011044252, Date of filing: 12/10/2020. 4. Mr. Subhabrata Barman, Copyright Title: PLC Based Traffic Light Control System with HMI Interface Dairy No.: 25078/2022-CO/L 5. Mrs. Patrali Pradhan, Detecting Botnet Cyber-Attacks in IoT Scenarios using Dynamic Residual Projection of Concept Drift “, Name of Applicant: Patrali Pradhan (CSE), Application No.202241037111A, INDIA, Date of Publication: 22/07/2022. 6. Rajrupa Metia, The sentimental analysis-based disease estimation and health risk prediction system. Application No.: 202241037150 A Date of filing of Application :28/06/2022 Publication Date: 08/07/2022. 7. Abhijit Sarkar, Small & Cost-Effective Portable IoT Temperature Control Device for Baby Incubators with Automatic Safety Management: Germans Patent and trademark office, Patent No. 20 2022 105 680, Date of Application: 08.10.2022, Status: Granted and Registered, Date of Registration: 18.11.2022.
2021-2022	<ol style="list-style-type: none"> 1. Dr. Pinaki Pratim Acharjya, Hand Shape and Sign Recognition from Video Using Deep Convolution Network, Status: Granted, Date of Grant: 25.08.2021, File number: 2021104072, Date of filing: 12/07/2021.

	<ol style="list-style-type: none"> 2. Dr. Pinaki Pratim Acharjya, Quantitative Trait Loci Analysis for Assessing Ragi's Blast Resistance Using, Machine Learning Technique, Status: Granted, Date of Grant: 10.11.2021, Effective date of patent:21/08/2021 to 21/08/2029, File number: 2021106339, Date of filing: 21/08/2021. 3. Dr. Pinaki Pratim Acharjya, A novel method to analyze liver cancer growth using computational neuro- associator, Markov property and learning rule, Status: Published, Date of Publication: 15.04.2022, File number: 202011044253, Date of filing: 12/10/2020 4. Dr. Pinaki Pratim Acharjya, Methods to compute human thought process and disorder, Status: Published, Date of Publication: 24/06/2022, File number: 202011055450, Date of filing:21/12/2020. 5. Dr. Pinaki Pratim Acharjya, Copyright Name: Oral Lesions Classification using Ensemble Learning and Deep Learning Techniques, Status: Registered, Reg.No.-L-108404/2021, Date of Registration: 14.10.2021, Dairy No: 21447/2021-CO/L, Date of filing:06/09/2021 6. Dr. Pinaki Pratim Acharjya, Copyright Name: Copyright Name: Plant Leaf Disease Diagnosis, Classification and Enhancement for Discovery Accurate Shading through Color Model, Status: Registered, Reg.No.-L-109108 /2021, Date of Registration: 18.11.2021, Dairy No: 21502 /2021-CO/L, Date of filing:07/09/2021. 7. Dr. Sabyasachi Pramanik, Non-intrusive Personalized Smart Home Automation using Big Data, Patent Number 202141048156 filed on 22nd Oct 2021. 8. Mrs. Patrali Pradhan, Smart Energy Management System Using Machine Learning and IoT, Application No. 202241027519A (IPR), Date of Application 13/05/2022, Date of Publication 27/05/2022. 9. Mr. Rajesh Mukharjee, A Method for Sentiment Correlation in Course of Market Movement, Application No.202111034822 A, Publication Date: 27/08/2021. 10. Rajesh Mukherjee, DR. BIDESH CHAKRABORTY, Artificial Intelligence based system for efficient data handling in Healthcare, Application Number 202211007274, Publication Date: 18/02/2022. 11. Dr. Bidesh Chakraborty, MR. RAJESH MUKHARJEE, A Method for Sentiment Correlation in Course of Market Movement, Application No.202111034822 A, Publication Date: 27/08/2021. 12. Dr. Bidesh Chakraborty, Artificial Intelligence based system for efficient data handling in Healthcare, Application Number 202211007274, Publication Date: 18/02/2022.
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Ph.D. guided/guiding during the assessment periods while working in the Institute

Sl. No	Faculty Name	No of Students Guided	No of Students Guiding	University Name
1.	Dr. Subhankar Joardar	-	5	MAKAUT
2.	Dr. Subhankar Joardar	1	-	Amity University
3.	Dr. Pinaki Pratim Acharjee	-	1	Sri Satya Sai University of Technology of and Medical Sciences
4.	Dr. Pinaki Pratim Acharjee	2	-	Brainware University
5.	Dr. Arindam Giri	-	1	Jadavpur University
6.	Dr. Mrinmoy Sen	-	1	MAKAUT

7.	Dr. Bidesh Chakraborty	-	1	MAKAUT
8.	Dr. Sabyasachi Paramanik	-	1	Brainware University

Faculty members in Editorial Board

Sl. No.	Name of faculty	Members in Editorial Board	Academic Year
1	Dr. Subhankar Joardar	Next-Generation Systems and Secure Computing, Publisher - Scrivener Publishing LLC, to be published within 2024.	2023-2024
2	Dr. Pinaki Pratim Acharjya	Futuristic Trends in Computing Technologies and Data Sciences, Iterative International Publisher (IIP) Series.	2023-2024
3	Dr. Santanu Koley	Next-Generation Systems and Secure Computing, Publisher - Scrivener Publishing LLC, to be published within 2024.	2023-2024
4	Mr. Subhabrata Barman	Next-Generation Systems and Secure Computing, Publisher - Wiley-Scrivener Publishing LLC (to be published by June 2024).	2023-2024
5	Mr. Subhabrata Barman	Machine Learning and Computer Vision for Renewable Energy, ISBN: 9798369323557, EISBN: 9798369323564, IGI Global International.	2023-2024
6	Dr. Subhankar Joardar	International Symposium on Artificial Intelligence, communication in Computer and Information Science, 1695, Springer.	2021-2022
7	Mr. Subhabrata Barman	Artificial Intelligence: First International Symposium, ISAI 2022, Haldia, India, eBook ISBN 978-3-031-22485-0 DOI : https://doi.org/10.1007/978-3-031-22485-0 published by Springer.	2021-2022

