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Publications

Journal Papers

- [J1] Ashish Kumar, Kakali Chatterjee, Ashish Singh, Abhinav Kumar, and Hamad Aldawsari. "Privacy-Preserving Federated Learning with Blockchain Auditing for Consumer Electronics Applications". *IEEE Transactions on Consumer Electronics* (2026), (**Impact Factor: 10.9**).
- [J2] Kirti Kumari, Jyoti Prakash Singh, and Abhinav Kumar. "Deep active learning for identifying hate and offensive content in multilingual social media posts". *Knowledge and Information Systems* 68.1 (2026), (**Impact Factor: 3.1**).
- [J3] Rajnish Pandey, Abhinav Kumar, Jyoti Prakash Singh, and Sudhakar Tripathi. "A hybrid convolutional neural network for sarcasm detection from multilingual social media posts". *Multimedia Tools and Applications* 84.16 (2025), (**Scopus**).
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- [J6] Sunil Dalal, Jyoti Prakash Singh, Arvind Kumar Tiwari, and Abhinav Kumar. "Identification of COVID-19 with CT Scans using Radiomics and DL-based Features". *Modeling Analysis in Health Informatics and Bioinformatics* (2024), (**Impact Factor: 2.0**).
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- [J12] Ashish Singh, Abhinav Kumar, and Suyel Namasudra. "DNACDS: Cloud IoE big data security and accessing scheme based on DNA cryptography". *Frontiers of Computer Science* 18.1 (2024), (**Impact Factor: 4.6**).
- [J13] Abhinav Kumar, Jyoti Kumari, and Jiesth Pradhan. "Explainable Deep Learning for Mental Health Detection from English and Arabic Social Media Posts". *ACM Transactions on Asian and Low-Resource Language Information Processing* (2023), (**Impact Factor: 2.0**).

