

Dr. Kirti Kumari



PERSONAL DETAILS

Designation Assistant Professor, Department of CSE, Indian Institute of Information Technology, Ranchi, India
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EDUCATION

Ph.D(CSE, 2021)

National Institute of Technology Patna (NIT Patna), India

Title of PhD. thesis: "Identification of Online Harassment on Social Media using Soft Computing Techniques"

M.Tech(CSE, 2014)

M.S. Ramaiah Institute of Technology (M.S.R.I.T.) Bangalore, V.T.U. Belgaum, India

B.Tech.(CSE, 2011)

Government College, Bhagalpur College of Engineering (BCE) Bhagalpur, Tilka Manjhi Bhagalpur University (T.M.B.U.), Bhagalpur, Bihar, India.

WORK EXPERIENCE

- **Assistant Professor** CSE department, Indian Institute of Information Technology Ranchi (IIIT Ranchi), Ranchi, Jharkhand, India. (21st December, 2021 to till date)
- **Assistant Professor** CSE department, Institute of Technical Education and Research (ITER), Siksha 'O' Anusandhan (Deemed o be) University, Bhubaneswar, Odisha, India.
(20th October, 2020 – 20th December 2021)

ADMINISTRATIVE RESPONSIBILITY

- *Girls' Hostel Warden, IIIT Ranchi (April 2022 to till date)*
- *Faculty Advisor (May 2023 to till date),*
- *Coordinator Research Cell, Machine Learning & Artificial Intelligence I, IIIT Ranchi*
- *Faculty Advisor (during 2020-2021), CSE, Institute of Technical Education and Research (ITER),*

Siksha 'O' Anusandhan (Deemed to be) University, Bhubaneswar

AWARDS/ACHIEVEMENTS

- **GATE** Exam qualified (2012, 2014, 2015, 2016, 2019, 2020).
- PhD Research Scholarship funded by Ministry of Electronics and Information Technology, Government of India (September, 2015 to August, 2020).
- GATE Scholarship from Ministry of Education, Government of India during M. Tech. (2012-2014).

RESEARCH AREAS

1. Healthcare, Water Quality Monitoring, Identification of Hate Speech, Cyberaggression, Cyberbullying
2. Quantum Natural Language Processing (QNLP)
3. Machine Learning, Deep Learning, Data Science
4. Explainable Artificial Intelligence (XAI)
5. Evolutionary Computing, Optimization Techniques.

PUBLICATIONS

List of International Journal Papers:

1. **Kirti Kumari**, Jyoti Prakash Singh, Yogesh Kumar Dwivedi, and Nripendra Pratap Rana, "Towards Cyberbullying-free social media in smart cities: a unified multi-modal approach", *Soft Computing*, Springer, volume 24, number 15, 11059-11070, 2020, SCIE, [IF: 3.628]
2. **Kirti Kumari**, and Jyoti Prakash Singh, "Identification of Cyberbullying on Multi-modal Social Media Posts using Genetic Algorithm", *Transactions on Emerging*

Telecommunications Technologies, Wiley, volume 32, number 2, e3907, 2020 , SCIE,[IF: 2.638]

3. **Kirti Kumari**, Jyoti Prakash Singh, Yogesh Kumar Dwivedi, and Nripendra Pratap Rana, “Bilingual Cyber-aggression Detection on Social Media using LSTM Autoencoder”, *Soft Computing*, Springer, volume 25, 8999–9012, SCIE, [IF: 3.628]
4. **Kirti Kumari**, Jyoti Prakash Singh, Yogesh Kumar Dwivedi, and Nripendra Pratap Rana, “Multi-modal Aggression Identification using Deep Learning and Binary Particle Swarm Optimization”, *Future Generation Computer Systems*, Elsevier, volume 118, 187-197, 2021, SCIE [IF:7.187]
5. **Kirti Kumari**, and Jyoti Prakash Singh, “Multi-modal Cyber-aggression Detection with Feature Optimization by Firefly Algorithm”, *Multimedia Systems*, Springer, , 2022, volume 28, issue 6, 1951-1962. SCI, [IF: 2.156]
6. Annapurna P. Patil, and **Kirti Kumari**, "Implementation and Performance Evaluation of Data Offloading Approaches for Mobile Social Networks" International Journal of Emerging Technology and Advanced Engineering, ISSN 2250-2459, Volume 4, Issue 7, 2014, SCOPUS, (IF: 0.44).