Faculty Membership in Professional Society

Sl. No.	Name of faculty	Membership in Professional Society
1	Dr. Subhankar Joardar	Member of the Computer society of India.
2	Dr. Pinaki Pratim Acharjya	Member of The Institution of Engineers (India), India. (Membership No.: M-1666783), 2019.
3	Dr. Pinaki Pratim Acharjya	Member of Indian Society for Technical Education (ISTE), India. (Membership No.: LM 72704), 2011.
4	Dr. Pinaki Pratim Acharjya	Fellow of Nikhil Bharat Siksha Parisad (NBSP), India. (Fellowship No: NBSPIN44A), 2021.

5	Dr. Pinaki Pratim Acharjya	Fellow of the International Society for Research and Development (ISRD), United Kingdom. (Fellowship No.: F3140901069), 2019.
6	Dr. Pinaki Pratim Acharjya	Associate member of All India Eminent Faculty council of Engineering, Management & Technology, India. (Membership no: AIEFCTBS2101SN15),
7	Dr. Santanu Koley	Member of International Association of Engineers (IAENG) with Member no -152404, website -www.iaeng.org, email-member@iaeng.org, info@iaeng.org Add - Unit-1, 1/F, 37-39, Hung to Road, Hong Kong.
8	Dr. Santanu Koley	Member of The Society of Digital Information and Wireless Communications (SDIWC) with member ID – 10718.http://sdiwc.net/, Email-sdiwc@sdiwc.net. Tel: 001(202)-657-4603 - Outside USA.
9	Dr. Santanu Koley	Member of International Association of Computer Science and Information Technology IACSIT (Registered No.: 53122865K) Registration No.: 80350377.
10	Dr. Santanu Koley	Member of The Internet Society (ISoc) with member ID – 112468.
11	Dr. Arindam Giri	Member of the International Association of Engineers (Membership No-336751).
12	Dr. Arindam Giri	Member of The Society of Digital Information and Wireless Communications (SDIWC), (Membership No-8708).
13	Mr. Subhabrata Barman	Member of Computer Society of India (Professional Member) Membership No.: 2036230004.
14	Mr. Subhabrata Barman	Member of the International Association of Engineers (Membership Number: 103032).
15	Mrs. Sanchita Saha	Member, Institution of Engineers (India).
16	Mrs. Sanchita Saha	Member, IEEE.
17	Mrs. Patrali Pradhan	Member, CSI, ID: 2031220004.
18	Mrs. Patrali Pradhan	Member, SWAN Group, IIT KGP.
19	Mrs. Patrali Pradhan	Member, IEANG, Membership ID:346553.
20	Mrs. Sunanda Jana	IEEE MEMBER (Membership no-98543597).
21	Dr. Moumita Das	Green ThinkerZ Membership.
22	Mr. Abhirup Paria	Member, CSI.

Awards /Rewards Received faculty

Sl. No.	Name of faculty	Members in Editorial Board	Academic Year
1	Dr. Jayeeta Majumder	Received Best Paper Award for the Paper “Protecting Rose Leaves from Diseases: A Deep Learning Strategy in the	2023-2024

		contributory track-III D (Computer Science-II) at IEMSC-24, Kolkata, India.	
2	Dr. Moumita Das	Received Top 50 International Distinguished Teacher Award.	2023-2024
3	Mr. Umesh Pal	Joined as JRF, Project: - AI/ML-based Network Management and Signal Processing for 5G and Beyond Base Station, IITB COMET Foundation under NM-ICPS), DST, Government of India.	2023-2024
4	Dr. Arpita Mazumdar	Received "Jury Award" in paper presentation competition in a SEMINAR ON WOMEN EMPOWERMENT AND WOMEN'S RIGHTS IN THIS CENTURY organised by Wajood Foundation for Women's Right on 25/03/2023 in Rotary Sadan, Kolkata.	2022-2023
5.	Dr. Pinaki Pratim Acharjya	Received Best Paper Award for the Paper "Sustainable Student Engagement in Online Learning Environment Using Machine Learning" in ICETC-2022, organized by Brainware university, Kolkata, held on 24 th & 25 th February 2022.	2021-22

Awarded during the assessment periods while working in the institute

Sl. No.	Name of the faculty	University	Academic Year
1	Dr. Rituparna Saha	IIT, KGP, West Bengal.	2022-23
2	Dr. Sumanta Kuila	Amity University, UP.	2022-23
3	Dr. Arpita Mazumdar	UEM University, West Bengal.	2022-23
4	Dr. Sumanta Kuila	Amity University, UP.	2022-23
5	Dr. Jayeeta Majumdar	KIIT university, Odisha.	2022-23
6	Dr. Biplab Das	MAKAUT, West Bengal.	2022-23
7	Dr. Arindam Giri	from Jadavpur University,	2021-22
8	Dr. M. Sen	IISC, Shibpur, West Bengal	2021-22

