Name: Dr. Priyanka Tripathi

Qualification: MCA, Ph. D.

Ph.D.:	from **Maulana Azad National Institute of Technology, MANIT Bhopal** in 2009
MCA:	from **Govt Engineering College/NIT Raipur, CG** in Feb 97 with honors.

Work Experience:

Professor in the Department of Computer Applications, **National Institute of Technology Raipur**.

Associate Professor in the Department of Computer Engineering and Applications, **National Institute of Technical Teachers Training and Research NITTTR Bhopal (**Feb 2013 till Feb 2018)

Assistant system Engineer with **Tata Consultancy Services TCS** 1998 to 2000.

Research Interest and Publications: Supervised 5 Ph D, 13 M.Tech. thesis in the areas Image processing, Cloud Computing, IoT , Data Mining.

Professional Membership: IEEE , CSI Computer Society of India **CSI** Life member

Journal Publications in SCI/SCIE/SSCI/Scopus Indexed Journals

- Jha, V., & Tripathi, P. (2025). A high-performance data analytics method for significant pattern discovery in cognitive IoT. *Quality & Quantity*. https://doi.org/10.1007/s11135-025-02180-0
- Jha, V., & Tripathi, P. (2025). Data-driven parametric adaption in type-2 fuzzy logic for significant pattern discovery using massive heterogeneous data in cognitive IoT. *Progress in Artificial Intelligence*. https://doi.org/10.1007/s13748-025-00380-1
- Jha, V., & Tripathi, P. (2025). Imprecise reasoning: extracting precision in imprecision for knowledge discovery in cognitive IoT. *Iranian Journal of Computer Science*, 8, 607–625. https://doi.org/10.1007/s42044-025-00236-w
- Jha, V., & Tripathi, P. (2025). Intelligent multisensory data fusion and knowledge discovery in cognitive IoT. *Iranian Journal of Computer Science*. https://doi.org/10.1007/s42044-025-00291-3
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- Jha, V., & Tripathi, P. (2025). Selective hypothesis testing in cognitive IoT sensor network. *The Journal of Supercomputing*, 81, 133. https://doi.org/10.1007/s11227-024-06515-w

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- Jha, V., & Tripathi, P. (2025). -tree based knowledge representation and recommendation system in cognitive IoT. *Wireless Networks*, 31, 3395–3413. https://doi.org/10.1007/s11276-025-03945-z

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- Jha, V., & Tripathi, P. (2025). An energy-efficient knowledge discovery in cognitive IoT. *OPSEARCH*. https://doi.org/10.1007/s12597-025-00977-z

- Sahu, R., & Tripathi, P. (2025). An intelligent forecasting system in Internet of Agriculture Things sensor network. *Ad Hoc Networks*, 169, 103752.

- Sahu, R., & Tripathi, P. (2025). An intelligent framework for monitoring and irrigation prediction for precision agriculture. *Iranian Journal of Computer Science*. https://doi.org/10.1007/s42044-025-00269-1

- Jaiswal, T., Pandey, M., & Tripathi, P. (2024). Advancing image captioning with V16HP1365 encoder and dual self-attention network. *Multimedia Tools and Applications*, 83(34), 80701–80725.

- Jaiswal, T., Pandey, M., & Tripathi, P. (2024). Enhancing image captioning using deep convolutional generative adversarial networks. *Recent Advances in Computer Science and Communications*, 17(5), 37–47.

- Jaiswal, T., Pandey, M., & Tripathi, P. (2025). A Robust Approach to Object Detection in Images using Improved T_CenterNet Method. *Recent Advances in Electrical & Electronic Engineering*, 18(2), 202–211.

- Jaiswal, T., Pandey, M., & Tripathi, P. (2025). Advancing Medical Image Captioning: A Dynamic Convolution Encoder-Decoder Network Approach for Automatic Generation of Descriptive Captions for Chest X-Ray Images. *IETE Journal of Research*, 1–19. https://doi.org/10.1080/03772063.2025.2519536

- Jaiswal, T., Pandey, M., & Tripathi, P. (2025). An Efficient Image Captioning Method Based on Beam Search. *Recent Advances in Electrical & Electronic Engineering*, 18(2), 147–160.

