Pranav Goel

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ACADEMIC APPOINTMENTS AND AFFILIATIONS

Postdoctoral Research Associate   Sep 2023 - Aug 2025
Network Science Institute, College of Social Sciences and Humanities
    Northeastern University
   Advisor: Prof. David Lazer

Affiliated Researcher   Sep 2023 -
The NULab for Text, Maps, and Networks
    Northeastern University

EDUCATION

Ph.D., Computer Science   2018 - 2023
University of Maryland, College Park
    Dissertation: Analyzing communicative choices to understand their motivations, context-based variation,
    and social consequences
    Advisor: Philip Resnik

Masters, Computer Science   2018 - 2020
University of Maryland, College Park

B.Tech. Computer Science & Engineering (with Honors in AI)   2014 - 2018
Indian Institute of Technology (BHU) Varanasi, India
    Advisor: Anil Kumar Singh

RESEARCH AND PROFESSIONAL EXPERIENCE

Visiting Research Scholar: Lazer Lab, Northeastern University   June 2021 - Aug 2023
Project: Mainstream News Sharing in Online Misinformation Networks
    Supervisor: Prof. David Lazer
Summer Research Fellow: National Institute of Science & Technology (NIST) June-Sep 2022
Project: An Interactive Document Annotation Tool using Technical Language Processing for Measurement Science, working with the NIST Community Resilience Program
    Supervisor: Prof. Jordan Boyd-Graber & Dr. Juan Fung
Research Intern: NLP Group, Microsoft Research, Redmond   June 2020 - Aug 2020
Project: Money Talks? Associations between Donor Activity and Congressional Floor Speech
    Supervisor: Dr. Nebojsa Jojic
Research Intern: NLP Group, Microsoft Research, Redmond   June 2019 - Aug 2019
Project: Different Language Generation Mechanisms for Chatbots - What are the Differences?
    Supervisor: Dr. Nebojsa Jojic
Research Intern: Articulab, Carnegie Mellon University   May 2017 - July 2017
Project: Conversational Strategy Classification for a Virtual Assistant and Detecting Indirectness
    Supervisors: Prof. Yoichi Matsuyama and Prof. Justine Cassell
Research Intern: CFILT Lab, Indian Institute of Technology Bombay May 2016 - July 2016
Project: Sarcasm Target Identification
    Supervisors: Dr. Aditya Joshi and Prof. Pushpak Bhattacharyya
Software Engineering Intern: Ephesoft, India   Dec 2016 - Jan 2017
Project: Comparing Content Analysis Approaches (with the Data Science team)

PEER-REVIEWED PUBLICATIONS

[1] Stefan McCabe, Jon Green, **Pranav Goel**, and David Lazer. "Inequalities in Online Representation: Who Follows Their Own Member of Congress on Twitter?" Journal of Quantitative Description: Digital Media 3. 2023.

[2] Alexander Hoyle, Rupak Sarkar, **Pranav Goel**, and Philip Resnik. "Natural Language Decompositions of Implicit Content Enable Better Text Representations" Proceedings of the 2023 Conference on Empirical Methods in Natural Language Processing (EMNLP). 2023.

[3] **Pranav Goel**, Nikolay Malkin*, SoRelle W. Gaynor*, Kristina Miler, Nebojsa Jojic, Philip Resnik. "Donor Activity is Associated with US Legislators Attention to Political Issues." PLoS ONE 18(9): e0291169. https://doi.org/10.1371/journal.pone.0291169. 2023.

[4] **Pranav Goel**, David Lazer, Philip Resnik. "Mainstream News Articles Co-Shared with Fake News Buttress Misinformation Narratives." International AAAI Conference on Web and Social Media (ICWSM) 2023. (Non-archival track). *Outstanding Study Design Award.*

[5] Alexander Hoyle, **Pranav Goel**, Rupak Sarkar, and Philip Resnik. "Are Neural Topic Models Broken?" Proceedings of the 2022 Conference on Empirical Methods in Natural Language Processing (EMNLP) (Findings). 2022.

[6] **Pranav Goel***, Alexander Hoyle*, Denis Peskov*, Andrew Hian-Cheong*, Jordan Boyd-Graber, and Philip Resnik. "Is Automated Topic Model Evaluation Broken?: The Incoherence of Coherence." Advances in Neural Information Processing Systems (2021). *Spotlight Presentation at NeurIPS 2021*

[7] Nikolay Malkin, Sameera Lanka, **Pranav Goel**, and Nebojsa Jojic. "Studying word order through iterative shuffling." Proceedings of the 2021 Conference on Empirical Methods in Natural Language Processing (EMNLP). 2021.

