

Dr. Ramesh Kumar Mohapatra

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Employment History

01/07/2024 – Till Date	■ Associate Professor. Computer Science & Engineering Department, NIT Rourkela, Odisha, India, 769008.
02/02/2018 – 30/06/2024	■ Assistant Professor Grade-I. Computer Science & Engineering Department, NIT Rourkela, Odisha, India, 769008.
01/07/2011 – 01/02/2018	■ Assistant Professor. Computer Science & Engineering Department, NIT Rourkela, Odisha, India, 769008 .
01/08/2010 – 30/06/2011	■ Assistant Professor. Computer Science & Engineering Department, ITER Bhubaneswar, Odisha, India, 751030.
02/05/2007(AN) – 31/07/2010	■ Lecturer. Computer Science & Engineering Department, ITER Bhubaneswar, Odisha, India, 751030.
21/07/2004 – 02/05/2007(FN)	■ Lecturer. Computer Science & Engineering Department, DRIEMS, Tangi, Cuttack, Odisha, India, 754022.

Education

2011 – 2016	■ Ph.D. , National Institute of Technology Rourkela, India in Optical Character Recognition. Thesis title: <i>Handwritten Character Recognition of a Vernacular Language: The Odia Script</i> . More details at https://www.nitrkl.ac.in/CS/~mohapatrark/
2008 – 2010	■ M.Tech. , Information Security, National Institute of Technology Rourkela, India in Cryptography. Thesis title: <i>Signcryption Schemes With Forward Secrecy Based on Elliptic Curve Cryptography</i> .
1999 – 2003	■ B.E. , Computer Science & Engineering, ITER Bhubaneswar, BPUT, India.
1996 – 1998	■ 10 + 2, Council of Higher Secondary Education, Maharishi College of Natural Law, Bhubaneswar, Odisha, India.
1996	■ 10 th , Board of Secondary Education Odisha, Sri Aurobindo Institute of Integral Education, Bhubaneswar, Odisha, India.

Institutional Responsibility

July/2012 – June/2017	■ Faculty Advisor for the B Tech/Dual Degree Batch 2012-2017
05/July/2018 – 30/June/2020	■ Assistant Warden, VS Hall of Residence
July/2020 – June/2024	■ Faculty Advisor for the B Tech Batch 2020-2024
1/July/2022 – 30/June/2024	■ Vice President, Games and Sports Society, SAC
1/July/2024 – till date	■ Chairman, Extra Academic Activity

Author IDs

Web of Science ResearcherID	Y-1419-2019
Scopus ID	57021074500
ORCID ID	0000-0002-3424-1465
Google Scholar ID	pY9mO6gAAAAJ

Areas of Interest

- Optical Character Recognition and Document Image Analysis
- Block Chain Technology
- Computer Vision and Video Processing
- Machine Learning
- Secure Computing

Research Group


- Intelligent Computing and Computer Vision Group

Books Edited

- The New Advanced Society: Artificial Intelligence and Industrial Internet of Things Paradigm. Sandeep Kumar Panda (Editor), Ramesh Kumar Mohapatra (Editor), Subhrakanta Panda (Editor), S. Balamurugan (Editor), ISBN: 978-1-119-82447-3, April 2022, 512 Pages.

Research Publications

Journal Articles

- 1 Bandana Das, B., Kumar Ram, S., Sathya Babu, K., Mohapatra, R. K., & Mohanty, S. P. (2024). Person identification using autoencoder-cnn approach with multitask-based eeg biometric. *Multimedia Tools and Applications*, 1-21.
- 2 Debnath, S., Mohapatra, R. K., & Dash, R. (2024). A robust secret data sharing through coverless video steganography based on average dc coefficient on bit plane segmentation. *Computers and Electrical Engineering*, 120, 109766.
- 3 Rout, S. & Mohapatra, R. K. (2024). Secure video steganographic model using framelet transform and elliptic curve cryptography. *Multimedia Tools and Applications*, 83(9), 25191-25212.
- 4 Sahoo, S. R., Dash, R., & Mohapatra, R. K. (2024a). Fusion of deep and wavelet feature representation for improved melanoma classification. *Multimedia Tools and Applications*, 1-27.
- 5 Debnath, S., Mohapatra, R. K., & Dash, R. (2023). Secret data sharing through coverless video steganography based on bit plane segmentation. *Journal of Information Security and Applications*, 78, 103612.
- 6 Rout, S. & Mohapatra, R. K. (2023). Secure video steganographic model using framelet transform and elliptic curve cryptography. *Multimedia Tools and Applications*, 1-22. 
<https://doi.org/10.1007/s11042-023-16531-2>

