DR. RAVI SHARMA

EXPERIENCE

Assistant Professor, 10/2024 – Present
Jaypee University of Information Technology, Waknaghat, Solan, H.P.

Research Scholar cum Teaching Assistant, 07/2019 – 07/2024
DR. B. R. Ambedkar National Institute of Technology Jalandhar, Punjab

EDUCATION AND TRAINING

Doctor of Philosophy, **Computer Science and Engineering, 04/2025**
Dr. B. R. Ambedkar National Institute of Technology - Jalandhar, Punjab, India.
CGPA = 8.00
Thesis Title: An Enhanced Security Model using Machine Learning for Prediction and Prevention of IoT Attacks

Master of Technology, **Computer Science**, **07/2019**
Himachal Pradesh University - Shimla, Himachal Pradesh, India
Percentage = 82.54%

Bachelor of Technology, **Computer Science and Engineering**, **03/2016**
Institution of Engineers - Kolkata, West Bengal, India.
CGPA = 7.46

Three Year Diploma, **Computer Engineering**, **07/2013**
Dr. B. R. Ambedkar Govt Polytechnic College - Ambota, Una, Himachal Pradesh, India.
Percentage = 74.99%

Matriculation, **03/2010**
Himalayan Model School - Anni, Kullu, Himachal Pradesh, India
Percentage = 81.86%

RESEARCH PROFILE

- Google Scholar
https://scholar.google.com/citations?user=jcXZuGRX5mMC&hl=en
- ORCID ID
https://orcid.org/0000-0002-9047-3279
- Research Gate
https://www.researchgate.net/profile/Ravi-Sharma-44

CONTACT

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RESEARCH INTERESTS

- Machine Learning
- Internet of Things
- Cyber Security

RESEARCH PUBLICATIONS

Journals:
1. **Sharma, Ravi,** Sharma, Nonita. Enhancing Security of Internet of Medical Things in Fog-Edge Environment: A Study on Attack Detection Performance. Sadhana.49, 299 (2024). (WoS/SCIE) IF 1.4 https://doi.org/10.1007/s12046-024-02622-9
2. **Sharma, Ravi**, and Sharma, Nonita. "Attacks on resource-constrained IoT devices and security solutions." *International Journal of Software Science and Computational Intelligence (IJSSCI)* 14.1 (2022): 1-21. (WoS/ESCI) IF 2.9 https://doi.org/10.4018/IJSSCI.310943
3. Rizvi, Fizza, **Sharma, Ravi**, Sharma, Nonita et al. "An evolutionary KNN model for DDoS assault detection using genetic algorithm-based optimization." *Multimedia Tools and Applications* (2024): 1-24. (WoS/SCIE) IF 3.0 https://doi.org/10.1007/s11042-024-18744-5
4. **Sharma, Ravi**, din, Saika Mohi ud, Sharma, Nonita, and Kumar, Arun. "Enhancing IoT Botnet Detection through Machine Learning-based Feature Selection and Ensemble Models." *EAI Endorsed Transactions on Scalable Information Systems* 11.2 (2024). (WoS/ESCI) IF 1.2 https://doi.org/10.4108/eetsis.3971
5. din, Saika Mohi ud, **Sharma, Ravi**, Rizvi, Fizza and Sharma, Nonita. "Detection of botnet in IoT network through machine learning based optimized feature importance via ensemble models." *International Journal of Information Technology* 16, no. 2 (2024): 1203-1211. (Scopus) https://doi.org/10.1007/s41870-023-01603-1
6. Bagla, Piyush, Kumar, Kuldeep, Sharma, Nonita, and **Sharma, Ravi**. "Multivariate analysis of water quality of Ganga River." *Journal of The Institution of Engineers (India): Series B* 102 (2021): 539-549. (Scopus) https://doi.org/10.1007/s40031-021-00555-z