Ph.D. registered during the assessment periods while working in the institute

Sl. No.	Name of faculty	Name of the University	From A.Y.
1	Mr. Palash Roy,	MAKAUT, West Bengal	2021-22
2	Mrs. Patrali Pradhan	Jadavpur University, West Bengal	2021-22
3	Mrs. Sunanda Jana	Calcutta University, West Bengal	2023-24
4	Mrs. Angana Chakraborty	MAKAUT, West Bengal	2023-24
5	Mrs. Sanchita Saha	CIT, Kokrajhar, Assam	2020-21

6	Mr. Abhirup Paria	Jadavpur University, West Bengal	2021-22
7	Mrs. Sikha Das	NIT, Patna	2022-23
8	Mrs. Minakshi Sarkar	IEST, West Bengal	2023-24
9	Mrs. Rajrupa Metia	Sunrise University, rajasthan	2022-23
10	Mrs. Soma Chatterjee	Jadavpur University, West Bengal	2017-18

Faculty interaction with outside world

Faculty Name	Details of Interaction
Dr. Pinaki Pratim Acharjya	PhD. Guiding at Sri Satya Sai University of Technology of and Medical Sciences, Sehore, Madhya pradesh from A.Y. 21-22 to till date.
	Question paper setter for GNIT, West Bengal in A.Y. 2021-22
	Project : Consultancy project Sponsored Institute : Haldia Institute of Dental Science & Research Project Type : Design, Development and Maintenance of the Website of HIDSAR Project duration : May'23 to April'24
	Reviewer of the "Journal of the Institution of Engineers (India): Series B (IEIB)", Electronic ISSN: 2250-2114, Print ISSN: 2250-2106, Springer From A.Y. 2019-20 to till date.
	Guided Ph.D at Brainware university rom A.Y. 2020-21 to 2022-23
	Reviewer of the "International Journal of Computer Vision and Image Processing (IJCVIP)", ISSN: 2155-6997 EISSN: 2155-6989, DOI: 10.4018/IJCVIP, IGI Global: International Academic publisher from A.Y. 2022-23 to till date.
	Book editor of Futuristic Trends in Computing Technologies and Data Sciences Publisher: Iterative International Publisher (IIP) Series from AY. 2022-2023 to till date.
Dr. Subhankar Joardar	Project : Consultancy project Sponsored Institute : Haldia Institute of Dental Science & Research Project Type : Design, Development and Maintenance of the Website of HIDSAR Project duration : May'23 to April'24
	Sk. Maidul Islam, "Image Retrieval using Deep Learning-Application in Fashion Design", Maulana Abul Kalam Azad University of Technology (MAKAUT), West Bengal, DOR: 22/11/2019
	Partha Pratim Bhattacharya, "A study on Ferro industry based Transportation Problem under inexact Optimization Techniques", Maulana Abul Kalam Azad University of Technology (MAKAUT), West Bengal, DOR: 04/07/2019.
	Submitted a project proposal in collaboration with Botanical Survey of India to MoEFCC
	Program Chair of international Symposium on Artificial Intelligence, ISAI 2022
	Brainware University in the academic year 22-23
	design and devolopement of and maintenance of the website, HIDSAR ,2023-2024
	Edited Book: A.Ahmed, Turki Turki, T. K Ghosh, S Joardar, S. Barman,"Artificial Intelligence: First International Symposium, ISAI 2022, Haldia, India, February 17-22, 2022, Revised Selected Papers", eBook ISBN: 978-3-031-22485-0, Pages XV, 336, Springer Nature, January 2023, https://doi.org/10.1007/978-3-031-22485-0
	Program Chair of international Symposium on Artificial Intelligence, ISAI 2022

	<p>Edited book: Santanu Koley, Subhabrata Barman, Subhankar Joardar (Eds.), "Novel Research and Development Approaches in Heterogeneous Systems and Algorithms" ,ISBN13: 9781668475249, (IGI Global), (2023)</p> <p>Manasi Das, "Design and implementation of data hiding scheme in different domain", Maulana Abul Kalam Azad University of Technology (MAKAUT), West Bengal, DOR: 05/10/2020.</p> <p>Technical program committee member ICCDC 2023</p> <p>Angana Chakraborty, "Hostile Content Detection from Social Media Posts in Regional Languages", Maulana Abul Kalam Azad University of Technology (MAKAUT), West Bengal, DOR: 05/10/2020.</p>
Dr. Santanu Koley	<p>Project Submitted at West Bengal Technology Hunt (2022-23)</p> <p>Paper setter of GNIT (2021-22)</p> <p>Ph.D defense expert at Brainware University (2023-24)</p> <p>Editor of Book "Novel Research and Development Approaches in Heterogeneous Systems and Algorithms" (2022-23)</p> <p>Editor of Book "Novel Research and Development Approaches in Heterogeneous Systems and Algorithms" (2022-23)</p> <p>Reviewer ICCDC 2023 (2022-23)</p>
DR. ARINDAM GIRI	<p>Co-Supervisor of Mr. Abhirup Paria, "Machine Learning Applications for Precision Agriculture", registered at Jadavpur University, Kolkata, DOR-17/05/2022.</p> <p>Co-Supervisor of Mrs. Dipika Sarkar, "Development of Machine Learning Approaches in Smart Agriculture", registered at NIT, Jamshedpur, DOR-14/10/2022.</p> <p>Submitted project on "The Data-Driven Agriculture Model to Mitigate Climate Change Impact on the Rice Crop in Indo ASEAN countries" to ASEAN-India Collaborative R&D Scheme, SERB, GoI(accepted) submitted on 21-12-2022.</p> <p>Submitted project on "Development of a System for Distributed Smart Grid integrating Hybrid electric storage with Renewable Energy Sources using Artificial Intelligence" to India EU Joint Call for Proposal, SDT, GoI, submitted on 27-4-2023.</p> <p>Delivered an an invited talk on Machine Learning in Agriculture in One-Day State Level Seminar on Machine Learning in Agriculture and Computer Vision Applications at Raja N. L. Khan Women's College (Autonomous), Midnapore on 27 January 2024.</p> <p>Delivered an invited talk in One-Day State Level Seminar on Development of Computer Science Frontiers: WSN & Edge Computing at Raja N. L. Khan Women's College (Autonomous), Midnapore on 18 March 2023</p> <p>Paper setter of BCA course at Raja N.L. Khan Women's College (Autonomous) during November,2022 & October, 2023.</p> <p>Reviewed paper ID-WIRE-D-23-00385 in Wireless Personal Communications, Springer</p> <p>Reviewed paper id-CandC-D-23-00071 in Control and Cybernetics</p> <p>Reviewed paper id-WINE-D-22-01503 in Wireless Networks Springer.</p> <p>Reviewed paper id-SNCS-D-23-04398 in SN Computer Science</p>
Dr Sabyasachi Pramanik	<p>Acting as a co-supervisor of Ms. Bidisha Banerjee (Appliation ID No-2022/286667) in Brainware University in the Dept. of Computational Sciences from 08.04.2023</p> <p>Acting as a co-supervisor of Mr. Atanu Roy (Registration No-001/PhD/SOMS/TNU/23) in Neotia University in the School of Maritime Studies from 09.12.2023. PhD topic: Studies of Emission Footprint Lightening in Transportation Sectors</p>

