

# Shivani Kumar, Ph.D.

Postdoctoral Research Fellow at University of Michigan

📍 Ann Arbor, MI, USA | 🌐 [shivanik96.github.io](https://github.com/shivanik96) | ✉ [kshivan@umich.edu](mailto:kshivan@umich.edu) | 📱 [shivanik96](https://www.linkedin.com/in/shivanik96)

## RESEARCH INTEREST

My research interests lie into exploring how Large Language Models tackle RHETORICAL ANALYSIS, especially in conversations. I am interested in probing the three verticals of rhetoric: ETHOS, PATHOS, and LOGOS. For ETHOS, I'm excited to examine how cultural values, credibility, and trust shape dialogues. With PATHOS, I'm keen on understanding how emotions are managed and expressed in LLM interactions. And for LOGOS, I wish to analyze how these models craft and navigate logical arguments.

## EXPERIENCE

- **University of Michigan** May 2024 - Present  
Postdoctoral Research Fellow Ann Arbor, Michigan, USA  
Advisor: Prof David Jurgens  
Topic: Moral Values, Cultural Influence, and Large Language Models
- **Adobe Inc.** January 2023 - June 2023  
PhD Intern Noida, Uttar Pradesh, India  
Advisors: Dr. Sumit Bhatia, Milan Aggarwal  
Topic: Dialogue Foundation Model

## PUBLICATIONS

C=CONFERENCE, J=JOURNAL, P=PREPRINT

- [P.1] Johnathan Ivey\*, **Shivani Kumar\***, Jiayu Liu\*, Hua Shen\*, Sushrita Rakshit\*, Rohan Raju\*, Hao-tian Zhang\*, Aparna Ananthasubramaniam\*, Junghwan Kim\*, Bowen Yi\*, Dustin Wright\*, Abraham Israeli\*, Anders Giovanni Møller\*, Lechen Zhang\*, David Jurgens. [Real or Robotic? Assessing Whether LLMs Accurately Simulate Qualities of Human Responses in Dialogue](#). *ArXiv Preprint*, 2024.
- [J.6] **Shivani Kumar**, Sumit Bhatia, Milan Aggarwal, Tanmoy Chakraborty. [Dialogue Agents 101: A Beginner's Guide to Critical Ingredients for Designing Effective Conversational Systems](#) *Natural Language Processing (formerly Natural Language Engineering)*, 2024.
- [C.6] **Shivani Kumar**, Md Shad Akhtar, Erik Cambria, Tanmoy Chakraborty. [SemEval 2024–Task 10: Emotion Discovery and Reasoning its Flip in Conversation \(EDiReF\)](#) *The North American Chapter of the Association for Computational Linguistics (NAACL)*, 2024.
- [J.5] Prottay Kumar Adhikary, Aseem Srivastava, **Shivani Kumar**, Salam Michael Singh, Puneet Manuja, Jini K Gopinath, Vijay Krishnan, Swati Kedia, Koushik Sinha Deb, Tanmoy Chakraborty. [Exploring the Efficacy of Large Language Models in Summarizing Mental Health Counseling Sessions: A Benchmark Study](#) *Journal of Medical Internet Research (JMIR)*, 2024.
- [J.4] Priyadarshini Rai, Atishay Jain, **Shivani Kumar**, Divya Sharma, Neha Jha, Smriti Chawla, Abhijit Raj, Apoorva Gupta, Sarita Poonia, Angshul Majumdar, Tanmoy Chakraborty, Gaurav Ahuja, Debarka Sengupta. [Literature mining discerns latent disease gene relationships](#) *Bioinformatics*, 2024.
- [C.5] **Shivani Kumar**, Rishabh Gupta, Md Shad Akhtar, Tanmoy Chakraborty. [Adding SPICE to Life: Speaker Profiling in Multiparty Conversations](#) *Joint International Conference on Computational Linguistics, Language Resources and Evaluation (LREC-COLING)*, 2024.
- [C.4] **Shivani Kumar**, Tanmoy Chakraborty. [Harmonizing Code-mixed Conversations: Personality-assisted Code-mixed Response Generation in Dialogues](#). *Conference of the European Chapter of the Association for Computational Linguistics (EACL) - Findings*, 2024.
- [C.3] **Shivani Kumar**, Ramaneswaran S, Md Shad Akhtar, Tanmoy Chakraborty. [From Multilingual Complexity to Emotional Clarity: Leveraging Commonsense to Unveil Emotions in Code-Mixed Dialogues](#). *Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2023.
- [J.3] **Shivani Kumar**, Shubham Dudeja, Md Shad Akhtar, Tanmoy Chakraborty. [Emotion Flip Reasoning in Multiparty Conversations](#). *IEEE Transactions on Artificial Intelligence*, 2023.