- Jaiswal, T., Pandey, M., & Tripathi, P. (2025). Real-Time Multiple Object Detection Using Raspberry Pi and Tiny-ML Approach. *Recent Advances in Electrical & Electronic Engineering*, 18(2), 244–255.

- Jha, V., & Tripathi, P. (2024). Anomalous data detection in cognitive IoT sensor network. *International Journal of Networking and Virtual Organisations*, 30(4), 309–328.

- Jha, V., & Tripathi, P. (2024). Cognitively-inspired intelligent decision-making framework in cognitive IoT network. *International Journal of Networking and Virtual Organisations*, 31(2), 87–105.

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- Jha, V., & Tripathi, P. (2024). Inductive reasoning for significant concept and pattern discovery in cognitive IoT. *Service Oriented Computing and Applications*, 1–16.

- Jha, V., & Tripathi, P. (2024). Plausible reasoning and knowledge extraction in cognitive IoT. *Multimedia Tools and Applications*, 1–36.

- Jha, V., & Tripathi, P. (2024). Probabilistic SAX: A cognitively-inspired method for time series classification in cognitive IoT sensor network. *Mobile Networks and Applications*, 29(3), 809–824.

- Shakya, S., & Tripathi, P. (2024). A background-based new scheduling approach for scheduling the IoT network task with data storage in cloud environment. *Cluster Computing*, 27(6), 8577–8594.

- Shakya, S., & Tripathi, P. (2024). Multi-resource management using an advanced scheduling algorithm to the least amount of time. *International Journal of Information Technology*, 16(4), 2283–2293.

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- Singh, N., & Tripathi, P. (2024). An ensemble technique to predict Parkinson's disease using machine learning algorithms. *Speech Communication*, 159, 103067.

- Singh, N., & Tripathi, P. (2024). An efficient model for detecting real-time facemask based on different Classification Algorithms. *Multimedia Tools and Applications*, 83(18), 55175–55198.

- Jaiswal, T., Pandey, M., & Tripathi, P. (2023). Deep understanding of radiology reports: Leveraging dynamic convolution in chest X-ray images. *Data Technologies and Applications*, 58(3), 427–446.

- Jaiswal, T., Pandey, M., & Tripathi, P. (2021). Image Captioning through Cognitive IoT and Machine-Learning Approaches. *Turkish Journal of Computer and Mathematics Education*, 12(9), 333–351.

- Tripathi, P., & Singh, N. (2021). An Association Between Socio-Economic Status and KAP of Reproductive Health of the Early Married Women. *Annals of the Romanian Society for Cell Biology*, 25(1), 5473–5479.

- Agnihotri, D., Verma, K., Tripathi, P., & Singh, B. K. (2019). Soft voting technique to improve the performance of global filter based feature selection in text corpus. *Applied Intelligence*, 49(4), 1597–1619. https://doi.org/10.1007/s10489-018-1349-1

- Panigrahi, S., Verma, K., & Tripathi, P. (2019). Optimal Threshold Value Determination for Land Change Detection. *The International Arab Journal of Information Technology*, 16(2).

- Agnihotri, D., Verma, K., & Tripathi, P. (2018). An automatic classification of text documents based on correlative association of words. *Journal of Intelligent Information Systems*, 50(3), 549–572. https://doi.org/10.1007/s10844-017-0482-3

- Agnihotri, D., Verma, K., & Tripathi, P. (2017). Variable Global Feature Selection Scheme for automatic classification of text documents. *Expert Systems with Applications*, 81, 268–281. https://doi.org/10.1016/j.eswa.2017.03.057

- Panigrahi, S., Verma, K., & Tripathi, P. (2017). Data mining algorithms for land cover change detection: a review. *Sādhanā*, 42(12), 2081–2097. https://doi.org/10.1007/s12046-017-0751-4

- Agnihotri, D., Verma, K., & Tripathi, P. (2016). Computing symmetrical strength of N-grams: A two pass filtering approach in automatic classification of text documents. *SpringerPlus*, 5(1), 1–29.