[8] Nikolay Malkin, Sameera Lanka, **Pranav Goel**, Sudha Rao, and Nebojsa Jojic. "GPT Perdetry Test: Generating new meanings for new words" In Proceedings of the 2021 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL). 2021.

[9] **Pranav Goel***, Alexander Hoyle*, and Philip Resnik. "Improving Neural Topic Models Using Knowledge Distillation." Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP). 2020.

[10] **Pranav Goel**, Shi Feng, and Jordan Boyd-Graber. "How Pre-trained Word Representations Capture Commonsense Physical Comparisons". Proceedings of the 1st Workshop on Commonsense Inference in Natural Language Processing at EMNLP 2019.

[11] **Pranav Goel***, Devang Kulshreshtha*, and Anil Kumar Singh. "How emotional are you? Neural Architectures for Emotion Intensity Prediction in Microblogs". COLING 2018.

[12] **Pranav Goel**, Yoichi Matsuyama, Michael Madaio, and Justine Cassell. "I think it might help if we multiply, and not add": Detecting Indirectness in Conversation. Proceedings of the International Workshop Series on Spoken Dialogue Systems Technology (IWSDS) 2018. (Also published as a Chapter in the Book: 9th International Workshop on Spoken Dialogue System Technology pp 27-40, Lecture Notes in Electrical Engineering, vol 579. Springer, Singapore.)

[13] Aditya Joshi, **Pranav Goel**, Pushpak Bhattacharyya, and Mark J. Carman. "Sarcasm Target Identification: Dataset and An Introductory Approach." LREC 2018-11th edition of the Language Resources and Evaluation Conference 2018.

[14] **Pranav Goel***, Devang Kulshreshtha*, Prayas Jain and K.K. Shukla. "Prayas at emoint 2017: An ensemble of deep neural architectures for emotion intensity prediction in tweets." Proceedings of the 8th Workshop on Computational Approaches to Subjectivity, Sentiment and Social Media Analysis at EMNLP 2017. (Shared Task Winner!)

[15] **Pranav Goel** and Anil Kumar Singh. "IIT (BHU): System Description for LSDSem'17 Shared Task." Proceedings of the 2nd Workshop on Linking Models of Lexical, Sentential and Discourse-level Semantics at EACL 2017.

* joint first author

Under Review:

- SoRelle W. Gaynor, Kristina Miler, **Pranav Goel**, Alexander M. Hoyle, and Philip Resnik. "Express Yourself (Ideologically): Legislators' Ideal Points Across Audiences." *Journal of Politics.*

SERVICE TO PROFESSION

- Reviewer at NeurIPS 2023.

- Program Committee at ACL 2023.

- Reviewer Committee for the Computational Social Science and Cultural Analytics track at EMNLP 2022.

- Reviewer for the ACL Rolling Review (ARR).

- Reviewer for EMNLP 2021, Computational Social Science and Cultural Analytics track; Information Retrieval and Text Mining track.

- Reviewer for CLPsych 2021 workshop at NAACL 2021.

- Reviewer for ACL 2021, Computational Social Science and Cultural Analytics track.

TEACHING

Teaching Assistant   Spring 2020
Discrete Mathematics at Dept of Computer Science, University of Maryland
Teaching Assistant   Fall 2019
Discrete Mathematics at Dept of Computer Science, University of Maryland
Teaching Assistant   Spring 2019
Introduction to Natural Language Processing at Dept of Computer Science, University of Maryland
Teaching Assistant   Fall 2018
Discrete Mathematics at Dept of Computer Science, University of Maryland
Teaching Assistant   Spring 2018
Introduction to Artificial Intelligence at Dept of Computer Science & Engineering, Indian Institute of Technology (BHU) Varanasi
Teaching Assistant   Fall 2016
Introduction to Programming in C at Dept of Computer Science & Engineering, Indian Institute of Technology (BHU) Varanasi

AWARDS AND SCHOLARSHIPS

- Outstanding Study Design Award at ICWSM 2023

- Ann G. Wylie Dissertation Fellowship 2023

- Jacob K. Goldhaber Travel Grant 2023

- Dean's Fellowship, University of Maryland, 2019-2020.

- Dean's Fellowship, University of Maryland, 2018-2019.

- Selected for the DAAD-WISE scholarship/internship program for 2017.