- [C.2] **Shivani Kumar**, Ishani Mondal, Md Shad Akhtar, Tanmoy Chakraborty. [Explaining \(Sarcastic\) Utterances to Enhance Affect Understanding in Multimodal Dialogues](#). *Proceedings of the 37th AAAI Conference on Artificial Intelligence (AAAI 2023)*.
- [C.1] **Shivani Kumar\***, Atharva Kulkarni\*, Md Shad Akhtar, Tanmoy Chakraborty. [When did you become so smart, oh wise one?! Sarcasm Explanation in Multi-modal Multi-party Dialogues](#). *Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics (ACL 2022)*.
- [J.2] **Shivani Kumar**, Anubhav Shrima, Md Shad Akhtar, Tanmoy Chakraborty. [Discovering Emotion and Reasoning its Flip in Multi-Party Conversations using Masked Memory Network and Transformer](#). *Knowledge-Based Systems*, 2022.
- [J.1] Manjot Bedi\*, **Shivani Kumar\***, Md Shad Akhtar, Tanmoy Chakraborty. [Multi-modal Sarcasm Detection and Humor Classification in Code-mixed Conversations](#). *IEEE Transactions on Affective Computing*, 2021.

## EDUCATION

- **Indraprastha Institute of Information Technology, Delhi (IIIT-Delhi)** 2019 - 2024  
*Doctor of Philosophy (Ph.D.)* Delhi, India
  - Thesis Title: Understanding and Explaining Affective Traits in English and Code-mixed Conversations
  - Advisor: Prof. Tanmoy Chakraborty
- **University of Delhi – Department of Computer Science** 2017 - 2019  
*Masters of Sciences (M.Sc.) in Computer Science* Delhi, India
  - Thesis Title: Using Complex Networks for Generating Concept Maps
  - Advisor: Prof. Vasudha Bhatnagar
  - Aggregate: 87.5% (GPA: 3.5/4.0)
- **University of Delhi – Shaheed Sukhdev College of Business Studies** 2014 - 2017  
*Bachelors of Sciences (B.Sc.) in Computer Science* Delhi, India
  - Aggregate: 92.5% (GPA: 3.7/4.0)
- **Queen Marys School, Tis Hazari** 2002 - 2014  
*School Education* Delhi, India
  - **Senior Secondary**, CBSE: 91.2% (3.6/4.0 GPA)
  - **Secondary**, CBSE: 91.2% (3.6/4.0 GPA)

## TEACHING ASSISTANT

- **Social Network Analysis** 2023, 2022  
*National Programme on Technology Enhanced Learning (NPTEL) – an Indian MOOCs Platform*
- **Social Network Analysis** 2022  
*Teaching Assistant at IIIT-Delhi*
- **Machine Learning** 2021  
*Teaching Assistant at IIIT-Delhi*
- **Natural Language Processing** 2021  
*Teaching Assistant for PG Diploma in Data Science and AI at IIIT-Delhi*