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- Verma, K., Singh, B. K., Tripathi, P., & Thoke, A. S. (2015). Review of feature selection algorithms for breast cancer ultrasound image. *Studies in Computational Intelligence*, 598, 23–32. https://doi.org/10.1007/978-3-319-16211-9_3

International/Scopus Conference Publications:

- N. Singh and P. Tripathi, "A Multimodal Based Framework to Classify Parkinson Disease using Voice Signal and HandDraw," 2025 International Conference on Ambient Intelligence in Health Care (ICAIHC), Raipur Chattisgarh, India, 2025, pp. 1-6, doi: 10.1109/ICAIHC64101.2025.10956150.

- R. Sahu, V. Jha and P. Tripathi, "Analysis and Evaluation of Bayesian Statistics for Healthcare Domain," 2025 International Conference on Ambient Intelligence in Health Care (ICAIHC), Raipur Chattisgarh, India, 2025, pp. 1-7, doi: 10.1109/ICAIHC64101.2025.10956535.

- L. Chandra, M. Atulkar and P. Tripathi, "Advanced CNN-Based Approaches for COVID-19 Diagnosis and Multiclass Classification: An Experimental Review," 2025 International Conference on Ambient Intelligence in Health Care (ICAIHC), Raipur Chattisgarh, India, 2025, pp. 1-6, doi: 10.1109/ICAIHC64101.2025.10957120.

- R. Sahu and P. Tripathi, "Enhancing Energy Efficiency in Smart Agriculture: GA based Optimization for Large-Scale LoRaWAN Networks," 2024 3rd International Conference on Automation, Computing and Renewable Systems (ICACRS), pp. 553-561, IEEE, December 2024.

- N. Singh and P. Tripathi, "Efficient Model for Prediction of Parkinson's Disease Using Machine Learning Algorithms with Hybrid Feature Selection Methods," Biomedical Engineering Science and Technology: Second International Conference, ICBEST 2023, Raipur, India, February 10–11, 2023, Revised Selected Papers, Springer Nature, March 2024, p. 186.

- R. Sahu and P. Tripathi, "IoT Based Multifunctional Agriculture Monitoring and Smart Irrigation System," International Conference on Computational Intelligence in Communications and Business Analytics, Springer Nature Switzerland, January 2024, pp. 84-99.

- L. Chandra, M. Atulkar and P. Tripathi, "Fusion of Local and Global Texture Descriptors for Improved Tuberculosis Detection in Chest X-ray Images," 2024 15th International Conference on Computing Communication and Networking Technologies (ICCCNT), IEEE, June 2024, pp. 1-7.

- R. Sahu and P. Tripathi, "A Brief Review on LPWAN Technologies for Large Scale Smart Agriculture," Proceedings of the International Conference on Advanced Network Technologies and Intelligent Systems, 2023.

- T. Jaiswal, M. Pandey, and P. Tripathi, "Deep understanding of radiology reports: leveraging dynamic convolution in chest X-ray images," Data Technologies and Applications, vol. 58, no. 3, pp. 427–446, 2023.

- T. Jaiswal, M. Pandey, and P. Tripathi, "Advancement in object tracking models and techniques," Proceedings of the International Conference on Applied Mechanics, Machine Learning and Advanced Technologies, 2023.

- S. Shakya and P. Tripathi, "Alcohol based quick accident detection system through IoT," Proceedings of the International Conference on Applied Computational Intelligence and Analytics, 2023.

- S. Shakya and P. T. P. Tripathi, "Advanced scheduling algorithm for multi resource scheduling with minimum time consumption," 2023.

- V. Jha and P. Tripathi, "Semantic modelling of multivariate time-series data in cognitive IoT," Proceedings of the 9th International Conference on Advanced Computing and Communication Systems, 2023.

- S. Shakya and P. Tripathi, "Framework For Load Balancing Using Multi Resource Scheduling With Minimum Time Consumption," Proceedings of the 1st International Conference on Innovations in High Speed Communication and Networking, 2023.

- N. Singh and P. Tripathi, "Gait Assessment Using Optimized Machine Learning and Feature Selection Algorithm for Identifying Parkinson's Disease," IEEE International Students' Conference on Electrical, Electronics and Computer Science, 2023.

- N. Singh and P. Tripathi, "Efficient model for prediction of Parkinson's disease using machine learning algorithms with hybrid feature selection methods," International Conference on Biomedical Engineering Science and Technology, 2023.