Dr. Mrinmoy Sen	Paper-Setter in Computer Science, Paper code - DSE3T, Semester - VI, for the End Semester Examination, 2023. PANSKURA BANAMALI COLLEGE (AUTONOMOUS) Panskura R.S., Purba Medinipur, West Bengal, Pin-721152
	IGI Global; Machine Learning and Computer Vision for Renewable Energy. 2. IGI Global; Novel Research and Development Approaches in Heterogeneous Systems and Algorithms (pp.Chapter 8) Publisher: IGI Global 3. Wiley Scrivener; "Next-Generation Systems Secure Computing"
Dr. Arpita Mazumdar	Avinya Kendra-an innovation hub 23-24
	Lecture in Workshop on "Applications of Information Technology for Autism" organized by the Centre for Development of Advanced Computing (CDAC), Kolkata in association with CDAC Noida, National Institute for the Empowerment of Persons with Intellectual Disabilities (NIEPID)1, Kolkata and NIEPID, Noida center, on 11th November 2022 - 23.
	Reviewer of Journal Cloud Computing and Data Science 23-24
Mr. Subhabrata Barman	Submitted a project proposal in collaboration with Botanical Survey of India to MoEFCC
	One-Day State Level Seminar on Machine Learning in Agriculture and Computer Vision Applications at Raja N. L. Khan Women's College (Autonomous), Midnapore on 27 January 2024
	Question paper setter for BCA for Raja N. L. Khan Women's College (Autonomous), Midnapore
	Reviewer of IEEE Systems Journal (Web of Science)
	P. P. Acharya, S. Koley, S. Barman, "Morphological Image Segmentation based on Distance Transform", LAP LABERT Academic Publishing, 2021, ISBN: 978-620-4-98070-6.
	Edited Book: A.Ahmed, Turki Turki, T. K Ghosh, S Joardar, S. Barman,"Artificial Intelligence: First International Symposium, ISAI 2022, Haldia, India, February 17-22, 2022, Revised Selected Papers", eBook ISBN: 978-3-031-22485-0, Pages XV, 336, Springer Nature, January 2023, https://doi.org/10.1007/978-3-031-22485-0
Mr. Avijit Bera	Editorial Review Board member of International Journal of Software Innovation (IJSI),November 2023
	Editorial Review Board member of International Journal of Computer Vision and Image Processing (IJCVIP),September 2023
	Editorial Review Board member of International Journal of Systems and Software Security and Protection (IJSSSP),November 2023
Mr. Umesh Pal	M.B.M(Institute of Education Psychology Survey & Research) A unit of H.S.V.B.S, Affiliated by Ramakrishna Mission Institute of Culture 23-24
	As a Reviewer of 5th International Conference on Advances in Information Communication Technology & Computing 23-24

STTP attended by faculty members

Academic Year	Details
2023-2024	1. Mrs. SUNANDA JANA participated in One Week Online Short Term Course on Machine Learning and its Applications in IoT, Computer Vision and Cloud Computing (MICC-2023) organised by Department of Computer Science & Engineering, National Institute of Technology Jamshedpur during 10-14 July, 2023.