- 7 Sahoo, S. R., Dash, R., & Mohapatra, R. K. (2023). A customized deep learning framework for skin lesion classification using dermoscopic images. *Computer Animation and Virtual Worlds*, 34(5), e2132.
- 8 Sanyal, B., Mohapatra, R., & Dash, R. (2023). Indian tsr for partial occlusion using gdn. *Multimedia Tools and Applications*, 1–16. <https://doi.org/10.1007/s11042-023-16168-1>
- 9 Singh, R. P., Dash, R., & Mohapatra, R. K. (2023). Lbp and cnn feature fusion for face anti-spoofing. *Pattern Analysis and Applications*, 26(2), 773–782.
- 10 Sanyal, B., Mohapatra, R. K., & Dash, R. (2021). Real-time embedded tsr using mdeffnet: an efficient compact dnn on varied multi-resolution images across multiple databases. *International Journal of Wavelets, Multiresolution and Information Processing*, 19(03), 2050082.
- 11 Das, B. B., Kumar, P., Kar, D., Ram, S. K., Babu, K. S., & Mohapatra, R. K. (2019). A spatio-temporal model for eeg-based person identification. *Multimedia Tools and Applications*, 78(19), 28157–28177.
- 12 Mohapatra, R. K., Majhi, B., & Jena, S. K. (2017). Two-stage classification approach for the recognition of handwritten atomic odia character. *International Journal of Applied Pattern Recognition*, 4(1), 44–63.
- 13 Panda, S. & Mohapatra, R. K. (2013). Stamped proxy blind signature scheme. *International Journal of Computer Applications*, 64(15).
- 14 Panda, S., Sahu, S. K., Mohapatra, J., & Mohapatra, R. K. (2013). An application of time stamped proxy blind signature in e-voting. *International journal on computer science and engineering*, 5(6), 547.
- 15 Pradhan, S. & Mohapatra, R. (2011). Proxy blind signature scheme based on ecdlp. *International Journal of Engineering Science & Technology*, 3(3), 2244–2248.

Conference Proceedings

- 1 Basu, S., Debnath, S., & Mohapatra, R. K. (2024). Enhancing security and efficiency in signcryption schemes using elliptic curve cryptography. In *International conference on machine learning, iot and big data* (pp. 101–111).
- 2 Sahoo, S. R., Dash, R., & Mohapatra, R. K. (2024b). Improving melanoma classification using transfer learning based wavelet features. In *International conference on computational intelligence in communications and business analytics* (pp. 58–68).
- 3 Behera, G., Mohapatra, R. K., & Bhoi, A. K. (2023). A mixed collaborative recommender system using singular value decomposition and item similarity. In *International conference on machine learning, iot and big data* (pp. 259–267). Springer Nature Singapore Singapore.
- 4 Biswas, S., Debnath, S., & Mohapatra, R. K. (2023). Coverless image steganography based on dwt approximation and pixel intensity averaging. In *2023 7th international conference on trends in electronics and informatics (icoei)* (pp. 1554–1561). IEEE.
- 5 Chandel, A., Debnath, S., Kumar, J., & Mohapatra, R. K. (2023). An ecc-based lightweight cpabe scheme with attribute revocation. In *International conference on machine learning, iot and big data* (pp. 505–515). Springer Nature Singapore Singapore.
- 6 Debnath, S., Mohapatra, R. K., & Kulkarni, T. S. (2023). Bit plane segmentation and lbp-based coverless video steganography for secure data transmission. In *International conference on computer vision and image processing* (pp. 256–268).

- 7 Ekka, F. D., Debnath, S., Kumar, J., & Mohapatra, R. K. (2023). Verifiable secret image sharing with cheater identification. In *International conference on machine learning, iot and big data* (pp. 493–503). Springer Nature Singapore Singapore.
- 8 Kulkarni, T., Debnath, S., Kumar, J., & Mohapatra, R. K. (2023). Dct based robust coverless information hiding scheme with high capacity. In *2023 7th international conference on trends in electronics and informatics (icoei)* (pp. 358–364). IEEE.
- 9 Rani, S., Shukla, V., & Mohapatra, R. K. (2023). Recognition of high-security registration plate for indian vehicles. In *2023 3rd international conference on artificial intelligence and signal processing (aisp)* (pp. 1–5). IEEE.
- 10 Shukla, V., Rani, S., & Mohapatra, R. K. (2023). A new approach for leaf disease detection using multilayered convolutional neural network. In *2023 3rd international conference on artificial intelligence and signal processing (aisp)* (pp. 1–5). IEEE.
- 11 Singh, G., Kumar, J., & Mohapatra, R. K. (2023). Physical backdoor attack using multi-trigger to same class. In *2023 3rd international conference on artificial intelligence and signal processing (aisp)* (pp. 1–5). IEEE.
- 12 Biswal, P. R., Sanyal, B., & Mohapatra, R. K. (2022). Building damage detection using discrete wavelet transforms and convolutional neural networks. In *Proceedings of 2nd international conference on artificial intelligence: advances and applications: icaiaa 2021* (pp. 743–753). Springer Nature Singapore Singapore.
- 13 Debnath, S. & Mohapatra, R. K. (2022). A study on secret data sharing through coverless steganography. In *2022 2nd international conference on artificial intelligence and signal processing (aisp)* (pp. 1–6). IEEE.
- 14 Rout, S. & Mohapatra, R. K. (2022). Hiding sensitive information in surveillance video without affecting nefarious activity detection. In *2022 2nd international conference on artificial intelligence and signal processing (aisp)* (pp. 1–6). IEEE.
- 15 Sanyal, B., Padhy, A., Mohapatra, R. K., & Dash, R. (2022). Real-time indian tsr using mdeffnet. In *2022 2nd international conference on artificial intelligence and signal processing (aisp)* (pp. 1–5). IEEE.
- 16 Tirkey, A., Mohapatra, R. K., & Kumar, L. (2022a). Policing android malware using object-oriented metrics and machine learning techniques. In *Edge analytics: select proceedings of 26th international conference—adcom 2020* (pp. 307–319). Springer Singapore Singapore.
- 17 Tirkey, A., Mohapatra, R. K., & Kumar, L. (2022b). Sniffing android malware using deep learning. In *Edge analytics: select proceedings of 26th international conference—adcom 2020* (pp. 489–505). Springer Singapore Singapore.
- 18 Das, B. B., Ram, S. K., Pati, B., Panigrahi, C. R., Babu, K. S., & Mohapatra, R. K. (2021). Svm and ensemble-svm in eeg-based person identification. In C. R. Panigrahi, B. Pati, P. Mohapatra, R. Buyya, & K.-C. Li (Eds.), *Progress in advanced computing and intelligent engineering* (pp. 137–146). Singapore: Springer Singapore.
- 19 Gauttam, H. K. & Mohapatra, R. K. (2020). Speed prediction of fast approaching vehicle using moving camera. In *Computer vision and image processing: 4th international conference, cvip 2019, jaipur, india, september 27–29, 2019, revised selected papers, part ii 4* (pp. 423–431). Springer Singapore.
- 20 Rout, S. & Mohapatra, R. K. (2020). Video steganography using curvelet transform and elliptic curve cryptography. In *2020 11th international conference on computing, communication and networking technologies (icccnt)* (pp. 1–7). IEEE.

