



Contact Details

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Web of Science ID: <https://www.webofscience.com/wos/author/record/C-1966-2017>

Educational Qualification

Year	Degree/Program	Board University
2015	Ph.D.	Maulana Azad National Institute of Technology, Bhopal
2009	M.Tech	Maulana Azad National Institute of Technology, Bhopal
2002	B.E	Oriental Institute of Science and Technology, Bhopal

Teaching Experience

Organization	Start Date	End Date	Designation	Nature of Work
Maulana Azad National Institute of Technology, Bhopal.	24/12/2024	Continuing	Associate Professor Level 13 (A2)	Teaching and research
Maulana Azad National Institute of Technology, Bhopal.	26/12/2018	23/12/2024	Assistant Professor Grade-I	Teaching and research
Maulana Azad National Institute of Technology, Bhopal.	17/08/2005	25/12/2018	Assistant Professor Grade-II	Teaching and research

Ph.D. Supervised/Ongoing

Name of the Student	Topic	Year of Award	Co-Supervisor (if any)
Mr. Anil Kumar Kushwah	Non-stationary wind time series forecasting using hybrid approaches	2022	NIL
Ms. Banalaxmi Brahma	Investigation of dataset characteristics for design of RNN models in time series applications	2022	Nil
Mr. Muktesh Gupta	Change Point Detection-Based Prediction for Time Series Data Applications	2024	Dr. Akhtar Rasool

Ms. B. Sowkarthika	Efficient Data Complexity based Machine Learning for Real World Problems	Thesis Submitted	Supervisor: Dr. Manasi Gyanchandani
Ms. Manali Chandnani	Enhancing the efficiency and resilience of intelligent transportation systems through machine learning techniques.	Ongoing	Supervisor: Dr. Sanyam Shukla
Ms. Juhi Kumari	Deep Learning-Based Statistical Downscaling System for Forecasting Climate Variables under Regime Shifts.	Ongoing	Dr. Sanyam Shukla

Patents				
Title	Patent No.	Agency	Grant Date	Status
System and Method of Detecting and Regulating Parameters in a Greenhouse Environment	562965	The Patent office, Govt. of India	20/03/25	Granted

Administrative Work Done

1. Associate Dean (R&C) (28 March 2024 to Till Date)
2. Warden CV Raman Hostel No. 4 (01 Dec 2009 to 16 June 2016)
3. Professor I/C Website (www.manit.ac.in) (18 Aug 2017 to 29 Apr 2020)
4. Institutes Social Media Nodal Officer (10 Apr 2018 to 29 Apr 2020)
5. Time Table Coordinator (May 2012 to Dec 2023)
6. PG Coordinator Computer Networking (Jan 2019 to Jan 20222)
7. Departmental Exam Co-coordinator (July 2009 to Jan 2012)

Other Information	
Activity	Count
Workshops/Short-Term Training Programs Attended	18
Workshops/Short-Term Training Programs Organized	02

Publications
• International Journals: 42 • International Conference: 26 • Book Chapters: 05
Journal Papers 1. Rakesh Batchala, Priyank Jain, Manasi Gyanchandani, Sanyam Shukla, Rajesh Wadhvani. "Enhance differential privacy mechanisms for clinical data analysis using CNNs and reinforcement learning." Big Data 12, 178 (2025). 2. Muktesh Gupta, Rajesh Wadhvani, and Akhtar Rasool. " Deep learning-based real-time diagnosis of cardiac diseases through behavioral changes in ECG signals. " Biomedical Signal Processing and Control, Volume 104 , (2025).