Book Chapters:
1. **Sharma, Ravi**, and Sharma, Nonita. "Applications of Artificial Intelligence in Cyber-Physical Systems." In *Cyber-Physical Systems*, pp. 1-14. Chapman and Hall/CRC, 2022. https://doi.org/10.1201/9781003202752
2. **Sharma, Ravi**, Sharma, Nonita, and Sharma, Aditi, "Application of Machine Leaning for Intrusion Detection in Internet of Things." In *Big Data Analytics in Intelligent IoT and Cyber-Physical Systems*, pp. 91-109. Singapore: Springer Nature Singapore, 2023. https://doi.org/10.1007/978-981-99-4518-4_6
3. **Sharma, Ravi**, and Sharma, Nonita. "Application of machine learning in precision agriculture." *Integration of Cloud Computing with Internet of Things: Foundations, Analytics, and Applications* (2021): 131-151. https://doi.org/10.1002/9781119769323.ch8
4. Aditya, Kapoor, Sharma, Nonita, Sharma, K. P., and **Sharma, Ravi**. "Statistical Analysis of Factors Affecting COVID-19." In *Soft Computing for Intelligent Systems: Proceedings of ICSCIS 2020*, pp. 623-631. Springer Singapore, 2021. https://doi.org/10.1007/978-981-16-1048-6_48
5. Sharma, K.P., Sharma, Shivam, Sharma, Nonita, **Sharma, Ravi,** Mishra, M. (2024). A Feature Selection Technique Using Self-Organizing Maps for Software Defect Prediction. In: Sharma, N., Mangla, M., Shinde, S.K. (eds) Big Data Analytics in Intelligent IoT and Cyber-Physical Systems. Transactions on Computer Systems and Networks. Springer, Singapore. https://doi.org/10.1007/978-981-99-4518-4_10

Conference Papers:

1. **Sharma, Ravi,** Sharma, Nonita, and Mangla, Monika. "An analysis and investigation of infostealers attacks during COVID'19: a case study." In *2021 2nd International Conference on Secure Cyber Computing and Communications (ICSCCC)*, pp. 443-449. IEEE, 2021. https://doi.org/10.1109/ICSCCC51823.2021.9478163

2. Bagla, Piyush, **Sharma, Ravi,** Mishra, Amit Kumar, Tripathi, Neha, Dumka, Ankur, and Pandey, Neeraj Kumar. "An Efficient Security Solution for IoT and Cloud Security Using Lattice-Based Cryptography." In *2023 International Conference on Emerging Trends in Networks and Computer Communications (ETNCC)*, pp. 82-87. IEEE, 2023. https://doi.org/10.1109/ETNCC59188.2023.10284931

3. Pandey, Neeraj Kumar, Mishra, Amit Kumar, Tripathi, Neha, Bagla, Piyush and **Sharma, Ravi.** "Implementation and monitoring of network traffic security using machine learning." In *2023 2nd international conference on smart technologies and systems for next generation computing (ICSTSN)*, pp. 1-5. IEEE, 2023. https://doi.org/10.1109/ICSTSN57873.2023.10151471

4. Bagla, Piyush, Mishra, Amit Kumar, Pandey, Neeraj Kumar, **Sharma, Ravi** and Dumka, Ankur. "Intelligent System for Detection of Intrusion in Imbalanced Network Traffic." In *2024 14th International Conference on Cloud Computing, Data Science & Engineering (Confluence)*, pp. 346-351. IEEE, 2024. https://doi.org/10.1109/Confluence60223.2024.10463249

ACCOMPLISHMENTS

- Gate Qualified
- UGC - Net Qualified
- University 3rd Topper (MTech)

REVIEWER WORK FOR TECHNICAL JOURNALS

- Reviewer for Intelligent Decision Technologies
- Reviewer for Journal of the Science of Food and Agriculture

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CONTRIBUTION TO ACADEMICS ACTIVITIES

- Student representative, Senate's Department Post Graduate Committee

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MEMBERSHIPS

- IEEE
Student Member
- IEI
Associate Member
- Punjab Science Congress
Member

REFERENCES

- Prof. A. J. Singh

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  University Institute of Technology (UIT),
  Himachal Pradesh University, Shimla
  +91 7018460847, aj.hpu@gmail.com

- Dr. Nonita Sharma
  Associate Professor
  Dept. of Information Technology,
  IGDTUW, Delhi
  +91 9896255117, nsnonita@gmail.com

- Dr. Rajneesh Rani
  Associate Professor
  Department of Computer Science Engineering,
  Dr. B. R. Ambedkar National Institute of Technology, Jalandhar
  +91 8146800757, ranir@nitj.ac.in