- [J14] Abhinav Kumar, Sunil Saumya, and Ashish Singh. "Detecting Dravidian Offensive Posts in MIoT: A Hybrid Deep Learning Framework". *ACM Transactions on Asian and Low-Resource Language Information Processing* (2023), (**Impact Factor: 2.0**).
- [J15] Abhinav Kumar, Jyoti Prakash Singh, Nripendra P Rana, and Yogesh K Dwivedi. "Multi-Channel Convolutional Neural Network for the Identification of Eyewitness Tweets of Disaster". *Information Systems Frontiers* 25.4 (2023), (**Impact Factor: 8.3**).
- [J16] Abhinav Kumar, Jyoti Prakash Singh, and Amit Kumar Singh. "Explainable BERT-LSTM Stacking for Sentiment Analysis of COVID-19 Vaccination". *IEEE Transactions on Computational Social Systems* (2023), (**Impact Factor: 4.9**).
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- [J22] Abhinav Kumar, Jyoti Prakash Singh, and Amit Kumar Singh. "COVID-19 Fake News Detection Using Ensemble-Based Deep Learning Model". *IT Professional* 24.2 (2022), (**Impact Factor: 2.6**).
- [J23] Abhinav Kumar, Jyoti Prakash Singh, and Amit Kumar Singh. "Randomized Convolutional Neural Network Architecture for Eyewitness Tweet Identification During Disaster". *Journal of Grid Computing* 20.3 (2022), (**Impact Factor: 2.9**).
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- [J26] Ashish Singh, Abhinav Kumar, Zahid Akhtar, and Muhammad Khurram Khan. "Guest Editorial: Cybersecurity Intelligence in the Healthcare System". *IEEE Transactions on Industrial Informatics* 19.1 (2022), (**Impact Factor: 9.9**).
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- [J30] Abhinav Kumar, JP Singh, YK Dwivedi, and Nripendra P Rana. "A deep multi-modal neural network for informative Twitter content classification during emergencies". *Annals of Operation Research* (2020), (**Impact Factor: 4.5**).
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- [C1] Shraddha Chauhan and Abhinav Kumar. "DSLNLNLP@ NLU of devanagari script languages 2025: Leveraging bert-based architectures for language identification, hate speech detection and target classification". *COLING 2025: Proceedings of the First Workshop on Challenges in Processing South Asian Languages (CHIPSAL 2025)*. 2025.
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- [C3] Shraddha Chauhan and Abhinav Kumar. "MNLP@ DravidianLangTech 2025: Transformer-based Multimodal Framework for Misogyny Meme Detection". *Proceedings of the Fifth Workshop on Speech, Vision, and Language Technologies for Dravidian Languages*. 2025.
- [C4] Shraddha Chauhan, Kumari Nibha Priyadarshani, and Abhinav Kumar. "ViT4Waste: Vision Transformer-Based Deep Learning for Efficient E-Waste Management". *2025 International Conference on Electronics, AI and Computing (EAIC)*. 2025.
- [C5] Ranjeet Kumar, Rahul Kumar, and Abhinav Kumar. "An Empirical Evaluation of LLMs in identification of Sarcasm from Roman Code-Mixed Social Media Posts". *2nd International Conference on Artificial Intelligence and Emerging Technologies 2.0 (AISUMMIT 2025): Global AI Summit 2025 (IEEE)*. 2025.
- [C6] Vijay Kumar and Abhinav Kumar. "An Explainable Neuro-Fuzzy DeBERTa Model for Earthquake Disaster Tweet Classification". *2nd International Conference on Artificial Intelligence and Emerging Technologies 2.0 (AISUMMIT 2025): Global AI Summit 2025 (IEEE)*. 2025.
- [C7] Vijay Kumar and Abhinav Kumar. "Explainable Hybrid Transformer for Crisis Informatics: Combining Deep Contextual Embeddings with Handcrafted Cues". *2025 International Conference on Machine Learning and Data Engineering (Procedia Computer Science)*. 2025.
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- [C10] Abhay Vishwakarma and Abhinav Kumar. "MNLP@ DravidianLangTech 2025: Transformers vs. Traditional Machine Learning: Analyzing Sentiment in Tamil Social Media Posts". *Proceedings of the Fifth Workshop on Speech, Vision, and Language Technologies for Dravidian Languages*. 2025.
- [C11] Shraddha Chauhan and Abhinav Kumar. "A Transformer-Based Model for Detecting Multilingual Sarcasm in Social Media Posts". *Forum of Information Retrieval and Evaluation FIRE-2024*. 2024.
- [C12] Ranjeet Kumar and Abhinav Kumar. "MSD: Multilingual Sarcasm Detection using Deep Learning-Based Model". *Forum of Information Retrieval and Evaluation FIRE-2024*. 2024.
- [C13] Jyoti Kumari and Abhinav Kumar. "JA-NLP@ LT-EDI-2023: Empowering Mental Health Assessment: A RoBERTa-Based Approach for Depression Detection". *Proceedings of the Third Workshop on Language Technology for Equality, Diversity and Inclusion*. 2023.
- [C14] Abhinav Kumar, Sunil Saumya, and Pradeep Roy. "SOA_NLP@ LT-EDI-ACL2022: An Ensemble Model for Hope Speech Detection from YouTube Comments". *Proceedings of the Second Workshop on Language Technology for Equality, Diversity and Inclusion*. 2022.
- [C15] Pradeep Roy, Snehaan Bhawal, Abhinav Kumar, and Bharathi Raja Chakravarthi. "IIITSurat@ LT-EDI-ACL2022: Hope Speech Detection using Machine Learning". *Proceedings of the Second Workshop on Language Technology for Equality, Diversity and Inclusion*. 2022.
- [C16] Suprakash Samantaray and Abhinav Kumar. "Bi-directional Long Short-Term Memory Network for Fake News Detection from Social Media". *Intelligent and Cloud Computing: Proceedings of ICICC 2021*. 2022.