List of Book Chapter:

1. **Kirti Kumari**, Jyoti Prakash Singh and Sunil Kumar Suman, “Analysis and Detection of Cyberbullying in Reddit Discussions,. In *Cybercrime in Social Media* (pp. 107-120). Chapman and Hall/CRC, 2023.

List of International Conferences:

1. **Kirti Kumari**, Jyoti Prakash Singh, Yogesh Kumar Dwivedi, and Nripendra Pratap Rana, “Aggressive Social Media Post Detection System containing Symbolic Images”, In **Conference on e-Business, e-Services and e-Society**, Springer, Cham. Norway, Vol. 11701, pp. 415-424. September 18-20, 2019.
2. **Kirti Kumari**, and Jyoti Prakash Singh, “AI ML NIT Patna at HASOC 2019: Deep Learning Approach for Identification of Abusive Content”, In **11th annual meeting of the Forum for Information Retrieval Evaluation (FIRE 2019)**, CEUR Works Proceeding, Indian Statistical Institute Kolkata, Vol. 2517, pp. 328-335, December 12-15, 2019.

3. **Kirti Kumari**, and Jyoti Prakash Singh, “AI ML NIT Patna @ TRAC - 2: Deep Learning Approach for Multi-lingual Aggression Identification”, *In Proceedings of the Second Workshop on Trolling, Aggression and Cyberbullying, Language Resources and Evaluation Conference (LREC 2020)*, European Language Resources Association (ELRA), pp. 113-119, May 2020.
4. **Kirti Kumari**, and Jyoti Prakash Singh, “AI ML NIT Patna @ HASOC 2020: BERT Models for Hate Speech Identification in Indo-European”, *In 12th annual meeting of the Forum for Information Retrieval Evaluation (FIRE 2020)*, CEUR Works Proceeding, Hyderabad, Vol. 2826, pp. 319-324, December 16-20, 2020.
5. **Kirti Kumari**, and Jyoti Prakash Singh, “Machine Learning Approach for Hate Speech and Offensive Content Identification in English and Indo-Aryan Code-Mixed Languages”, *In 14th annual meeting of the Forum for Information Retrieval Evaluation (FIRE 2022)*, CEUR Works Proceeding, Vol. 3395, pp. 575-583, December 16-20, 2022.
6. **Kirti Kumari**, Shaury Srivastav, Rajiv Ranjan Suman, “Bias, threat and aggression identification using machine learning techniques on multilingual comments”, *In Proceedings of the Third Workshop on Threat, Aggression and Cyberbullying (TRAC 2022)*, Association for Computational Linguistics (ACM 2022), Gyeongju, Republic of Korea, pp. 30-36, October 2022.
7. **Kirti Kumari**, and Sima Das, “Stress Detection System using Natural Language Processing and Machine Learning Techniques”, *In the nineteenth International Conference on Natural Language Processing (ICON-2022)*, CEUR Works Proceeding, Vol. 3416, pp. 45-55, December 15-18, 2022.
8. **Kirti Kumari**, and *Ranjana Kumari*, “An Extractive Approach for Automated Summarization of Indian Languages using Clustering Techniques”, *In 14th annual meeting of the Forum for Information Retrieval Evaluation (FIRE 2022)*, CEUR Works Proceeding, Vol. 3395, pp. 418-423, December 16-20, 2022.
9. Sima Das **and Kirti Kumari**, “Dia-Heart Prediction: Diabetes and Heart Attack Prediction using Machine Learning Techniques and Smartphone”, *In proceeding of International Conference on Global Mental Health and Public Health Challenges & Innovations*, November 2022 (In Press).
10. **Kirti Kumari**, Shirish Shekhar Jha, Zarikunte Kunal Dayanand, and Praneesh Sharma, “ML&AI IIITRanchi@DravidianLangTech: Fine-Tuning of Indic-BERT for Exploring Language-Specific Features for Sentiment Classification in Code-

Mixed Dravidian Language”, *In Proceedings of the Third Workshop on Speech and Language Technologies for Dravidian Languages, In Recent Advances in Natural Language Processing, Association for Computational Linguistics (ACM), September 7-8, 2023.*