	<ol style="list-style-type: none"> 2. Dr. Arpita Mazumdar participated and successfully completed Advanced Technology Program [ATP] training program on CLOUD COMPUTING from 11th Sept to 15th Sept 2023 By TalentNext Team, Talent Transformation Wipro Limited. 3. Dr. Arpita Mazumdar participated in Online Mode Short Term Course and Faculty Development Programme on “Applications of Machine Learning Techniques in Sustainable Technologies (AMLST-2024)” organized by the Department of Computer Science and Engineering, and Electrical Engineering NIT Rourkela from 24th January 2024 to 28th January 2024. 4. Mrs. Rajrupa Metia participated in One Week Online Short Term Course on Machine Learning and its Applications in IoT, Computer Vision and Cloud Computing (MICC-2023) organised by Department of Computer Science & Engineering, National Institute of Technology Jamshedpur during 10-14 July, 2023. 5. Mrs. Jheelam Mondal participated in One Week Online Short Term Course on Machine Learning and its Applications in IoT, Computer Vision and Cloud Computing (MICC-2023) organised by Department of Computer Science & Engineering, National Institute of Technology Jamshedpur during 10-14 July, 2023.
2022-2023	<ol style="list-style-type: none"> 1. Mrs. Sanchita Saha participated in Five days Online Short Term Course on Internet of Underwater Things (IoUT) with AI & ML”, organized by Central Institute of Technology Kokrajhar and funded by TIH Division IITG TIDF from May 22 to May 26, 2023. 2. Mrs. Sunanda Jana participated in two weeks STTP organized by organized by the Department of Information Technology in association with IQAC, Haldia Institute of Technology during 2 nd-14th January, 2023. 3. Dr. Arpita Mazumdar participated in Advanced Technology Program [ATP] training program on Bigdata 30th January to 3rd February 2023 By TalentNext Team, Talent Transforamtion Wipro Limited. 4. Mrs. Angana Chakraborty participated in two weeks STTP organized by organized by the Department of Information Technology in association with IQAC, Haldia Institute of Technology during 2 nd-14th January, 2023. 5. Mrs. Jheelam Mondal participated in two weeks STTP organized by organized by the Department of Information Technology in association with IQAC, Haldia Institute of Technology during 2nd-14th January, 2023. 6. Mr Abhirup Paria participated STTP on HPC and Cloud Computing from 14th March to 18th March, 2022 organised by NITTTR(Kolkata)[Online Mode] 7. Ms. Sikha Das participated in 40 hours online Program on “Medical Image Processing” jointly organized by the Electronics and ICT Academies at IIT Roorkee, MNIT Jaipur, NIT Patna, PDPM IIITDM Jabalpur and NIT Warangal during August 22 – September 2, 2022 under the “Scheme of financial assistance for setting up of Electronics and ICT Academies” of the Ministry of Electronics and Information Technology (MeitY), Government of India. 8. Ms. Sikha Das participated in 5-day Online Short Term Course on Internet of Underwater Things (IoUT) with AI ML organized by Central Institute of Technology Kokrajhar and funded by TIH Division IITG TIDF from May 22 to May 26, 2023.
2021-2022	<ol style="list-style-type: none"> 1. Dr. Subhankar Joardar participated AICTE Student Learning Assessment – STTP PARAKH in collaboration with Construction Industry Development Council (CIDC) from 07 February, 2022 to 19 February, 2022 2. Mr. Arindam Giri attended 2 weeks STTP, AICTE Student Learning Assessment – STTP PARAKH in collaboration with Construction Industry Development Council (CIDC) from 07 February, 2022 to 19 February, 2022 3. Dr. Mrinmoy Sen Participated in two weeks training program for faculty members on AICTE Student Learning Assessment – STTP PARAKH in collaboration with Construction Industry Development Council (CIDC) from 07 February, 2022 to 19 February, 2022. 4. Dr. Mrinmoy Sen Attended AICTE sponsored 6 days STTP on “New Avenues of Emotion Recognition”, from 23rd to 28th August, 2021, organized by MAKAUT. 5. Mrs. Jayeeta Majumder attended STTP on “Introduction to Data Security” from 08-11-21 to 12-11-21 at NITTTR, Kolkata 6. Mrs. Jayeeta Majumder attended One Week Short Term Training Programme

through ICT Mode on Data Security organised by NITTTR, Kolkata from 15th November to 19th November, 2021