- 21 Sanyal, B., Mohapatra, R. K., & Dash, R. (2020). Traffic sign recognition: a survey. In *2020 international conference on artificial intelligence and signal processing (aisp)* (pp. 1–6). IEEE.
- 22 Tirkey, A. & Mohapatra, R. K. (2020). Understanding android application masquerades (paper category: preliminary). In *Pie* (Vol. 28, pp. 10–4).
- 23 Gupta, S. & Mohapatra, R. K. (2019). Performance improvement in handwritten devanagari character classification. In *2019 women institute of technology conference on electrical and computer engineering (witcon ece)* (pp. 60–64). IEEE.
- 24 Mohapatra, R. K., Shaswat, K., & Kedia, S. (2019). Offline handwritten signature verification using cnn inspired by inception v1 architecture. In *2019 fifth international conference on image information processing (iciip)* (pp. 263–267). IEEE.
- 25 Tirkey, A., Mohapatra, R. K., & Kumar, L. (2019). Anatomizing android malwares. In *2019 26th asia-pacific software engineering conference (apsec)* (pp. 450–457). IEEE.
- 26 Naidu, R., Bharti, S. K., Babu, K. S., & Mohapatra, R. K. (2018). Text summarization with automatic keyword extraction in telugu e-newspapers. In *Smart computing and informatics: proceedings of the first international conference on sci 2016, volume 1* (pp. 555–564). Springer Singapore.
- 27 Panthi, V., Gardizy, A., Mohapatra, R. K., & Mohapatra, D. P. (2018). Functionality testing of object-oriented software using uml state machine diagram. In *2018 international conference on circuits and systems in digital enterprise technology (iccsdet)* (pp. 1–7). IEEE.
- 28 Besra, B. & Mohapatra, R. K. (2017). Extraction of segmented vein patterns using repeated line tracking algorithm. In *2017 third international conference on sensing, signal processing and security (icsss)* (pp. 89–92). IEEE.
- 29 Naidu, R., Bharti, S. K., Babu, K. S., & Mohapatra, R. K. (2017). Sentiment analysis using telugu sentiwordnet. In *2017 international conference on wireless communications, signal processing and networking (wisnet)* (pp. 666–670). IEEE.
- 30 Patil, D., Mohapatra, R. K., & Babu, K. S. (2017). Evaluation of generalization based k-anonymization algorithms. In *2017 third international conference on sensing, signal processing and security (icsss)* (pp. 171–175). IEEE.
- 31 Vishwakarma, R. & Mohapatra, R. K. (2017). A secure three-party authentication protocol for wireless body area networks. In *2017 third international conference on sensing, signal processing and security (icsss)* (pp. 99–103). IEEE.
- 32 Mohapatra, R. K., Majhi, B., & Jena, S. K. (2016). Printed odia digit recognition using finite automaton. In *Proceedings of 3rd international conference on advanced computing, networking and informatics: icacni 2015, volume 1* (pp. 643–650). Springer India.
- 33 Mohapatra, R. K., Majhi, B., & Jena, S. K. (2015). Classification performance analysis of mnist dataset utilizing a multi-resolution technique. In *2015 international conference on computing, communication and security (icccs)* (pp. 1–5). IEEE.
- 34 Mohapatra, R. K., Mishra, T. K., Panda, S., & Majhi, B. (2015). Ohcs: a database for handwritten atomic odia character recognition. In *2015 fifth national conference on computer vision, pattern recognition, image processing and graphics (ncvprpg)* (pp. 1–4). IEEE.