11. **Kirti Kumari**, Shirish Shekhar Jha, Zarikunte Kunal Dayanand, and Praneesh Sharma, “ML&AI IIT Ranchi@LT-EDI-2023: Hybrid Model for Text Classification aimed at Identifying Different Forms of Depression”, *In Proceedings of the Third Workshop on Language Technology for Equality, Diversity and Inclusion (LTEDI), In Recent Advances in Natural Language Processing, Association for Computational Linguistics (ACM), September 7-8, 2023.*
12. **Kirti Kumari**, Shirish Shekhar Jha, Zarikunte Kunal Dayanand, and Praneesh Sharma, “ML&AI IIT Ranchi@DravidianLangTech: Leveraging Transfer Learning for the Discernment of Fake News within the Linguistic Domain of Dravidian Language”, *In Proceedings of the Third Workshop on Speech and Language Technologies for Dravidian Languages, In Recent Advances in Natural Language Processing, Association for Computational Linguistics (ACM), September 7-8, 2023.*
13. **Kirti Kumari**, Shirish Shekhar Jha, Zarikunte Kunal Dayanand, and Praneesh Sharma, “ML&AI IIT Ranchi@LT-EDI-2023: Identification of Hope Speech of YouTube comments in Mixed Languages”, *In Proceedings of the Third Workshop on Language Technology for Equality, Diversity and Inclusion (LTEDI), In Recent Advances in Natural Language Processing, Association for Computational Linguistics (ACM), September 7-8, 2023.*

MEMBERSHIP OF PROFESSIONAL BODIES:

- Annual Member of IEEE (Young Professionals, Women in Engineering, SIGHT)

OUTRICH (REVIEWERS OF JOURNALS / CONFERENCES AND TPC MEMBER):

- Multimedia Tools and Applications, Springer, SCIE, Impact Factor: 2.757
- Complex & Intelligent Systems, *Springer, SCIE, Impact Factor: 5.277*
- Socio-Economic Planning Sciences, Elsevier, SCIE, *Impact Factor: 4.923*

- 2nd International Conference on Intelligent and Cloud Computing (ICICC-2021)
- 12th meeting of *Forum for Information Retrieval Evaluation 2020* (FIRE 2020), Technical Program Committee Member and Reviewer
- 13th meeting of *Forum for Information Retrieval Evaluation 2021* (**FIRE 2021**), Reviewer
- **12th Edition of its Language Resources and Evaluation Conference (LREC 2020)**, European Language Resources Association.
- Network Computation in Neural Systems, Taylor & Francis, SCIE
- 19 International Conference on Natural Language Processing (**ICON-2022**), Technical Program Committee Member and Reviewer

CERTIFICATIONS (ACADEMIC / INDUSTRIAL):

- Participated in on Workshop on “**Plan for Promoting Jharkhand as Cyber Defence Corridor of the World**” at Jharkhand Technical University, Ranchi on 21st December 2021.
- Participated in six days Short Term Training Programme on **Machine Learning and Its Applications on Cyber Security** at Gandhi Institute for Education and Technology, Bhubaneswar from 7th to 12th December 2020.
- Participated in one week FDP on **Natural Language Processing** organized by Electronics and ICT Academics at **NIT Patna** from January 06-10th, 2020.
- Participated in one week FDP on **Deep Learning and Applications** organized by Electronics and ICT Academics at **NIT Patna** from December 09-13th, 2019.
- Participated in one week FDP on **Artificial Intelligence** organized by AICTE Training And Learning (ATAL) Academy at **NIT Patna** from December 02-06th, 2019.
- Participated in one week FDP on **ANN and Deep Learning** organized by Electronics and ICT Academics at **NIT Patna** from June 11-15th, 2018.

- Participated in one week FDP on **AI and Machine Learning** organized by Electronics and ICT Academics at **NIT Patna** from June 04-08th, 2018.
- Participated in 4th International **Doctoral Symposium on Applied Computation and Security System (ACSS)** organized by **NIT Patna** from March 17-19th, 2017.
- Participated in Expert Lectures Series on **Distributed Computing** organized under ICT Academy at **NIT Patna** from June 1-5th, 2016.
- Attended one week Short Term Course on **Foundation of Data Security**, held at **NIT Patna** from December 16-20th, 2016.
- Participated in TEQIP-II Sponsored Workshop on **Recent Trends in Computer Science and Technology** organized by CSE Department, **NIT Patna** from December 18-19th, 2015.
- Online course on **Introduction to Software Development on SAP HANA** duration of six weeks from November to December 2013.
- Vocational Training on C.D.M.A WLL, BROAD-BAND & Multiplay, GSM Mobile, OCG Exge, Power Plant and MDF Section conducted by B.S.N.L. Bhagalpur from September 7-October 3, 2009.

Declaration

I hereby declare that the information furnished above is true to the best of my knowledge and belief.

Place: IIIT Ranchi

Signature : Kirti Kumari

Date: 06.09.2023