7. **Mrs. Jayeeta Majumder** attended One Week Short Term Training Programme through ICT Mode on Object Oriented Design & Programming in C++ organised by NITTTR, Kolkata, from 14th March to 18th March, 2022 successfully.
8. **Mrs. Jayeeta Majumder** participated in two weeks training program for faculty members on AICTE Student Learning Assessment – STTP PARAKH in collaboration with Construction Industry Development Council (CIDC) from 07 February, 2022 to 19 February, 2022.
9. **Mr. Palash Ray** participated in two weeks training program for faculty members on AICTE Student Learning Assessment – STTP PARAKH in collaboration with Construction Industry Development Council (CIDC) from 07 February, 2022 to 19 February, 2022.
10. **Mrs. Mahuya Sasmal** participated in two weeks training program for faculty members on AICTE Student Learning Assessment – STTP PARAKH in collaboration with Construction Industry Development Council (CIDC) from 07 February, 2022 to 19 February, 2022.
11. **Mr. Subhabrata Barman** participated in 2 weeks training programme on “AICTE Student Learning Assessment – STTP-PARAKH” in collaboration with Construction Industry Development Council (CIDC), 07 – 19th February, 2022.
12. **Mr. Sumanta Kuila** participated in 2 weeks training programme on “AICTE Student Learning Assessment – STTP-PARAKH” in collaboration with Construction Industry Development Council (CIDC), 07 – 19th February, 2022.
13. **Mrs. Sanchita Saha** participated in 2 weeks training programme on “AICTE Student Learning Assessment – STTP-PARAKH” in collaboration with Construction Industry Development Council (CIDC), 07 – 19th February, 2022.
14. **Mrs. Sanchita Saha** Attended AICTE Sponsored QIP Short Term Course on “Software-defined Networks and its Applications” organized by IIT, Bhubaneswar, during June 22- July 02, 2021.
15. **Mrs. Sunanda Jana** participated in 2 weeks training programme on “AICTE Student Learning Assessment – STTP-PARAKH” in collaboration with Construction Industry Development Council (CIDC), 07 – 19th February, 2022.
16. **Mrs. Arpita Mazumdar** participated in 2 weeks training programme on “AICTE Student Learning Assessment – STTP-PARAKH” in collaboration with Construction Industry Development Council (CIDC), 07 – 19th February, 2022.
17. **Mrs. Angana Chakraborty** participated in 2 weeks training programme on “AICTE Student Learning Assessment – STTP-PARAKH” in collaboration with Construction Industry Development Council (CIDC), 07 – 19th February, 2022.
18. **Mr. Rajesh Mukherjee** participated in 2 weeks training programme on “AICTE Student Learning Assessment – STTP-PARAKH” in collaboration with Construction Industry Development Council (CIDC), 07 – 19th February, 2022.
19. **Mr. Rajesh Mukherjee** attended AICTE sponsored – STTP programme "New Avenues of Emotion Recognition" organised by MAKAUT, WB from 23rd august to 28th august, 2021
20. **Mr. Abhijit Sarkar** participated and completed Short Term Training Programme through ICT Mode on NBA Accreditation Issues organised by NITTTR, Kolkata from 28th March to 1st April, 2022
21. **Mr. Abhijit Sarkar** participated and completed Short Term Training Programme through ICT Mode on HPC and Cloud Computing organised by NITTTR, Kolkata from 14th March to 18th March, 2022.
22. **Mr Abhirup Paria** attended AICTE Student Learning Assessment – STTP PARAKH in collaboration with Construction Industry Development Council (CIDC) from 07 February, 2022 to 19 February, 2022
23. **Mr Abhirup Paria** attended ICT Mode STTP on “Introduction to Image Processing (ICT135)” from 23/08/2021 to 27/08/2021.
24. **Dr. Bidesh Chakraborty** attended STTP on ‘Data Science and Machine Learning’ held during 24th – 28th May, 2021 at Narula Institute of Technology.
25. **Dr. Bidesh Chakraborty** attended 2 weeks STTP, AICTE Student Learning Assessment – STTP PARAKH in collaboration with Construction Industry

	<p>Development Council (CIDC) from 07 February, 2022 to 19 February, 2022.</p> <p>26. Ms. Sikha Das attended Short term Training Program (STTP) on "APPLIED DATA SCIENCE AND MACHINE LEARNING" organized Department of IT with Computer Society of India (CSI), Kancheepuram from 31 May to 5 June 2021.</p> <p>27. Ms. Sikha Das attended Online Training Programme on Data Science and its Applications" organized by Electronics and ICT Academy, NIT Patna, held from March 01 {March 08, 2022 in online mode under the Scheme of financial assistance for setting up of Electronics and ICT Academies" by the Ministry of Electronics and Information Technology (MeitY), Government of India.</p>
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Workshop attended by faculty members

Academic Year	Details
2023-2024	<ol style="list-style-type: none"> Dr. Pinaki Pratim Acharjya participated in the Workshop on Intellectual Property Rights (IPR) and Innovations, organized by IPR Cell, Haldia Institute of Technology and IQAC, Haldia Institute of Technology, in Association with Patent Information Centre, West Bengal State Council of Science and Technology, Department of Science and Technology and Biotechnology, Govt. of West Bengal held on 2nd August, 2023. Dr. Santanu Koley participated in the Workshop on Intellectual Property Rights (IPR) and Innovations, organized by IPR Cell, Haldia Institute of Technology and IQAC, Haldia Institute of Technology, in Association with Patent Information Centre, West Bengal State Council of Science and Technology, Department of Science and Technology and Biotechnology, Govt. of West Bengal held on 2nd August, 2023. Ms. Sikha Das participated in the online workshop "21st Century Teaching and Learning Skills" by Mr. Kartic Vaidyanathan, Founder, LetsPlayToLearn in IIT Madras (NPTEL Certificate).on 1st July,2023.
2022-2023	<ol style="list-style-type: none"> Mrs. Sunanda Jana participated in the "3rd One-Week International Workshop on Technical Writing using LaTeX (Online)" organized by the School of Electronics Engineering (SENSE) at VIT-AP University, Amaravati, India from 30th March -5th April 2023. Mrs. Rajrupa Metia participated in two weeks training program for faculty members on AICTE Student Learning Assessment – STTP PARAKH in collaboration with Construction Industry Development Council (CIDC) from 07 February, 2022 to 19 February, 2022. Mrs. Angana Chakraborty participated in the "3rd One-Week International Workshop on Technical Writing using LaTeX (Online)" organized by the School of Electronics Engineering (SENSE) at VIT-AP University, Amaravati, India from 30th March -5th April 2023. Mrs. Jheelam Mondal participated in the "3rd One-Week International Workshop on Technical Writing using LaTeX (Online)" organized by the School of Electronics Engineering (SENSE) at VIT-AP University, Amaravati, India from 30th March -5th April 2023. Mr. Subir Chakraborty participated a national level seminar on "Effective Implementation of National Education Policy", Mr. Subir Chakraborty participated in Workshop August, 2022, organized by Vardhaman College of Engineering in association with NACC, Bengaluru. Mr. Abhijit Sarkar attended 1 day Workshop on Educators Meet on Emerging Technologies for Industry 4.0 organized by Webel-Fujisoft -Vara Centre of Excellence in Webel IT Park, Haldia on 27th June, 2023. Ms. Sikha Das Online Workshop on" Python Programming Language" from 25th February to 26th February, 2023 in MYWBUT.
2021-2022	<ol style="list-style-type: none"> Dr. Pinaki Pratim Acharjya participated in One-day "National Seminar on National Education Policy 2020", organized by Haldia Institute of Technology in association with Global Institute of Science and Technology, held on 22nd November, 2021. Mr. Subhabrata Barman attended a workshop "Webinar on Cyber Security &