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- [C20] Abhinav Kumar and Jyoti Kumari. "A Machine Learning Approach for Fake News Detection from Urdu Social Media Posts." *FIRE (Working Notes)*. 2021.
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- [C26] Gunjan Kumar, Jyoti Prakash Singh, and Abhinav Kumar. "A deep multi-modal neural network for the identification of hate speech from social media". *Conference on e-Business, e-Services and e-Society*. 2021.
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- [C30] Ankit Kumar Mishra, Sunil Saumya, and Abhinav Kumar. "Sentiment Analysis of Dravidian-CodeMix Language." *FIRE (Working Notes)*. 2021.
- [C31] Anu Priya and Abhinav Kumar. "Deep Ensemble Approach for COVID-19 Fake News Detection from Social Media". *2021 8th International Conference on Signal Processing and Integrated Networks (SPIN)*. 2021.
- [C32] Anu Priya and Abhinav Kumar. "Hate and Offensive Content Identification from Dravidian Social Media Posts: A Deep Learning Approach." *FIRE (Working Notes)*. 2021.
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- [C34] Sunil Saumya, Abhinav Kumar, and Jyoti Prakash Singh. "Offensive language identification in Dravidian code mixed social media text". *Proceedings of the First Workshop on Speech and Language Technologies for Dravidian Languages*. 2021.
- [C35] Ashish Singh, Abhinav Kumar, and Zahid Akhtar. "Bitcoin Price Prediction: A Deep Learning Approach". *2021 8th International Conference on Signal Processing and Integrated Networks (SPIN)*. 2021.
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- [C40] Abhinav Kumar and Jyoti Prakash Singh. "Disaster severity prediction from Twitter images". *Intelligence Enabled Research: DoSIER 2020*. 2020.
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- [C42] Sunil Saumya, Jyoti Prakash Singh, and Abhinav Kumar. "A Machine Learning Model for Review Rating Inconsistency in E-commerce Websites". *Data Management, Analytics and Innovation*. 2020.
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Book Chapters

- [BCh1] Dibya Ranjan Das Adhikary, Prabhat Dansena, Dharamveer Yadav, Abhinav Kumar, and Laxminath Tripathy. "Role of Digital Agriculture in Shaping the Future of Farming: A Social Network Analytics Approach". *Social Network Analytics: Empowering Data Engineering with Deep Learning and Large Language Models*.
- [BCh2] Aarna Kumar and Abhinav Kumar. "Advancing Mental Health Monitoring in Social Media with Deep Learning and LLMs". *Social Network Analytics: Empowering Data Engineering with Deep Learning and Large Language Models*.
- [BCh3] Abhinav Kumar. "Multimodal Meme Identification for Sustainable Development: Techniques, Challenges, and Societal Impact". *Multimedia and Multimodal Intelligence for Sustainable Development*.
- [BCh4] Vijay Kumar, Abhinav Kumar, and Pradeep Kumar Roy. "Explainable Transfer Learning Model for Disaster Damage Assessment from Social Media Images". *Social Network Analytics: Empowering Data Engineering with Deep Learning and Large Language Models*.
- [BCh5] Rajnish Pandey, Abhinav Kumar, and Jyoti Prakash Singh. "Sarcasm Detection in Code-Mixed Social Media Posts: A Hybrid Perspective". *Social Network Analytics: Empowering Data Engineering with Deep Learning and Large Language Models*.
- [BCh6] Dibya Ranjan Das Adhikary, Jitesh Pradhan, Abhinav Kumar, and Brijendra Pratap Singh. "A Multilingual Review of Hate Speech Detection in Social Media Content". *Cybercrime in Social Media: Theory and Solutions*.
- [BCh7] Brijendra Pratap Singh, Abhinav Kumar, Dibya Ranjan Das Adhikari, Jitesh Pradhan, Durgesh Singh, and Debahuti Mishra. "Fundamental Theories Behind the Detection of Fake News and Rumors". *Cybercrime in Social Media: Theory and Solutions*.

Books (Upcoming)

- [B1] Deepak Gupta, Mayank Pandey, Abhinav Kumar, and P. N. Suganthan, eds. *Next-Generation Networks and Deployable Artificial Intelligence. Proceedings of NGNDAI 2025*. Singapore: Springer, 2025.
- [B2] Abhinav Kumar and Pradeep Kumar Roy. *Detecting Misinformation and Toxicity in Social Media: Techniques and Applications*. London, UK: IET Press, 2025.
- [B3] Pradeep Kumar Roy and Abhinav Kumar. *Introduction to Generative AI for Business Managers*. Boca Raton, USA: CRC Press, Taylor and Francis, 2025.
- [B4] Asis Kumar Tripathy, Pradeep Kumar Roy, Abhinav Kumar, and Yulei Wu, eds. *Next-Gen Social Network Analytics: Empowering Data Engineering with Deep Learning and Large Language Models*. London, UK: Taylor and Francis, 2025.