Books and Chapters

- 1 Sanyal, B., Biswal, P. R., Mohapatra, R., Dash, R., & Agarwalla, A. (2022). *Automated tsr using dnn approach for intelligent vehicles*. John Wiley & Sons, Inc. Hoboken, NJ, USA.

Research Scholars

Doctoral Students

- 2020 ■ Madhusmita Majhi(920CS5015), "Parameterized Algorithm, NLP", :- Co-Supervisor
 ■ Satyanarayanamurty M. (920CS5009), "Image Tampering Detection And Self Recovery Schemes Using Machine Learning Techniques" :- Supervisor
- 2019 ■ Shekhresh Barik(919CS5107), "IoT enabled smart city Development Program", :- Supervisor
 ■ Sourabh Debnath(519CS1014), "Video processing and medical image learning" :- Supervisor, (Submitted)
 ■ Ravi Pratap Singh, "Internet Of Things, Machine Learning" :- Co-Supervisor
- 2018 ■ Sandhya Rani Sahoo, "Image Processing, Information Security" :- Co-Supervisor
- 2017 ■ Banhi Sanyal(517CS1009), "Image Processing" :- Supervisor, (Completed)
 ■ Anand Tirkey(517CS1005), "Machine Learning" :- Supervisor
 ■ Banee Bandana Das, "EEG Based Authentication System" :- Co-Supervisor, (Completed)

M.Tech by Research Students(01 no.)

- Sonali Rout(617CS6003), *Secure Video Steganography Schemes Using Transform Domain Methods And Elliptic Curve Cryptography* (Graduated in 2021): - Supervisor

M. Tech. Thesis Guided (46 nos.)

- 2023-24 ■ Mandalapu Uday Chandra (222CS1084), *Clustering and Time series forecasting based Hybrid approaches for Air Quality Index(AQI) prediction*
 ■ Sweta Verma (222CS1267), *SecureVisage: Low-Light Biometric Face Recognition Security System*
 ■ Sudarshan Basu (222CS2095), *Enhancing security and efficiency in signcryption schemes using elliptic curve cryptography.*
 ■ Pranjal Singh (222CS2108), *Blockchain based Patient record maintenance System*
 ■ Kureti Bharatvardhan (222CS2377), *Enhancing the Selection of Class Representatives in Educational Institutions: A Blockchain Approach*
- 2022-23 ■ Avinash Chandel (221CS2284), *A lightweight CPABE with dynamic attribute revocation based on ECC.*
 ■ Franco Debashis Ekka (221CS2065), *Cheater Identification In Verifiable Secret Image Sharing.*
 ■ Govind Singh (221CS2282), *Multi-Trigger based Physical Backdoor Attack to the Same Class.*
 ■ K Varalakshmi (221CS1279), *Blockchain and IPFS-based Digital Certificate Verification System.*
 ■ Kulkarni Tejas Shirish (221CS2295), *Robust Coverless image steganography scheme based on DCT with high capacity.*
 ■ Suman Biswas (221CS2283), *Coverless Image Steganography based on DWT approximation and Pixel intensity averaging.*
- Sweta Rani (221CS1275), *Recognition of High-Security Registration Plate for Indian Vehicles*
 ■ Vivek Shukla (221CS1278), *Leaf Disease Detection using Multilayered Convolutional Neural Network.*
- 2021-22 ■ Gopikrishna Abhishek Muddu (220CS2606), *Authentication and Media Encryption using Collatz Conjecture in Cryptography.*