- N. Singh and P. Tripathi, "Live Streaming of Face Mask and Body Temperature Detection System using Transfer Learning and IoT," Journal of Physics: Conference Series, vol. 2273, no. 1, p. 012011, 2022, doi: 10.1088/1742-6596/2273/1/012011.

- V. Jha and P. Tripathi, "IoT based recommendation system for healthcare due to inhalation of Carbon Monoxide," 2nd International Conference on Power, Control and Computing Technologies, 2022.

- T. Jaiswal, M. Pandey, and P. Tripathi, "Real-Time Multiple-Object Detection Based on Enhanced SSD," 2nd International Conference on Power, Control and Computing Technologies, 2022.

- S. Panigrahi, K. Verma, and P. Tripathi, "Qualitative Analysis of Recursive Search Algorithm: A Case Study," Intelligent and Cloud Computing: Proceedings of ICICC 2019, Vol. 1, pp. 847–858, 2020.

- T. Jaiswal, M. Pandey, and P. Tripathi, "Review on IoT Enabled Smart Cities in India," 1st International Conference on Power, Control and Computing Technologies, 2020.

- T. Jaiswal, M. Pandey, and P. Tripathi, "IoT Empowered Smart Cities in India," Third International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud) (I-SMAC 2019), IEEE Xplore, 2019, pp. 250–254.

- D. Agnihotri, K. Verma, and P. Tripathi, "Mutual information using sample variance for text feature selection," ACM International Conference Proceeding Series, Nov. 2017, pp. 39–44, doi: 10.1145/3162957.3163054.

- S. K. Pandey, H. K. Tiwari, and P. Tripathi, "Hybrid approach to reduce time complexity of string matching algorithm using hashing with chaining," Advances in Intelligent Systems and Computing, 2016, vol. 408, pp. 185–193, doi: 10.1007/978-981-10-0129-1_20.

- G. Verma and P. Tripathi, "GMRCube: A GPGPU accelerated MapReduce DataCube construction model," 2016 International Conference on Control Instrumentation Communication and Computational Technologies (ICCICCT), Jul. 2017, pp. 513–517, doi: 10.1109/ICCICCT.2016.7988004.

- D. Agnihotri, K. Verma, and P. Tripathi, "Computing correlative association of terms for automatic classification of text documents," ACM International Conference Proceeding Series, Sep. 2016, pp. 71–80, doi: 10.1145/2983402.2983424.

- P. Tripathi, M. Pandey, and D. Bharti, "Towards the identification of usability metrics for academic web-sites," 2nd International Conference on Computer and Automation Engineering (ICCAE), 2010, vol. 2, pp. 393–397, doi: 10.1109/ICCAE.2010.5451569.

Books

Massive Data Analysis: IoT Perspective, Vidyapati Jha and Priyanka Tripathi, Published by B P International: Available at: http://www.bookpi.org

Book Chapters

- Jaiswal, T., Pandey, M., & Tripathi, P. (2021). **State-of-the-art natural language processing techniques.** In *Artificial Intelligence, Machine Learning, Data Science, Technology, Future Impact on Well-Being and Society 5.0* (pp. 219–247). https://doi.org/10.1201/9781003153405-12

- Jaiswal, T., Pandey, M., & Tripathi, P. (2021). **A review on smart traffic management system.** In *Internet of Things: Energy, Industry, and Healthcare* (pp. 119–130). Boca Raton: CRC Press, Taylor & Francis. https://doi.org/10.1201/9781003140443-9

- Jaiswal, T., Pandey, M., & Tripathi, P. (2021). **Fault detection in robotic arms.** In *Internet of Things, Robotics, and Drone Technology* (pp. 163–180). https://doi.org/10.1201/9781003181613-12

- Panigrahi, S., Verma, K., & Tripathi, P. (2020). **Review of MODIS EVI and NDVI data for data mining applications.** In *Data Deduplication Approaches: Concepts, Strategies, and Challenges* (pp. 231–253). Elsevier. ISBN: 978-012823395-5

- Agnihotri, D., Verma, K., Tripathi, P., & Choudhary, N. (2018). **A review of techniques to determine the optimal word score in text classification.** In *Advances in Intelligent Systems and Computing* (Vol. 696, pp. 497–507). https://doi.org/10.1007/978-981-10-7386-1_43

Workshop & Faculty Development Program Coordination

- **Organizing Chair** for the **3rd International Conference on Ambient Intelligence in Health Care (ICAIHC-2025)**, held on 10th–11th January 2025.