3. Rishita Raj, Rajesh Wadhvani, Akhtar Rasool and Muktesh Gupta. "Analyzing feature impacts in wind turbine power output modelling using quantile regression." *Wind Engineering* (2024): 49(2):330-343.
4. Akshita Gour, Muktesh Gupta, Rajesh Wadhvani and Sanyam Shukla. "Ecg based heart disease classification: Advancement and review of techniques." *Procedia Computer Science* ; Volume 235, Pages 1634-1648, (2024).
5. Gupta, Muktesh, Rajesh Wadhvani, and Akhtar Rasool. "Comprehensive analysis of change-point dynamics detection in time series data: A review." *Expert Systems with Applications* (2024): 123342.
6. Gyanchandani, Manasi, Rajesh Wadhvani, and Sanyam Shukla. "Data complexity measures for classification of a multi-concept dataset." *Multimedia Tools and Applications* (2024): 1-32.
7. Chandnani, Manali, Sanyam Shukla, and Rajesh Wadhvani. "Multistage traffic sign recognition under harsh environment." *Multimedia Tools and Applications* (2024): 1-33.
8. Patidar, Vivek Kumar, Rajesh Wadhvani, and Muktesh Gupta. "Analysis of wind power curve modeling using multi-model regression." *Wind Engineering* (2023): 0309524X231214141.
9. Sowkarthika, B., Gyanchandani, M., Rajesh Wadhvani & Sanyam Shukla (2023). Data complexity-based dynamic ensembling of SVMs in classification. *Expert Systems with Applications*, 216, 119437.
10. Gupta, Muktesh, Rajesh Wadhvani, and Akhtar Rasool. "A real-time adaptive model for bearing fault classification and remaining useful life estimation using deep neural network." *Knowledge-Based Systems* 259 (2023): 110070.
11. Rane, Rahul, Aditya Dubey, Akhtar Rasool, and Rajesh Wadhvani. "Data mining-based techniques for COVID-19 predictions." *Procedia Computer Science* 218 (2023): 210-219.
12. Brahma, Banalaxmi, and Rajesh Wadhvani. "A residual ensemble learning approach for solar irradiance forecasting." *Multimedia Tools and Applications* (2023): 1-23.
13. Gupta, Muktesh, Rajesh Wadhvani, and Akhtar Rasool. "Real-time Change-Point Detection: A deep neural network-based adaptive approach for detecting changes in multivariate time series data." *Expert Systems with Applications* 209 (2022): 118260.
14. Patil, Deepali, Rajesh Wadhvani, Sanyam Shukla, and Muktesh Gupta. "Adaptive wind data normalization to improve the performance of forecasting models." *Wind Engineering* (2022): 0309524X221093908.
15. Kushwah, Anil Kumar, and Rajesh Wadhvani. "Trend triplet based data clustering for eliminating nonlinear trend components of wind time series to improve the performance of statistical forecasting models." *Multimedia Tools and Applications* (2022): 1-27.
16. Brahma, Banalaxmi, and Rajesh Wadhvani. "Visualizing solar irradiance data in ArcGIS and forecasting based on a novel deep neural network mechanism." *Multimedia Tools and Applications* 81, no. 7 (2022): 9015-9043.
17. Kushwah, Anil Kumar, and Rajesh Wadhvani. "Data complexity based hybrid approach to select a model for wind speed forecasting." *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects* (2021): 1-18.
18. Kushwah, Anil Kumar, and Rajesh Wadhvani. "Discrete wavelet transforms based hybrid approach to forecast wind speed time series." *Wind Engineering* 45, no. 6 (2021): 1623-1635.
19. Brahma, Banalaxmi, Rajesh Wadhvani, and Sanyam Shukla. "Attention mechanism for developing wind speed and solar irradiance forecasting models." *Wind Engineering* 45, no. 6 (2021): 1422-1432.
20. Kushwah, Varsha, Rajesh Wadhvani, and Anil Kumar Kushwah. "Trend-based time series data clustering for wind speed forecasting." *Wind Engineering* 45, no. 4 (2021): 992-1001.
21. Brahma, Banalaxmi, and Rajesh Wadhvani. "Time series forecasting: A comparison of deep neural network techniques." *Solid State Technology* 63, no. 6 (2020): 1747-1761.