- | | |
|---------|---|
| | <p>■ Panne Lal (220CS2262), <i>Securing Color Image Transmission Using Symmetric Dynamic Algorithm.</i></p> <p>■ Rohit Singh Rana (220CS2609), <i>A Hybrid Data Security model to secure Data in Cloud using AES & ECDH Encryption Algorithm.</i></p> |
| 2020-21 | <p>■ Amitesh Singh (219CS2144), <i>Image steganography using AES encryption and K-means clustering</i></p> <p>■ Bulusu Swetha (219CS2462), <i>Handwritten Mathematical Expression Recognition and Evaluation</i></p> <p>■ Sandeep Morya (219CS2349), <i>Face Liveness Detection Using Convolutional Neural Network</i></p> |
| 2019-20 | <p>■ Dileswar Sahu (218CS1089), <i>Vehicle Type Detection Based on Deep Learning in Traffic Scene.</i></p> <p>■ Himanshu Kumar Keshri (218CS1084), <i>Text Independent Writer Identification From Handwritten Documents.</i></p> |
| 2018-19 | <p>■ Kumar Utkarsh (218CS2094), <i>Botnet Detection via Network Flow Information.</i></p> <p>■ Abhilekh Das (217CS2309), <i>Keystroke Dynamics System Using Various Detectors.</i></p> <p>■ Rangoli Ranjan (217CS1112), <i>Vision Based Fall Detection for Elderly Person using Machine Learning Techniques.</i></p> |
| 2017-18 | <p>■ Greeshma Vijayakumar (216CS1148), <i>Speech Recognition System for Malayalam Language</i></p> <p>■ Jitendra Pratap Dehury (216CS2154), <i>Random Forest-Based Intrusion Detection System (IDS).</i></p> <p>■ Nitin Kumar (216CS1140), <i>Heart Disease Detection using Machine Learning Techniques.</i></p> <p>■ Rupam Kumari (216CS3178), <i>Software Fault Prediction using Machine Learning Techniques.</i></p> |
| 2016-17 | <p>■ Bhagyashree Besra (215CS1064), <i>Enhancement of feature extraction with a robust matching for vascular identification.</i></p> <p>■ Dania Qara Bala (215CS2457), <i>A Lightweight Remote User Authentication Protocol for Smart e-Health Networking Environment</i></p> <p>■ Devyani Vilas Patil (215CS2316), <i>Optimal K-Anonymity using Monotonicity.</i></p> <p>■ Rahul Vishwakarma (215CS2318), <i>A Secure Three-Party Authentication Protocol for Wireless Body Area Networks.</i></p> <p>■ Reddy Naidu (215CS1073), <i>Lexicon - based Sentiment Analysis in Telugu Text.</i></p> <p>■ Sayed Mohammad Ashraf Gardizy (215CS3253), <i>Automatic Test Scenario Generation for Object-Oriented and Web-Based Applications.</i></p> |
| 2015-16 | <p>■ Ajnas Muhammed (214CS2139), <i>An Efficient QR Code Based Web Authentication Scheme.</i></p> <p>■ Faiza Siddiqui (214CS1129), <i>White Blood Cells Identification and Classification from Microscopic Blood Images.</i></p> <p>■ Kapil Dev (214CS3152), <i>Spatio-Textual Similarity Joins Using Variable Prefix Filtering and MBR Filtering.</i></p> <p>■ Rashmi Singh (214CS3158), <i>Performance Improvement In DSR And Comparative Analysis With DSDV, AODV, DSR.</i></p> <p>■ Sandeep Prabhakar Patil (214CS1141), <i>Sign language processing for effective collaboration between mute, deaf and physically unchallenged people.</i></p> |
| 2014-15 | <p>■ Udit Narayan Chauhan (213CS2160), <i>Intrusion Detection System: Survey and Classification Techniques..</i></p> |

Research Scholars (continued)

- 2013-14
- Shantanu Kumar Biswal (213CS3181), *A Combined Approach for Identifying Crosscutting concerns in an Object Oriented System.*
 - Rajkamal kishor Gupta(212CS1091) *Object detection and tracking in video image.*
 - Vikas Kumar (212CS2363),*Efficient identity based signcryption scheme and solution of key-escrow problem.*
- 2012-13
- Deepak Kumar Meena (211CS3072), *Test Case Generation From UML Interaction Overview Diagram and Sequence Diagram.*
 - Suryakanta Panda(211CS1273), *Time Stamped Proxy Blind Signature Scheme With Proxy Revocation Based on Discrete Logarithm Problem.*
- 2010-11
- Satarupa Pradhan, *Proxy Blind Signature Based on ECDLP for multiple original signers.*

B. Tech. and Dual Degree Thesis Guided (51 nos.)

- 2023-24
- Narendra Simha Mekala (120CS0181), *Face Recognition based Attendance System.*
 - Swayam Kumar Nahak (120CS0193), *Exploring Secure Computing and Cybersecurity.*
 - Omisa Panda (120CS0202), *Agri-Based Insurance using Blockchain.*
 - Mahesh Pandey (120CS0671), *E-Voting System using Blockchain in NIT Rourkela SAC Elections.*
 - Aditya Shekhar (120CS0678), *Comprehensive Analysis of Audio Steganography Techniques.*
- 2022-23
- Anshuman Padhy (118CS0189), *Real-time Indian TSR using MDEffNet.*
 - Karri Bhanu Teja (119CS0566), *A method using DNA encoding with ECC public key cryptography.*
 - Irfanur Rahman (119CS0155), *Design and Implementation of a Solar-Powered Alarm Clock using Raspberry Pi Pico.*
 - Muhammad Ali (119CS0105), *Distance Measurement with a Single Camera: Techniques and Applications.*
- 2021-22
- Manish Kumar Sarangi (117CS0261), *Drowsiness detection for driver awareness(Summer).*
 - Anshuman Padhy (118CS0189), *Real-time Indian TSR using MDEffNet.*
- 2020-21
- Aradhyula Shiva Rajesh (117CS0248), *Depth Estimation of Submerged Objects in Still Images Using Motionless Monocular Camera*
 - Milind Choudhary (117CS0196), *Plant Disease Identification Using Discrete Wavelet Transform and Convolutional Neural Network*
 - Piyush Ranjan Biswal (117CS0193), *Building Damage Detection using Discrete Wavelet Transforms and Convolutional Neural Networks*
 - Manish Kumar Sarangi (117CS0261), *Drowsiness detection for driver awareness*
 - Swostik Acharya (716CS2049), *Human Height Estimation using Computer Vision*
- 2019-20
- Ananya Sahoo (116CS0221), *Plant Disease Detection System using Deep Learning*
 - Bollavaram Sai Sandeep (116CS0230), *Movie Recommendation system using Collaborative filtering techniques*
 - Nischay Nirajit Mahanta (116CS0199), *A Machine Learning Approach for Malicious PDF file Classification*
 - Vuskamalla Shivakrishna (116CS0234), *Phishing URL detection using Machine Learning Techniques*