## INVITED TALKS

- **ACM-India's Symposium for Academic Research and Careers for Students** 2023  
*Lightning Talk and Poster Presentation* NISER Bhubhaneshwar, India
- **International Conference on Natural Language Processing (ICON)** 2023  
*Tutorial on Building Blocks of AI-Driven Mental Health Counseling* University of Goa, India
- **Google Research Week** 2024, 2023  
*Poster Presentation* Bangalore, India
- **Guest lecture on Social Media Analytics** 2022, 2021, 2019  
*For Research Methods in Social Science and Design (RMSSD) course* IIIT-Delhi, India

## AWARDS AND ACHIEVEMENTS

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- **Selected as a DAAD AInet fellow for the Postdoc-NeT-AI** Oct 2024  
*Includes a virtual networking week and a one-week networking visit to Germany.*
- **Microsoft Travel Grant, ACM-Woman Travel Grant** Nov 2023  
*For Travel to Singapore for EMNLP.*
- **Google Travel Grant, Microsoft Travel Grant, ACM-India Travel Grant (IARCS)** Apr 2022  
*For Travel to Dublin, Ireland for ACL.*
- **Junior Research Fellowship (JRF)** Jul 2019  
*Qualified UGC-NET, a standardized test by the University Grants Commission (UGC), India.*
- **Certificate of Merit** Jul 2017  
*From Shaheed Sukhdev College of Business Studies for academic excellence in Bachelors.*

## POSITIONS OF RESPONSIBILITY

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- **Co-Organiser at EDiReF** 2024  
*Shared Task in SemEval Workshop @ NAACL*
- **Program Committee at ICON** 2022  
*International Conference on Natural Language Processing*
- **Program Committee at CONSTRAINT** 2022  
*Workshop on Combating Online Hostile Posts in Regional Languages during Emergency Situation @ ACL*
- **Co-Organiser at ACSS** 2021, 2020  
*Workshop on AI for Computational Social Systems*
- **Co-Organiser at COFAD** 2020  
*Workshop on Combating Fraud Activities using Data Science*

## COMMUNITY SERVICE

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- **Paper Reviewer** 2024  
*ICLR, ARR, ASONAM, WiNLP, Cluster Computing, IEEE Transactions on Artificial Intelligence*
- **Paper Reviewer** 2023  
*ARR, EMNLP*
- **Paper Reviewer** 2022  
*EMNLP, ICON, CHI, DAFSAA*
- **Student Mentor** 2022  
*For the "Desh ka Mentor" program of Delhi Government. Mentored four high school students.*
- **Rapporteur** 2019  
*For The International Colloquium on Ethics and Governance of Autonomous AI Systems*

## ADDITIONAL INFORMATION

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**Fluent Languages:** • English • Hindi

**Interests:** • Crocheting • Photography • Reading • Writing • Music • Art

## REFERENCES

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1. **Prof David Jurgens**  
Associate Professor, School of Information  
University of Michigan  
Email: jurgens@umich.edu  
*Relationship: Postdoc Advisor*
2. **Prof Tanmoy Chakraborty**  
Associate Professor, Dept. of Electrical Engineering (Computer Technology Group); Associate Faculty  
Member, Yardi School of Artificial Intelligence  
Indian Institute of Technology Delhi (IIT Delhi), India  
Email: tanchak@iitd.ac.in, chak.tanmoy.iit@gmail.com\*  
*Relationship: PhD Advisor*

3. **Dr. Md Shad Akhtar**

Assistant Professor, Department of Computer Science and Engineering  
Indraprastha Institute of Information Technology (IIIT) Delhi  
Email: shad.akhtar@iiitd.ac.in  
*Relationship: Mentor and Professor*

4. **Prof Vasudha Bhatnagar**

Professor, Dept. of Computer Science  
University of Delhi  
Email: vbhatnagar@cs.du.ac.in  
*Relationship: Master's Advisor*

5. **Dr. Sumit Bhatia**

Senior Machine Learning Scientist, Media and Data Science Research Lab  
Adobe Inc.  
Email: sumit.bhatia@adobe.com, sumit.summit@gmail.com\*  
*Relationship: Internship Advisor*