22. Chandak, Trupti, Sanyam Shukla, and Rajesh Wadhvani. "An analysis of "A feature reduced intrusion detection system using ANN classifier" by Akashdeep et al. expert systems with applications." *Expert Systems with applications* 130 (2019): 79-83.
23. Kushwah, Anil Kumar, and Rajesh Wadhvani. "Performance monitoring of wind turbines using advanced statistical methods." *Sādhana* 44, no. 7 (2019): 1-11.
24. Wadhvani, Rajesh, and Sanyam Shukla. "Analysis of parametric and non-parametric regression techniques to model the wind turbine power curve." *Wind Engineering* 43, no. 3 (2019): 225-232.
25. Jain, Sukirty, Sanyam Shukla, and Rajesh Wadhvani. "Dynamic selection of normalization techniques using data complexity measures." *Expert Systems with Applications* 106 (2018): 252-262.
26. Wadhvani, Rajesh, Rajesh Kumar Pateriya, Manasi Gyanchandani, and Sanyam Shukla. "RIN-Sum: A System for Query-Specific Multi-Document Extractive Summarization." *International Journal of Advanced Computer Science and Applications* 8, no. 3 (2017).
27. Shukla, Sanyam, Rajesh Wadhvani, Jyoti Bharti, and Manasi Gyanchandani. "Voting based extreme learning machine with search based ensemble pruning." *IJCSNS* 17, no. 3 (2017): 223.
28. Wadhvani, Rajesh, Sanyam Shukla, Manasi Gyanchandani, and Akhtar Rasool. "Analysis of statistical techniques to estimate wind turbine power generation." *International Journal of Computer Science and Network Security (IJCSNS)* 17, no. 2 (2017): 247.
29. Barsiya, Tarang Kumar, Manasi Gyanchandani, and Rajesh Wadhvani. "Android malware is: a survey paper." *International Journal of Control, Automation, Communication and Systems (IJCACS)* 1, no. 1 (2016): 35-42.
30. Srivastava, Divya, Rajesh Wadhvani, and Manasi Gyanchandani. "A review: color feature extraction methods for content-based image retrieval." *International Journal of Computational Engineering & Management* 18, no. 3 (2015): 9-13.
31. Pradhan, Nitesh, Manasi Gyanchandani, and Rajesh Wadhvani. "A Review on Text Similarity Technique used in IR and its Application." *International Journal of Computer Applications* 120, no. 9 (2015): 29-34.
32. Shukla, Piyush Kumar, Sachin Goyal, Rajesh Wadhvani, M. A. Rizvi, Poonam Sharma, and Neeraj Tantubay. "Finding robust assailant using optimization functions (FiRAO-PG) in wireless sensor network." *Mathematical Problems in Engineering* 2015 (2015).
33. Prudviraj, Jeripothula, Rajesh Wadhvani, and Manasi Gyanchandani. "Content-based Image Retrieval using Conflation of Wavelet Transformation and CIECAM02 Color Histogram." *International Journal of Computer Applications* 126, no. 5 (2015).
34. Wadhvani, Rajesh, R. K. Pateriya, and Devshri Roy. "Impact of Part-Of-Speech Based Feature Selection in Text Summarization." *International Journal of Computer Science and Information Security* 11, no. 10 (2013): 54.
35. Wadhvani, Rajesh, R. K. Pateriya, and Devshri Roy. "A Topic-driven Summarization using K-mean Clustering and Tf-Isf Sentence Ranking." *International Journal of Computer Applications* 79, no. 8 (2013).
36. Wadhvani, Rajesh, and Devshri Roy. "Text Summarization Using Tense Recognizing Identifier." *International Journal of Computer Science and Information Security* 11, no. 6 (2013): 20.
37. Chandnani, Priya, and Rajesh Wadhvani. "Evolution of android and its impact on mobile application development." *International Journal of Scientific Engineering and Technology* 1, no. 3 (2012): 80-85.
38. Wadhvani, Rajesh, Ankit Singh, and Devshri Roy. "Comparison between Agent Development Frameworks: BEE-GENT and JADE." *IJCSIS* 2012 (2012).
39. Wadhvani, Rajesh, and Devshri Roy. "Developing agent oriented mobile learning system." *International Journal of Computer Science* 10 (2012).

40. Sahu, Sumit, Bharti Dongre, and Rajesh Wadhvani. "Web spam detection using different features." *International Journal of Soft Computing and Engineering (IJSCE)* 1, no. 3 (2011): 70-73.
41. Chhabra, Priyanka, Rajesh Wadhvani, and Sanyam Shukla. "Spam filtering using support vector machine." *Special Issue IJCCT* 1, no. 2 (2010): 3.
42. Ahirwar, Pradeep, Deepak Singh Tomar, and Rajesh Wadhvani. "A New Approach for Handling Null Values in Web Server Log." *International Journal of Advanced Computer Science and Applications* 1, no. 1 (2010).