Research Scholars (continued)

- 2018-19

Chinmay Kumar Rout (715CS1057), *Normalized difference vegetation index prediction using machine learning techniques on remote sensing satellite images.*
- 2018-19

Anil Kumar Kasaragadda (115CS0215), *Predicting Smartphone PIN using Motion Sensors.*
- 2018-19

Banoth Naresh (115CS0226), *Drowsiness Detection System for Students in a Class.*
- 2018-19

Hutesh Kumar Gauttam (115CS0209), *A Helmet with On-Board Camera to Predict the Speed of Fast Approaching Vehicle.*
- 2018-19

Maddineni Pranith Srujan Roy (115CS0246), *Stock Price prediction of NSE(Nifty) pharma stocks.*
- 2018-19

Ankush Agarwalla (714CS1083), *Traffic Sign Recognition using Convolutional Neural Networks.*
- 2018-19

Kumar Shaswat (714CS2121), *Offline Handwritten Signature Verification.*
- 2017-18

Aditya Sai Kandukuri (114CS0104), *Real time System to check the availability of Person in the department.*
- 2017-18

Divya Rani Lakra (114CS0370), *Classification of Diabetic Retinopathy using Support Vector Machine.*
- 2017-18

Kamal Agrawal (114CS0089), *Real time System to check the availability of Person in the department.*
- 2017-18

Yashwanthini Reddy M (114CS0017), *Breast Cancer Diagnosis Using Hybrid Classifier Based On Genetic Algorithm And Naive Bayes.*
- 2017-18

Chamakuri Bharat (713CS2045), *A Secure and Sustainable Model for Implementing Virtual Traffic Lights.*
- 2016-17

Himanshu Gupta (113CS0139), *Recognition and Evaluation of Mathematical Expressions in Handwritten Devanagari Lipi.*
- 2016-17

Vinod Kumar Reddy Polimera (113CS0165), *Pixel Mod Value Based Steganography on Images.*
- 2016-17

Jahnavi Ayyanki (113CS0198), *Pixel Mod Value Based Steganography.*
- 2015-16

Arjun Kumar Agrawal (112CS0134), *Face Recognition and its Application to Automated Attendance System.*
- 2015-16

Bhubanananda Chhatriya (112CS0144), *Face Recognition and its Application to Automated Attendance System.*
- 2015-16

Chandan Kumar Meher (112CS0164), *NITR Messenger.*
- 2015-16

Vikas Patidar (112CS0175), *Design of Automatic Water Dispenser Based on Coin Recognition.*
- 2014-15

Hillol Chakraborty (111CS0202), *Scene Identification Using Discriminative Pattern.*
- 2014-15

Sangeeta Bhuyan (111CS0444), *Image Security using Visual Cryptography.*
- 2014-15

Sourav Kumar Kamila (111CS0127), *Comparative Analysis of Different Transformation Techniques in Image Steganography.*
- 2014-15

Vaditya Ramesh (111CS0116), *Study of part of speech tagging.*
- 2014-15

Vanga Tulasi Krishna (710CS1157), *Depth Measurement and 3D Reconstruction of the Scene from Multiple Image Sequence.*
- 2013-14

Sai Prasanth Gumpalli (110CS0479) and Prasanth Kandipalli (110CS0141), *Image Segmentation and Multiple skew estimation, correction in printed and handwritten documents.*
- 2013-14

Sumeet Mahapatra (110CS0133), *Auto-focus algorithm based on maximum gradient and threshold.*
- 2013-14

Dayadru Nayak (110CS0138) and Manas Ranjan Sahoo (110CS0146), *Spam detection in collaborative tagging.*

Research Scholars (continued)

- 2012-13
- Rakesh Kumar Sethi, (110CS0151), *Use of adaptive methods to improve degraded document images.*
 - Bhishm Tripathi (109CS0599), *A Survey on various image compression techniques.*
 - Rajat Singh (109CS0345) and Devendra Singh Meena (109CS0633), *Study of image denoising using curvelet transform.*
 - Sandeep Kumar Patra (109CS0172) and Ch. Sharath Chandra Santosh Prasad (109CS0489), *A Survey of different classification techniques and their comparison using McNemar's Test.*

Sponsored Project Details

- 2024-27
- **Security Analysis of Software Systems** by NSCS from 2024-24(3years)(Amount Rs 52,31,000) as Co-PI.
- 2016-19
- **Re-configurable Hardware To Detect Drowsy Operator From Eye Image Under Spectacles** by BRNS from 2016-17(3years)(Amount Rs 18,26,650) as Co-PI.

Courses Taught

- UG
- Programming for Problem Solving
 - Python Programming
 - Data Structures and Algorithms
 - Digital Logic Design
 - Discrete Mathematics
 - Computer Organization and Architecture
 - Algorithms Analysis And Design
 - Formal Languages and Automata Theory
 - Computer Vision
 - Compiler Design
 - Data Communications and Computer Networks
 - Cryptography Foundations
 - Cyber Security
 - AI and ML Laboratory
- PG
- Image Processing
 - Machine Learning
 - Foundation of Computer Security
 - Network Security
 - Cyber Security

Membership of Professional Societies

- Fellow
- **Institution of Engineers (India) (IEI)**, Membership# F-1314110.
 - **International Society for Research and Development (ISRDI)**, Membership# F3140900385.

