

Dr. Monika

✉ khandelwalmonu21@gmail.com

☎ +91 9467963424

🌐 <https://scholar.google.com/citations?user=JuEjqT0AAAAJhl=enoi=ao>

Scopus Id: 57192676087



Education

- 2019 – 2024 **Ph.D., Computer Science & Engineering, National Institute of Technology Srinagar, J&K.**
Thesis title: *Protein Methylation sites Prediction based on spatial features of Amino Acids using Deep Vision and Explainable AI.*
- 2014 – 2016 **M.Tech., Computer Science & Engineering, National Institute of Technology Jalandhar, Punjab.**
Thesis title: *DoS Attack Detection Technique Using Back Propagation Neural Network.*
- 2008 – 2012 **B.Tech. Computer Science & Engineering, Guru Jambheshwar University Hisar, Haryana.**



Employment History

- 18/03/2024 – 09/08/2024 **Assistant professor**, School of Computer Science & Engineering, Lovely Professional University Phagwara, Punjab.
- 17/07/2018 – 31/05/2019 **Guest Faculty**, Computer Science & Engineering Department, National Institute of Technology Hamirpur, Himachal Pradesh.
- 11/01/2018 – 15/05/2018 **Guest Faculty**, Computer Science & Engineering Department, Malaviya National Institute of Technology Jaipur, Rajasthan.
- 31/07/2017 – 22/12/2017 **Assistant Professor**, Computer Science & Engineering Department, Chandigarh University, Punjab.




Research Publications

Journal Articles


- 1 G. Dwivedi, **M. Khandelwal**, R. K. Rout, S. Umer, S. Mallik, and H. Qin, "Rmsxai: Arginine methylation sites prediction from protein sequences using machine learning algorithms and explainable artificial intelligence," *Discover Applied Sciences*, vol. 6, no. 7, p. 329, 2024. [DOI: https://doi.org/10.1007/s42452-024-05898-y](https://doi.org/10.1007/s42452-024-05898-y).
- 2 **M. Khandelwal** and R. Kumar Rout, "Deepprms: Advanced deep learning model to predict protein arginine methylation sites," *Briefings in Functional Genomics*, elae001, 2024. [DOI: https://doi.org/10.1093/bfgp/elae001](https://doi.org/10.1093/bfgp/elae001).
- 3 **M. Khandelwal**, R. Kumar Rout, S. Umer, S. Mallik, and A. Li, "Multifactorial feature extraction and site prognosis model for protein methylation data," *Briefings in Functional Genomics*, vol. 22, no. 1, pp. 20–30, 2023. [DOI: https://doi.org/10.1093/bfgp/elac034](https://doi.org/10.1093/bfgp/elac034).
- 4 **M. Khandelwal** and R. K. Rout, "Prmxai: Protein arginine methylation sites prediction based on amino acid spatial distribution using explainable artificial intelligence," *BMC bioinformatics*, vol. 24, no. 1, p. 376, 2023. [DOI: https://doi.org/10.1186/s12859-023-05491-x](https://doi.org/10.1186/s12859-023-05491-x).
- 5 **M. Khandelwal**, R. K. Rout, S. Umer, *et al.*, "A pattern classification model for vowel data using fuzzy nearest neighbor," *Intelligent Automation & Soft Computing*, vol. 35, no. 3, 2023. [DOI: https://doi.org/10.32604/iasc.2023.029785](https://doi.org/10.32604/iasc.2023.029785).

- 6 R. K. Rout, S. Umer, **M. Khandelwal**, *et al.*, "Identification of discriminant features from stationary pattern of nucleotide bases and their application to essential gene classification," *Frontiers in Genetics*, vol. 14, p. 1154120, 2023.  DOI: 10.3389/fgene.2023.1154120.
- 7 **M. Khandelwal**, S. Sheikh, R. K. Rout, S. Umer, S. Mallik, and Z. Zhao, "Unsupervised learning for feature representation using spatial distribution of amino acids in aldehyde dehydrogenase (aldh2) protein sequences," *Mathematics*, vol. 10, no. 13, p. 2228, 2022.  DOI: <https://doi.org/10.3390/math10132228>.




