Chahat Raj

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RESEARCH INTERESTS

Social Computing, Human-Centered Computing, NLP, Fairness, Explainability

EDUCATION

George Mason University
Doctor of Philosophy, Computer Science
Virginia, United States
Aug. 2022 – Present

Delhi Technological University
Master of Technology, Information Systems (Research Track)
Thesis: Deep Neural Networks towards Multimodal Information Credibility Assessment
Delhi, India
Aug. 2019 – Aug. 2021

Indira Gandhi Delhi Technical University for Women
Bachelor of Technology, Computer Science and Engineering
Delhi, India
Aug. 2015 – May 2019

EXPERIENCE

University of Technology Sydney
Visiting Scholar
Sydney, Australia
Jun. 2021 - Jul. 2022

Delhi Technological University
Graduate Researcher
Delhi, India
Aug. 2019 - Jul. 2022

Indian Institute of Management Raipur
Remote Researcher
Chhattisgarh, India
May 2021 - Aug. 2021

Centre for Railway Information Systems (CRIS)
Information Security Intern
Delhi, India
May 2018 - Aug. 2018

Indira Gandhi Delhi Technical University for Women
Research Intern
Delhi, India
Aug. 2017 - Dec. 2017

PUBLICATIONS

- **Chahat Raj**, Anjishnu Mukherjee and Ziwei Zhu. "True and Fair: Robust and Unbiased Fake News Detection via Interpretable Machine Learning." *AAAI/ACM conference on Artificial Intelligence, Ethics, and Society 2023.*

- **Chahat Raj** and Priyanka Meel. "People Lie, Actions Don't! Modeling Infodemic Proliferation Predictors among Social Media Users." *Technology in Society 2022, 68, 101930.* (Impact Factor: **7.82**)

- Yohei Nii, **Chahat Raj**, Muhammad Salman Tiwana, Mahendra Samarawickrama and Mukesh Prasad. "Understanding Social Media Engagement in Response to Disaster Fundraising Attempts during Australian Bushfires." *ICIVC 2022*

- Chao Wang, Allison Young, **Chahat Raj**, Andrew Bradshaw, Sally Rosengren, Zeljka Calic, Gnana Bharathy and Mukesh Prasad. "Diagnosis of Recurrent Spontaneous Vertigo using Machine Learning Techniques." *2022.* (Under Review)

- Vivek Velivela, **Chahat Raj**, Mahendra Samarawickrama and Mukesh Prasad. "The Effectiveness of Social Media Engagement Strategy on Disaster Fundraising." *2022.*

- **Chahat Raj** and Priyanka Meel. "ARCNN Framework for Multimodal Infodemic Detection." *Neural Networks 2021, 146, 36-68.* (Impact Factor: **9.657**)

- **Chahat Raj** and Priyanka Meel. "ConvNet Frameworks for Multimodal Fake News Detection." *Applied Intelligence 2021, 1-17.* (Impact Factor: **5.086**)

- **Chahat Raj** and Priyanka Meel. "Microblogs Deception Detection using BERT and Multiscale CNNs." *IEEE GCAT 2021*

- **Chahat Raj** and Priyanka Meel. "Is Dynamic Rumor Detection on Social Media Viable? An Unsupervised Perspective." *2021. Arxiv*

- **Chahat Raj**, Ayush Agarwal, Gnana Bharathy, Bhuva Narayan and Mukesh Prasad. "Cyberbullying Detection: Hybrid Models Based on Machine Learning and Natural Language Processing Techniques." *Electronics 2021, 10(22), 2810.* (Impact Factor: **2.397**)

- Varad Kabade, Ritika Hooda, **Chahat Raj**, Zainab Awan, Allison Young, Miriam Welgampola and Mukesh Prasad. "Machine Learning Techniques for Differential Diagnosis of Vertigo and Dizziness: A Review." *Sensors 2021, 21(22), 7565.* (Impact Factor: **3.576**)
- **Chahat Raj** and Mihir P Mehta. "MediaEval 2020: An Ensemble-based Multimodal Approach for Coronavirus and 5G Conspiracy Tweet Detection." *MediaEval, CEUR Workshop Proceedings 2020*
- **Chahat Raj** and Priyanka Meel. "Fake News on Multiple Online Social Networks." *ICPCCAI 2020, 1-8.*

Teaching/Research

- **Graduate Research Assistant** — GMU, Virginia
  Fairness and Interpretability of Transformer Models — *Jun. 2023 – Aug. 2023*
- **Graduate Teaching Assistant** — GMU, Virginia
  CS112 Introduction to Python Programming — *Aug. 2022 – May 2023*
- **Graduate Teaching Assistant** — DTU, Delhi
  ISY5301 Artificial Intelligence — *Aug. 2019 – May 2021*
- **Professional Tutor** — Delhi
  Tutored 3000+ high school students — *Apr. 2015 – Mar. 2022*

Professional Service

- **Reviewer**
  Springer, Elsevier

Awards and Achievements

- **Travel Grant 2023**: AAAI/ACM conference on Artificial Intelligence, Ethics, and Society - *Funded $1000 to travel to Montreal, Canada to attend AIES'23*, Awarded by: *AAAI/ACM AIES*
- **Summer Graduate Research Award 2023**: Research Topic - *Explainability and Robustness of Debiasing Approaches for Transformers*, Awarded by: *George Mason University*
- **Research Excellence Award 2023**: Received *Commendable Research Award* and a cash prize of INR 50,000 by DTU, Delhi, for the research published in *Neural Networks*
- **Research Excellence Award 2023**: Received *Commendable Research Award* and a cash prize of INR 50,000 by DTU, Delhi, for the research published in *Technology in Society*
- **Research Excellence Award 2022**: Received *Commendable Research Award* and a cash prize of INR 50,000 by DTU, Delhi, for the research published in *Applied Intelligence*
- **Graduate Scholarship**: Received government scholarship from *AICTE* of INR 2,97,600 during the academic years 2019-2021 for qualifying GATE exam

Talks and Presentations

- **Cyberbully Monitoring**: ML4AU Research Showcase Event 2021, Sydney, Australia
- **Cyber Security and Online Safety**: Motilal Nehru College, Delhi University, Delhi, India

Relevant Coursework

- **Doctoral Coursework**
  Advanced NLP, Data Mining, Analysis of Algorithms, Research Experience in CS, Research in CS
- **Graduate Coursework**
  Research in CS, Data Mining, Research Problem Formulation, Research Project (24-Credits), Artificial Intelligence, Machine Learning and Applications, Image Analysis, Linear Algebra and Probability, High Performance Computing
- **Undergraduate Coursework**
  Natural Language Processing, Artificial Intelligence, Data Warehousing & Data Mining, Cloud Computing, Big Data Analytics, Theory of Computation