Membership of Professional Societies (continued)

Senior Member	■ Institute of Electrical and Electronics Engineers (IEEE), Membership# 92347167.
Life Member	■ Computer Society of India (CSI), Membership# 11151348. ■ Indian Society for Technical Education (ISTE), Membership# 50698.
Member	■ International Association of Engineers (IAENG), Membership# 106526. ■ International Association of Computer Science and Information Technology (IACSIT), Membership# 80337617.

Short-Term Course/Workshop/Conference/Training Conducted

2024	■ One day training given on MYBHARAT Portal conducted by Department of Youth Affairs, Ministry of Youth on November 11, 2024 (Online Mode). ■ Short Term Course on <i>Cyber Safety and Security 2024</i> (STCCSS-2024) from 24th-28th October 2024 organized by Computer Science and Engineering Department, National Institute of Technology Rourkela in association with Quick Heal. ■ One day training given on MYBHARAT Portal conducted by Department of Youth Affairs, Ministry of Youth Affairs and Sports Government of India and NIT Rourkela on July 16, 2024 (Offline mode). ■ VRITIKA (Training and Skill Internship) on Understanding blockchain and IPFS based secure data communication using various Tools from 15 May 2024 - 14 Jun 2024 Under Accelerated Vigyan scheme sponsored by SERB.
2023	■ Short Term Course on <i>Cyber Safety and Security 2023</i> (CSS-2023) from 6th-10th October 2023 organized by Computer Science and Engineering Department, National Institute of Technology Rourkela. ■ National Conference on "Artificial Intelligence and IoT in Agriculture and Food Industry 4.0" (AIIAF-23) from 12-13 August 2023 in collaboration with Department of Food Process Engineering and Department of Computer Science and Engineering, NIT Rourkela. ■ One day workshop on Cyber-Security organized by Computer Science and Engineering, National Institute of Technology Rourkela, on 8th August 2023.
2020	■ A <i>Short Term Course on Cybersecurity</i> conducted from 20 Aug 2020 to 20 May 2021 in the Department of Computer Science and Engineering, NIT Rourkela, India.
2010	■ A <i>Short Term Course on Ethical Hacking and Network Security</i> conducted from 08 Mar 2016 to 12 Mar 2016 in the Department of Computer Science and Engineering, NIT Rourkela, India.

Talk Delivered

2025	■ On <i>AI in Education</i> at Dept. of CSE(AI & ML, DS) Anil Neerukonda Institute of Technology & Sciences (ANITS) (A), on 4th February 2025, Sangivalasa, Visakhapatnam, AP.
2024	■ On <i>Understanding Cyber Security, Cyber Crime and its Prevention</i> at One-day Seminar on Cyber Security on 19th November 2024, DAMITS, Rourkela.
2023	■ On <i>AI and its role in Robotics and other Emerging Areas</i> at Boot-camp on Applied Artificial Intelligence for Motion Control of Unmanned Aerial Systems from 02 - 06 September 2023, Mechanical Sciences Department, NIT Campus, Rourkela.

Talk Delivered (continued)

- On *AI and its applications in Robotics* at National conference on Computing 4.0: *Empowering the next generation of technology* (NCCENG-2023) organised from 22nd to 23rd of September by the department of computer science and engineering and department of MCA in Gandhi Institute of Excellent Technocrats, Bhubaneswar.
- 2020 ■ On *Security in IoT: issues, challenges, and solutions* at The Institution of Engineers (India), Rourkela Local Centre on 27th December, 2020 (Sunday) at 06.00 pm at A.N. Patel Memorial Seminar Hall, Local Center Building, NIT Campus, Rourkela.
- On *IoT Privacy and Security: Challenges and Solutions* in AICTE-STTP on “Smart Perspectives of IoT in Green Technologies” from 14th Dec to 19th Dec 2020 at Gandhi Institute For Technology (GIFT), Bhubaneswar, Odisha.
- On *Security in Cloud Computing* in AICTE-ISTE sponsored FDP on “Recent Trends in Cloud Computing” from 7th Dec to 12th Dec 2020 organized by Department of Computer Science and Engineering and Internal Quality Assurance Cell (IQAC), DRIEMS Autonomous Engg. College, Tangi Cuttack, Odisha.
- On *Data Science Learnathon :From Raw Data to Deployment* in National Webinar organized by Department of Computer Science & Engineering and MCA, Raajdhani Engineering College, Bhubaneswar in Collaboration with TEQIP-III, BPUT, ODISHA(ATU) Odisha on 14th November 2020. [[Click Here](#)]
- 2019 ■ On *Introduction to Cybercrime and its Prevention* at The Institution of Engineers (India), Rourkela Local Centre on 15th March, 2019 (Friday) at 07.00 pm at A.N. Patel Memorial Seminar Hall, Local Center Building, NIT Campus, Rourkela.
- On *Cyber Security and Social Media Awareness* at CISF unit RSP, Rourkela on 29th March 2019.
- 2018 ■ On *Technical Documentation using L^AT_EX* at the workshop organized by Department of Computer Science & Engineering, GIET, Gunupur, Odisha on 2-3rd November 2018.
- On *Technical Documentation using L^AT_EX* at the workshop organized by Department of Computer Science & Engineering, Govt. College of Engineering Kalahandi, Odisha on 24-25th August 2018.
- On *System Security* at EC Department, NIT Rourkela on 4th July 2018.