Conference Proceedings

- 1 S. Krishana, **M. Khandelwal**, R. K. Rout, and S. Umer, "Harnessing the power of machine learning algorithms for landslide susceptibility prediction," in *International Conference on MACHine inTElligence for Research & Innovations*, Springer, 2023, pp. 95–104.
- 2 **M. Khandelwal**, R. Kumar Rout, and S. Umer, "Prediction of protein-protein interaction using support vector machine based on spatial distribution of amino acids," in *International Conference on Advances and Applications of Artificial Intelligence and Machine Learning*, Springer, 2022, pp. 23–32.  DOI: https://doi.org/10.1007/978-981-99-5974-7_3.
- 3 **M. Khandelwal**, R. K. Rout, and S. Umer, "Protein-protein interaction prediction from primary sequences using supervised machine learning algorithm," in *2022 12th International Conference on Cloud Computing, Data Science & Engineering (Confluence)*, IEEE, 2022, pp. 268–272.  DOI: 10.1109/Confluence52989.2022.9734190.
- 4 **M. Khandelwal**, D. K. Gupta, and P. Bhale, "Dos attack detection technique using back propagation neural network," in *2016 International Conference on Advances in Computing, Communications and Informatics (ICACCI)*, IEEE, 2016, pp. 1064–1068.  DOI: 10.1109/ICACCI.2016.7732185.

Books and Chapters




- 1 **M. Khandelwal**, N. Shabbir, and S. Umer, *Extraction of Sequence-Based Features for Prediction of Methylation Sites in Protein Sequences*. CRC Press, 2022, pp. 29–46.  DOI: 10.1201/9781003246688-2.

Skills


Languages		Reading, writing and speaking competencies for English, Hindi.
Coding		C, C++, Java, Python, \LaTeX
Misc.		Academic research, teaching, training, \LaTeX typesetting and publishing.

Miscellaneous Experience






Awards and Achievements

GATE		qualified in 2014, 2017, 2018, and 2019.
UGC NET JRF		qualified in 2019.
UGC NET		qualified for Assistant Professor in 2017 and 2019.

Certification

2024		participated in GURU-DAKSHTA: Faculty Induction Program (FIP) at LPU Phagwara from 27 th April 2024 to 03 rd June 2024.
------	---	--

Miscellaneous Experience (continued)

- 2023  member of the organizing team (**Student Coordinator**) for 5 days workshop on **AGRI ROBOTICS 2023** organized at National Institute of Technology Srinagar from 9th to 13th October 2023.
- 2018  participated in one-week **Faculty Development Programme** on **AI & Machine Learning** organized by Electronics and ICT Academics through National Knowledge Network from 4th to 8th June 2018.
-  participated in one-week **Faculty Development Programme** on **Big Data Analytics** organized at MNIT Jaipur from 21st to 25th May 2018.
- 2015  participated in one-day workshop on **Cloud Computing and Big Data Analytics** organized at Dr B R Ambedkar National Institute of Technology Jalandhar on 19th May 2015.
- 2009  undergone a certified course in **Core JAVA**.

References

Dr. Ranjeet Kumar Rout

Assistant Professor,
Department of Computer Science & Engineering,
National Institute of Technology Srinagar,
Hazratbal, J&K-190006, India.

✉ ranjeetkumarrou@nitsri.ac.in

Dr. Saiyed Umer

Assistant Professor,
Department of Computer Science & Engineering,
Aliah University,
Newtown, Kolkata-700156, West Bengal, India.

✉ saiyed.umer@aliah.ac.in

Dr. Saurav Mallik

Research Scientist,
Department of Pharmacology and Toxicology,
The University of Arizona, AZ 85721, USA.
Postdoctoral Fellow,
Department of Environmental Health,
Harvard T H Chan School of Public Health, Boston, USA.
Member of IEEE, AACR & ACM.

✉ smallik@arizona.edu

✉ smallik@hsph.harvard.edu