Conference Paper

1. Pooja Jaiswal, Akhtar Rasool, Rajesh Wadhvani and Aditya Dubey. "A Study On Recent Missing Value Imputation Techniques Based On Machine Learning And Deep Learning." In *2024 IEEE 8th International Conference on Information and Communication Technology (CICT)*, pp. 1-6. IEEE, 2024.
2. Rishita Raj, Rajesh Wadhvani, Akhtar Rasool and Muktesh Gupta. "Investigating Mobile Phone Price Variability: A Quantile Regression Study of Hardware Features." In *2024 IEEE 3rd World Conference on Applied Intelligence and Computing (AIC)*, pp. 735-740. IEEE, 2024.
3. Akshita Gour, Rajesh Wadhvani and Muktesh Gupta "Comprehensive ECG Signal Analysis for Heart Disease Classification: Integrating Neural Networks with Random Forest." In *2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT)*, pp. 1-7. IEEE, 2024.
4. Pooja Jaiswal, Akhtar Rasool, Rajesh Wadhvani and Aditya Dubey. "Spectral and Environmental Feature Synergies in Crop Yield Prediction: A Model-Wise ML Review." In *16th International IEEE Conference on Computing, Communication and Networking Technologies (ICCCNT)*, IEEE, 2025.
5. Bharti, Mukesh Kumar, Rajesh Wadhvani, Manasi Gyanchandani, and Muktesh Gupta. "Transformer-Based Multivariate Time Series Forecasting." In *2024 IEEE International Students' Conference on Electrical, Electronics and Computer Science (SCEECS)*, pp. 1-6. IEEE, 2024.
6. Gour, Akshita, Muktesh Gupta, Rajesh Wadhvani, and Sanyam Shukla. "A Comprehensive Review of Heart Disease Classification Techniques Utilizing ECG Signal Analysis." In *2023 International Conference on Electrical, Electronics, Communication and Computers (ELEXCOM)*, pp. 1-6. IEEE, 2023.
7. Kumar, Lalit, Sanyam Shukla, and Rajesh Wadhvani. "Analysis Of Feature Noise On Standard SVM With Linear Kernel." In *2024 IEEE International Students' Conference on Electrical, Electronics and Computer Science (SCEECS)*, pp. 1-6. IEEE, 2024.
8. Raj, Ananya, Aditya Dubey, Akhtar Rasool, and Rajesh Wadhvani. "Machine Learning based Missing Data Imputation Techniques." In *2023 14th International Conference on Computing Communication and Networking Technologies (ICCCNT)*, pp. 1-6. IEEE, 2023.
9. Kumar, Anshul, Rajesh Wadhvani, Akhtar Rasool, and Muktesh Gupta. "Quantile Regression in Machine Learning: A Survey." In *2023 Third International Conference on Secure Cyber Computing and Communication (ICSCCC)*, pp. 750-755. IEEE, 2023.
10. Raj, Rishita, Rajesh Wadhvani, Akhtar Rasool, and Muktesh Gupta. "Quantile Regression Approach in Analysis of Factors Affecting Song Popularity." In *2023 Third International Conference on Secure Cyber Computing and Communication (ICSCCC)*, pp. 61-66. IEEE, 2023.
11. Chaudhari, Pratik Ashok, Rajesh Wadhvani, Akhtar Rasool, and Muktesh Gupta. "A Review on Condition Assessment Methods of Ball Bearing." In *2023 Third International Conference on Secure Cyber Computing and Communication (ICSCCC)*, pp. 554-559. IEEE, 2023.
12. Rane, Rahul, Aditya Dubey, Akhtar Rasool, and Rajesh Wadhvani. "Data mining based techniques for COVID-19 predictions." *Procedia Computer Science* 218 (2023): 210-219.