- **Coordinato**r for the program **"A Wholistic Approach Towards Women Empowerment"**, organized by the Internal Complaint Committee, National Institute of Technology Raipur, held on Jan 8-12 2024.

- **Coordinator** for **AICTE ATAL Cyber Security Workshop**, held on 14-18 October 2019 at **NIT Raipur**.

- **Faculty Development Program Coordinator** for **Induction Training Programmes**, **Kolhapur**, conducted on 6-10 June 2016.

- **Faculty Development Program Coordinator** for **Induction Training Programmes Phase I**, **NITTTR Bhopal**, conducted on 8th August 2016.

- **Faculty Development Program Coordinator** for **Induction Training Programmes Phase II**, **NITTTR Bhopal**, conducted on 17-21 October 2016.

- **Faculty Development Program Coordinator** for **Induction Training to Newly Recruited NIT Raipur Faculty**, held on 2-6 June 2014.

- **Faculty Development Program Coordinator** for **Maintaining and Using the Laboratories and Workshops Effectively**, held on 16-20 December 2013, at **Govt Engineering College Raipur**.
- **Faculty Development Program Coordinator** for **Induction Training Programmes Phase I**, **NITTTR Bhopal**, held on 20th March 2017.
- **Faculty Development Program Coordinator** for **Induction Training Programmes Phase II**, **NITTTR Bhopal**, held on 7th November 2016.
- **Faculty Development Program Coordinator** for **Cloud Computing**, **NITTTR Pune**

Conferences Organized as Secretary

- Secretary for **National Conference on Enterprise Resource Planning**, conducted on 28th January 2014
- Secretary for **National Industry-Institute Conclave 2021**, NIT Raipur, conducted on 22nd October 2021
- Secretary for **National Conference on Digital Literacy: Advantages and Challenges in Rural India**, conducted on 8th June 2023
- Secretary for **National Conference on Computer Literacy and Social Media Contribution in Development**, conducted on 30th May 2023

Significant Outreach and Institute-Out Activities

- Delivered expert session at a workshop in **MANIT Bhopal**, on 30th November 2022
- Delivered expert lecture at **Six Degrees Consultants, Raipur**, on 27th July 2023
- Conducted lecture and interactive session with students at **Chhattisgarh Shrishti Development Organization, Raipur**, on 21st August 2023
- Served as Member, Technical Committee and Session Chair at the **International Conference on Application of Intelligent Computing in Engineering and Sciences**, MANIT Bhopal, from 6th–7th March 2023
- Reviewer for the journal **Knowledge and Information Systems**, Springer Nature, from 1st June 2022 to 30th November 2022
- Reviewer for papers at the **International Conference on Machine Intelligence and Signal Processing (MISP 2022)**, held from 12th–14th March 2022
- Reviewer for the journal **Artificial Intelligence**, Springer Nature, from 1st March to 31st March 2023
- Delivered expert lecture at **State Administrative Academy, Chhattisgarh**, on 15th June 2018
- Delivered expert lecture at **Government Girls Polytechnic College, Raipur**, on 3rd December 2018

- Served as **Session Chair** at the **International Conference on "Computer and Business Management", IACSIT, Paris, France**. (01 – 02 June 2013.

- Served as Session Chair at the **International Conference on Communication and Information Processing (ICCIP 2017)**, Tokyo, Japan, from 24th–28th November 2017

- Member, Technical Committee and Session Chair at the **International Conference on Application of Intelligent Computing in Engineering and Sciences**, from 12th–13th February 2022

- Participated in **vetting of lab equipment and machinery** from 12th–13th June 2017 CG State Institutes at **NITTTR Bhopal.**

- Delivered multiple expert sessions at workshops organized by **MANIT Bhopal**, between 1st January 2019 and 23rd February 2022

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