Ankita Gupta

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Google Scholar

Education

University of Massachusetts Amherst
Ph.D., Computer Science — 2021 – Present
Advisor: Brendan T. O'Connor

Indian Institute of Science Bangalore
M.E. with Thesis, Electrical Engineering and Computer Science — 2017
Advisor: P. S. Sastry

Malaviya National Institute of Technology Jaipur
B.Tech., Electrical Engineering — 2014

Honors and Awards

Plenary talk at IC2S2	2024
IBM PhD Fellowship Award	2023-2024
Invited talk at CRAC, EMNLP	2023
Research talk at TADA	2021
UMass W. Bruce Croft Scholarship (one student in NLP)	2021
UMass Anuradha and Hanuma Kodavalla Scholarship (two students in the department)	2021
Grace Hopper Fellow	2021
Samsung Citizen Award	2019
Travel grant by Microsoft Research	2017
Travel grant by Robert Bosch Centre for Cyber Physical Systems	2017
Gold Medalist, Department of Electrical Engineering, MNIT	2014
All India Rank 08 in Graduate Aptitude Test	2014
KVPY Fellowship (Young scientist fellowship, Government of India)	2010

Publications

Peer-Reviewed

[1] Harnessing Toulmin's theory for zero-shot argument explication.
Ankita Gupta, Ethan Zuckerman, Brendan O'Connor.
In *ACL*, 2024.
Also upcoming talk at IC2S2, 2024.

[2] ezCoref: Towards Unifying Annotation Guidelines for Coreference Resolution.
Ankita Gupta, Marzena Karpinska, Wenlong Zhao, Kalpesh Krishna, Jack Merullo, Luke Yeh, Mohit Iyyer, Brendan O'Connor.
In *Findings of EACL*, 2023.
Also presented at NENLP 2023 and CRAC, EMNLP 2023.

[3] Examining Political Rhetoric with Epistemic Stance Detection.
Ankita Gupta, Su Lin Blodgett, Justin H. Gross, and Brendan O'Connor.
In *Proceedings of the Fifth Workshop on Natural Language Processing and Computational Social Science (NLP+CSS) at EMNLP*, 2022.

[4] PoliBelief: A Multi-source Epistemic Stance Dataset for Analyzing Political Ideology.
Ankita Gupta, Su Lin Blodgett, Justin H. Gross, and Brendan O'Connor.
In *11th Annual Conference on Analyzing Text as Data (TADA)*, 2021.

[5] Quantifying the Causal Effect of Gender on Interruptions in Supreme Court Oral Arguments.
Katherine Keith, **Ankita Gupta**, Erica Cai, Brendan O'Connor and Douglas Rice.
In *New Directions in Analyzing Text as Data (TADA)*, 2022.

[6] NarrativeTime: Dense Temporal Annotation on a Timeline.
Anna Rogers, Marzena Karpinska, **Ankita Gupta**, Vladislav Lialin, Gregory Smelkov, Anna Rumshisky. In *LREC-COLING*, 2024.

Preprints

[7] Evaluating and improving the robustness of open dialogue summarization models. (under submission)
Ankita Gupta, Chulaka Gunasekara, Hui Wan, Jatin Ganhotra, Sachindra Joshi, Marina Danivelsky.

[8] CASPR: Automated Evaluation Metric for Contrastive Summarization.
Nirupan Ananthamurugan, Dat Duong, Philip George, **Ankita Gupta**, Sandeep Tata, Beliz Gunel.

Pre-PhD Publications

[9] Instability Prediction in Power Systems using Recurrent Neural Networks.
Ankita Gupta, Gurunath Gurrala, Pidaparthy S Sastry.
In *Proceedings of the Twenty-Sixth IJCAI*, 2017.

[10] An Online Power System Stability Monitoring System using Convolutional Neural Networks.
Ankita Gupta, Gurunath Gurrala, and P. S. Sastry.
IEEE Transactions on Power Systems. 2018.

[11] Question Factuality and Answer Veracity Prediction in Community Forums.
Ankita Gupta, S Sahoo, D Prakash, R.R Rohit, V Srivastava, and Y H Kim.
In *Proceedings of the 13th International Workshop on Semantic Evaluation*, 2019.

[12] Hyperpartisan News Detection using Lexical and Semantic Features.
V Srivastava, **Ankita Gupta**, D. Prakash, S Sahoo, R.R Rohit, and Y H Kim.
In *Proceedings of the 13th International Workshop on Semantic Evaluation*, 2019.