13. Tripathi, Shivangi, Rajesh Wadhvani, Akhtar Rasool, and Abhishek Jadhav. "Comparison Analysis of Deep Learning Models In Medical Image Segmentation." In 2023 13th International Conference on Cloud Computing, Data Science & Engineering (Confluence), pp. 468-471. IEEE, 2023.
14. Patidar, Vivek Kumar, et al. "Quantile Regression Comprehensive in Machine Learning: A Review." 2023 IEEE International Students' Conference on Electrical, Electronics and Computer Science (SCEECS). IEEE, 2023.
15. Pant, Aman, et al. "heart disease prediction using image segmentation Through the CNN model." 2023 13th International Conference on Cloud Computing, Data Science & Engineering (Confluence). IEEE, 2023.
16. Pansari, Risham Kumar, Akhtar Rasool, Rajesh Wadhvani, and Aditya Dubey. "Machine Learning-Based Stock Market Prediction." In International Conference on Next Generation Systems and Networks, pp. 57-67. Singapore: Springer Nature Singapore, 2022.
17. Pushkar, Aditya, Muktesh Gupta, Rajesh Wadhvani, and Manasi Gyanchandani. "A Comparative Study on Change-Point Detection Methods in Time Series Data." In 2022 2nd International Conference on Intelligent Technologies (CONIT), pp. 1-7. IEEE, 2022.
18. Patel, Chetan, et al. "Forecasting Nonstationary Wind Data Using Adaptive Min-Max Normalization." 2022 1st International Conference on Sustainable Technology for Power and Energy Systems (STPES). IEEE, 2022.
19. Pandey, Utkarsh, Sanyam Shukla, and Rajesh Wadhvani. "OCSK-SMOTE: An improved minority oversampling technique for unbalanced dataset using One-Class SVM and K-means." In 2022 2nd International Conference on Advance Computing and Innovative Technologies in Engineering (ICACITE), pp. 2343-2347. IEEE, 2022.
20. Joshi, Mayank, Manasi Gyanchandani, and Rajesh Wadhvani. "Analysis Of Genetic Algorithm, Particle Swarm Optimization and Simulated Annealing on Benchmark Functions." In 2021 5th International Conference on Computing Methodologies and Communication (ICCMC), pp. 1152-1157. IEEE, 2021.
21. Shali, Yedhu, Banalaxmi Brahma, Rajesh Wadhvani, and Manasi Gyanchandani. "Attention LSTM for Time Series Forecasting of Financial Time Series Data." In International Conference on Internet of Things and Connected Technologies, pp. 74-84. Springer, Cham, 2020.
22. Tiwari, Devashish, and Rajesh Wadhvani. "A review of time series modelling over coronal mass ejections (CMEs)." In 2018 2nd International Conference on Inventive Systems and Control (ICISC), pp. 65-70. IEEE, 2018.
23. Kumari, Pratima, and Rajesh Wadhvani. "Wind power prediction using klms algorithm." In 2018 International Conference on Inventive Research in Computing Applications (ICIRCA), pp. 154-161. IEEE, 2018.
24. Patel, Ashish, and Rajesh Wadhvani. "A comparative study of music recommendation systems." In 2018 IEEE International Students' Conference on Electrical, Electronics and Computer Science (SCEECS), pp. 1-4. IEEE, 2018.
25. Burse, Rashmi, and Rajesh Wadhvani. "Comparative analysis of various regularization techniques in the prediction of heart diseases." In 2017 International Conference on Inventive Computing and Informatics (ICICI), pp. 356-361. IEEE, 2017.
26. Wadhvani, Rajesh, Priyamvada. "Review on various models for time series forecasting." In 2017 International Conference on Inventive Computing and Informatics (ICICI), pp. 405-410. IEEE, 2017.

Book Chapter

1. Priyanshi Khare, Rajesh Wadhvani, and Sanyam Shukla. "Missing Data Imputation for Solar Radiation Using Generative Adversarial Networks." In Proceedings of International Conference on Computational Intelligence, pp. 1-14. Springer, Singapore, 2022.
2. Vendra Akhil, Rajesh Wadhvani, Manasi Gyanchandani, and Anil Kumar Kushwah. "Clustering-Based Hybrid Approach for Wind Speed Forecasting." In Proceedings of Data Analytics and Management, pp. 587-598. Springer, Singapore, 2022.
3. Priyanshi Khare, Rajesh Wadhvani, Manasi Gyanchandani, and Banalaxmi Brahma. "Generating Data for Real World Time Series Application with GRU-Based Conditional GAN." In Proceedings of International Conference on Data Science and Applications, pp. 335-349. Springer, Singapore, 2022.
4. Anil Kumar Kushwah, Rajesh Wadhvani, and Varsha Kushwah. "Statistical Time Series Models for Wind Speed Forecasting." In High Performance Vision Intelligence, pp. 233-243. Springer, Singapore, 2020.
5. Arora, Ashima, and Rajesh Wadhvani. "Comparative analysis of adaptive filters for predicting wind-power generation (SLMS, NLMS, SGDLMS, WLMS, RLMS)." International Conference on Intelligent Systems Design and Applications. Springer, Cham, 2017.

Publications				
International Journals: 42		Google Scholar Citations: 1138		
International Conference: 26		h-index: 16		
Book Chapters: 05		i10-index: 22		
Name of Journal	Type	SCI/Scopus	Impact Factor	Year of Publication
Knowledge-Based Systems	Q1	SCI	8.8	2023
Expert Systems with Applications	Q1	SCI	8.5	2018, 2019, 2022, 2023, 2024
Multimedia Tools and Applications	Q2	SCI	2.5	2022 (2), 2023
Energy Sources, Part A: Recovery, Utilization, and Environmental Effects	Q2	SCI	2.92	2021
Sādhanā	Q2	SCI	1.2	2019
Wind Engineering	Q2	Scopus	0.38	2019, 2021 (3), 2022, 2024