	<p>Ethical Hacking, Cloud Databases and Ethical Hacking” organized by the department of Computer Applications, Haldia Institute of Technology, India, 1st -5th December, 2021.</p> <p>3. Mr. Subhabrata Barman participated in training programme on “National Education Policy 2020” at Haldia Institute of Technology, on 22nd November, 2021.</p> <p>4. Mr. Rajesh Mukherjee participated in training programme on “National Education Policy 2020” at Haldia Institute of Technology, on 22nd November, 2021.</p> <p>5. Dr. Bidesh Chakraborty participated in training programme on “National Education Policy 2020” at Haldia Institute of Technology, on 22nd November, 2021.</p> <p>6. Ms. Sikha Das participated Online Training Programme on “Data Science and its Applications” March 01–March 08, 2022 Organized by Electronics & ICT Academy, NIT Patna.</p>
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Project sanctioned in A.Y. 2023-2024

Sr. No	Title of Project	Funding Agency	Principal Investigator	Requested Amount (Rs.)	Submitted on	Sanctioned on
1	Guardian Gem IoT-Based Woman Safety Band	MSME	Incubatee: Mrs. Payel Chatterjee PI: Dr. Jayeeta Majumder, Co PI: Mrs. Mahuya Sasmal	15,00,000	02.08.2023	29.02.2024

Project Submitted in A.Y. 2023-202

Sr. No	Title of Project	Funding Agency	Principal Investigator	Requested Amount (Rs.)	Submitted on
1	Establishment of Solar Powered Computer Laboratories in Schools for area inhabited by Schedule Tribe in India.	DST India	Dr. Pinaki Pratim Acharjya	9,75,433	27.09.2023
2	AVINYA KENDRA - an innovation hub	Biotechnology Industry Research Assistance Council (BIRAC)	Dr. Arpita Majumdar	1,26,00,000	31.10.2023
3	Guardian Gem IoT Based Woman Safety Band	MSME	Mrs. Payel Chatterjee	15,00,000	02.08.2023
4	Development of Mobile Applications for Pedagogical Support and Application of Data Analysis in Educational Intervention of Autism Spectrum Disorder (ASD)	MSME	Dr. Arpita Majumdar	15,00,000	30.08.2023
5	Digi Parikrama - e-carnival portal for persons with mobility impairment	MSME	Dr. Arpita Majumdar	15,00,000	28.08.2023
6	Agricultural Crop-growth Monitoring Device	MSME	Mr. Subhabrata Barman	15,00,000	22.08.2023
7	Smart AgriTech Solution to Improve Productivity of Crops	WB-DST	Mrs. Patrali Pradhan	5,00,000	27.07.2023

Project Submitted in A.Y. 2022-2023

Sr. No	Title of Project	Funding Agency	Principal Investigator	Requested Amount (Rs.)	Submitted on
1	The Data-Driven Agricultural Model to Mitigate Climate Change Impact on the Rice Crop in Indio ASEAN countries	DST (ASEAN-India Collaborative R&D Scheme)	Dr. Arindam Giri	17,05,000	21.12.2022
2	Development of a System for Distributed Smart Grid integrating Hybrid Electric storage with Renewable Energy Sources using Artificial Intelligence	DST (India EU joint call for Proposal)	Dr. Arindam Giri	1,41,71,556	24.04.2023
3	Open Source Technology for Analysis and Comprehensive Study of Differential Change in Floral Canopy of Mangrove Vegetation in Sundarbans using Field Spectroscopy	MoEFCC	Dr. Subhankar Joardar	2,42,49,240	05.06.2023
4	An Intelligent Sowing Time Forecasting App for Cultivation of Pearl Millet Crop in West Bengal	AI4ICPS (A National AI Hub for Cyber-Physical Systems, IIT Kharagpur)	Dr. Rituparna Saha	50,00,000	26.02.2023
5	Open source technology using Deep Hostile Content Detection from Social Media Posts in Regional Languages	MSME	Mrs. Angana Chakraborty	8,26,000	07-07-2022
6	Automated Honey Bee-Hive Detection System using UAV – An Approach to Digital Agriculture	MSME	Dr. Rituparna Saha	15,00,000	28.11.2022
7	Basudhaibo Kutumbakam e festival parikrama	MSME	Dr. Jayeeta Majumdar	14,30,000	27.08.2022
8	RAKTAM -An Android App	WB-DST	Dr. Santanu Koley	1,57,900	27.07.2022
9	Portable three-band instrument of crop-growth monitoring and diagnosis	WB-DST	Mr. Subhabrata Barman	1,50,000	05-07-2022
10	Smart LAI (Leaf Area Index) meter	WB-DST	Dr. Subhankar Joardar	1,50,000/	07-07-2022

Product Development

IoT Based Water Health Monitoring System for Pisciculture

Among all the quality determining parameters of the water in fish-culture-pond, Dissolve oxygen (DO) consider as the most sensitive one. DO level mainly fluctuate due to atmospheric temperature, fish population and growth of fish as well as showering. The farmers maintain DO level by traditional methods of aerations which consume huge recurring volume of fuels. Sometimes farmers run engine of aeration for extra time particularly in mature cultures, hence waste extra fuels. Real time monitoring of DO could save such extra expenditure and could be helpful to minimize the risk associated with DO.