[13] Knowledge Directed Multi-task Framework for Natural Language Inference in Clinical Domain
S Chopra, **Ankita Gupta**, and A Kaushik.
In *Proceedings of the 18th BioNLP Workshop and Shared Task*, 2019.

Research Experience

UMass Amherst 2021-Present
Graduate Research Assistant
Advisor: Brendan T. O'Connor
Developing discourse analysis methods for public interest technology applications, including zero-shot argument explication to analyze public comments [1], epistemic stances to identify conflicting entity beliefs as expressed in the political text [2-4], estimating the causal effect of gender on interruptions in oral arguments [5].

IBM Yorktown Heights June-September 2023
Research Intern, Language Technologies
Mentors: Danish Contractor, Marina Danilevsky, Chulaka Gunasekara, Brendan T. O'Connor
Worked on retrieval-augmented generation methods to improve policy-grounded dialogue systems.

IBM Yorktown Heights May-August 2022
Research Intern, Language Technologies
Mentors: Chulaka Gunasekara, Hui Wan, Marina Danilevsky
Worked on evaluating and improving the robustness of dialogue summarization in the presence of real-world input noise (e.g., repetitions, clarifications) [7].

Amazon Bangalore 2020-2021
Applied Scientist, India Machine Learning Team
Worked on contextual bandits to rank deals & discounts on the e-commerce platform, automatic curation of theme-specific products using positive-unlabelled learning.

Samsung Bangalore 2017-2020
Lead ML Engineer, Advanced Technology Lab
Worked on fact-verification [11], hyperpartisan news detection [12], logical fallacies, natural language inference for the clinical domain [13], claim extraction using abstractive summarization and sentence ranking techniques, reading-comprehension tasks to extract snippets of text that are relevant to a claim in a fact-checking pipeline.

Indian Institute of Science Bangalore 2016-2017
Graduate Research Assistant
Advisors: P.S. Sastry and Gurunath Gurrala
Worked on power-systems instability prediction using recurrent neural networks [9] and convolutional neural networks [10].

Relevant Graduate Coursework

Simulation and Causal Modeling, Advanced Natural Language Processing, Probabilistic Graphical Models, Advanced Algorithms, Machine Learning for Signal Processing, Data Analytics, Game Theory, Pattern Recognition, and Neural Networks, Data Mining, Linear and Non-Linear Optimization.

Competencies

Languages Hindi (*native*), English (*fluent*, TOEFL 119)
Programming Python, C/C++ (*Certified Professional, Samsung*), Java, Matlab, R, JavaScript
Libraries and Services Tensorflow, PyTorch, Theano, Stanford CoreNLP, NLTK, Amazon Mechanical Turk, Amazon Web Service, Amazon SageMaker, Git

Service and Outreach

Mentoring UMass Undergraduate Research Volunteer Program's scholarship-winning team 2024
Teaching Assistant for UMass CS685 (Advanced Natural Language Processing) Feb-May 2023
Committee Member, Ph.D. Applicant Support Program, UMass CICS. 2022, 2023
Organizer, Machine Learning & Friends Lunch, UMass CICS. 2022, 2023
Mentor, Ph.D. Applicant Support Program, UMass CICS. 2021
Volunteer, Candidate Friday, UMass CICS. 2021
Reading Group Coordinator, Samsung. 2018-2019
Young Women Professional Representative, Budget Meeting, Chief Minister Secretariat. 2014
Student Representative, Departmental Under Graduate Committee, MNIT, Jaipur. 2013-2014
Reviewer/Program Committee: EMNLP 2023, DialDoc 2023, ACL 2023, EACL 2023, EMNLP 2022, ARR 2021-Present.

Mentoring

Swetha Eppalapally (MS), Daksh Dangi (MS), Chaithra Bhat (MS) with Adobe Feb-May 2024
Kate Sorz (BS), Kaitlyn Malsky (BS), Algis Petlin (BS) Jan 2024
Dat Duong (MS), Philip George (MS), Nirupan Ananthamurugan (MS) with Google Feb-May 2023
Madhu S. Vangara (MS), Gauri Chaware (MS), Rahul Tandon (MS) with Lexalytics Feb-May 2022
Samuel Wallace (BS) Feb-May 2022