Professional Training/Short-Term Courses/FDP Attended

- 2024 ■ Two days training Program on *BIS Annual Convention* from 27 to 28 September 2024 by at Mahavalipuram, Chennai.
- One-day training program on MYBHARAT Portal at IIPA, Delhi on 5th July 2024.
- 2020 ■ Six days online Short Term Training Programme on *Emerging Trends in Cryptography and its Applications in CYBER SECURITY* sponsored by AICTE and organized by the Department of Computer Science and Engineering, Vidya Academy of Science and Technology from 21st December 2020 to 28th December 2020.
- Three days Faculty Development Programme on *Outcome based Engineering Education and Accreditation* (OBEEA 2020) sponsored by TEQIP-III and organized by NIT Meghalaya during 21st-23rd September 2020.
- 2019 ■ One-week Faculty Development Programme on *Deep Learning & Applications* from 27th to 31st May, 2019 jointly organized by Electronics and ICT Academies held from May 27 – 31, 2019 through National Knowledge Network 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.
- A short term course on *Introduction to Programming: A Pedagogical Approach* conducted by E & ICT Academy, Indian Institute of Technology, Kanpur from 17th June to 22nd June 2019.

Professional Training/Short-Term Courses/FDP Attended (continued)

- 2018 ■ Five days Faculty Development Program on *Machine Learning with Business Applications* from 8th to 12th October, 2018 at IIMB organized by Analytics Society of India (ASI) in association with DCAL, Indian Institute of Management Bangalore (IIMB).
- 2014 ■ Training on *Research Methodology and IPR* from 4 to 7 February 2014 by EQUATE New Delhi.
- 2012 ■ Training on *e-FMR and Financial Management* from 28 and 29th May 2014 organized by NPIU,SPFU and Sardar Patel College of Engineering, Mumbai.
- Training on *Object Oriented Analysis and Design using UML with Essential of Rational Software Architect* from 23-26, August 2012 at NIT Rourkela in collaboration with IBM.
- 2008 ■ Training on *Remote Sensing and GIS* from 19-30 May 2008 at IIT Kharagpur in collaboration with NNRMS(ISRO).

Seminar/ Conference/ Workshop Attended or Presented

- 2020 ■ The 26th (Virtual) Annual International Conference on Advanced Computing and Communications (ADCOM-2020) Jointly organized by National Institute of Technology Silchar, Assam Advanced Computing and Communications Society during December 16-18, 2020. [[Click Here](#)]
- 2019 ■ Fourth International Conference on Advanced Computing and Intelligent Engineering (ICACIE-2019) organised by Rama Devi Women's University, Vidya Vihar, Bhubaneswar, India, December 21-23, 2019.
- The 26th Asia-Pacific Software Engineering Conference (APSEC-2019) jointly organised by Malaysian Software Engineering Interest Group (MySEIG) and Universiti Teknologi Malaysia (UTM), Putrajaya, Malaysia, December 2-5, 2019.
- Fifth International Conference on Image Information Processing (ICIIP-2019) organised by the Department of Computer Science and Engineering of Jaypee University of Information Technology, Shimla, India during 15 - 17 November, 2019.
- Fourth International Conference on Computer Vision & Image Processing (CVIP-2019) organised by the Department of Computer Science and Engineering of Malaviya National Institute of Technology, Jaipur, India during 27 - 29 September, 2019.
- 2017 ■ Author Workshop organized by Elsevier in collaboration with NIT Rourkela from 23 Aug 2017 to 23 Aug 2017.
- International Conference on Wireless Communications, Signal Processing and Networking (WiSPNET) 2017 organized by IEEE Madras Section from 22 Mar 2017 to 24 Mar 2017.
- 2015 ■ Fifth National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics (NCVPRIPG) organized by IEEE Kharagpur Section and Indian Unit for Pattern Recognition and Artificial Intelligence, IUPRAI from 16 Dec 2015 to 19 Dec 2015.
- International Conference on Computing, Communication and Security (ICCCS) organized by IEEE Mauritius Subsection and Society of Information Technologists and Entrepreneurs from 04 Dec 2015 to 05 Dec 2015.
- International Conference on Advanced Computing, Networking, and Informatics organized by KIIT Bhubaneswar from 23 Jun 2015 to 25 Jun 2015.
- 2010 ■ International Conference on Advanced Computing and Communication (ICACC-2010) organized by Amal Jyothi College of Engineering, Kerala from 03 May 2010 to 04 May 2010.
- Research Promotion Workshop on Introduction to Graph and Geometric Algorithms organized by Department of CSE NIT Rourkela and TIFR Mumbai from 25 Mar 2010 to 27 Mar 2010.

Sd/-

(Dr. Ramesh Kumar Mohapatra)