The main objective of the system is to monitor the important water quality parameters namely DO, pH, and Temperatures. Other parameters such as alkalinity, hardness, ammonia, nitrites, chloride, salinity, and CO₂ could be monitored depending on the situation as well as type of the cultures. The parameters mentioned earlier often fluctuate due to change of weather pattern with time and due to addition of chemicals and food into water. Sometimes excess food and rejects of fish as well as dead fish mass also causes the change of water quality into a fatal environment for fish culture. Apart from that, it is required to monitor accumulation of fatal gases at the bottom layer of the pond due to deposition of unused food, rejects of fish and dead fishes too. Thus, real time

monitoring could help to decide immediate preventive measures to avoid disastrous situation for the fish culture pond, hence minimize the risk of business.

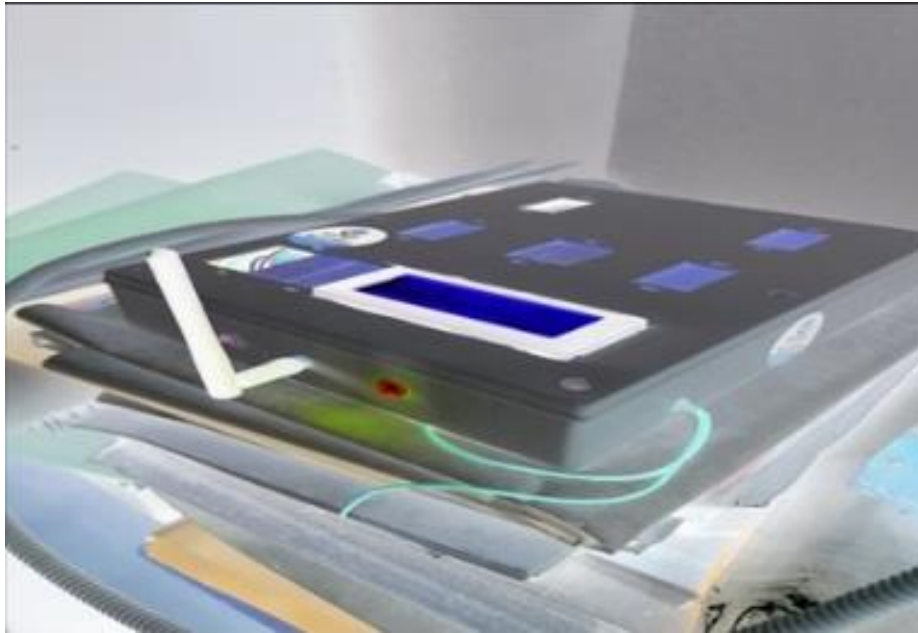


Fig. Lora IoT Device

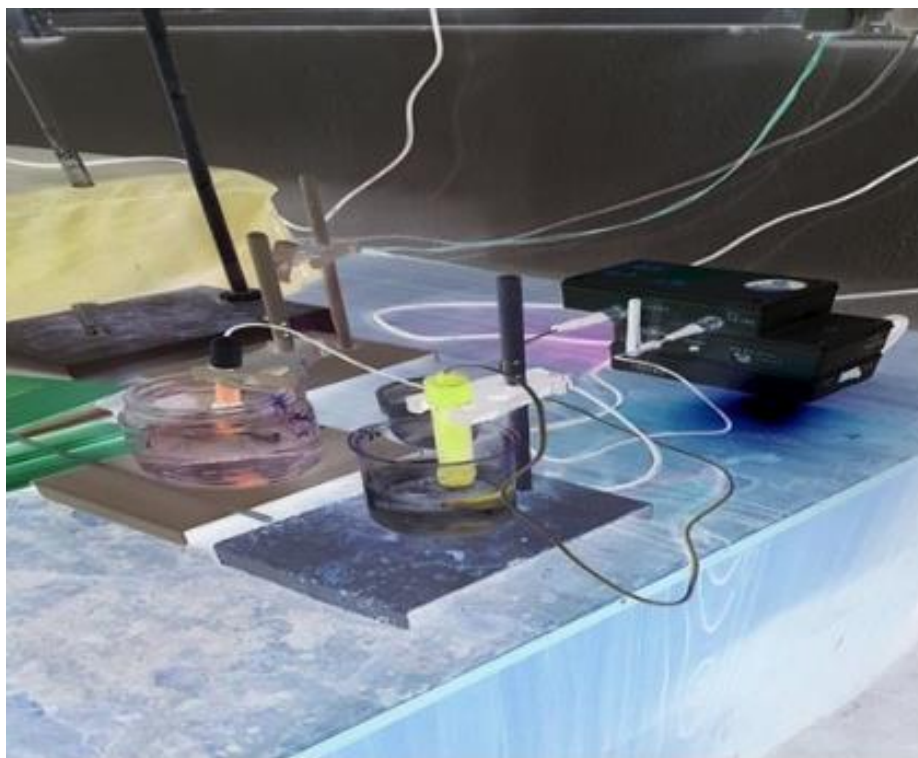


Fig. IoT Sensor for water health monitoring

Consultancy CAY 2022-2023

Project Title	Duration	Funding Agency	Amount
Design, Development and maintenance of the Website of HIDSAR	1 Year	HIDSAR	640000.00
			TotalAmount(X): 640000.00