

## ACADEMIC APPOINTMENTS AND AFFILIATIONS

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- 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

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- Ph.D., Computer Science** 2018 - 2023  
*University of Maryland, College Park, USA*  
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, USA*
- B.Tech., Computer Science & Engineering (with Honors in AI)** 2014 - 2018  
*Indian Institute of Technology (BHU) Varanasi, India*

## RESEARCH AND PROFESSIONAL EXPERIENCE

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- 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)*

[1] Zongxia Li, Andrew Mao, Daniel Stephens, **Pranav Goel**, Emily Walpole, Alden Dima, Juan Fung, Jordan Boyd-Graber. “Improving the TENOR of Labeling: Re-evaluating Topic Models for Content Analysis.” Proceedings of the 18<sup>th</sup> Conference of the European Chapter of the Association for Computational Linguistics (EACL): Main Volume. 2024.

[2] 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.

[3] 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.

[4] **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.

[5] **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*.

[6] 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.

[7] **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*

[8] 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.

[9] 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.

[10] **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.

[11] **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.

[12] **Pranav Goel\***, Devang Kulshreshtha\*, and Anil Kumar Singh. “How emotional are you? Neural Architectures for Emotion Intensity Prediction in Microblogs”. Proceedings of the 27th International Conference on Computational Linguistics (COLING) 2018.

[13] **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.)

[14] 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.

[15] **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!)

[16] **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 & TEACHING**

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### **Reviewing**

- *PNAS Nexus* (Reviewer).
- IC2S2 2024 (Reviewer).
- NLP + CSS workshop at NAACL 2024 (Reviewer).
- ACM FAccT 2024 (Program Committee).
- NeurIPS 2023 (Reviewer).
- ACL 2023 (Program Committee).
- EMNLP 2022 (Reviewer Committee for the Computational Social Science and Cultural Analytics track).
- ACL Rolling Review (ARR) 2022 (Reviewer).
- EMNLP 2021 (Reviewer for Computational Social Science and Cultural Analytics track, as well as Information Retrieval and Text Mining track).
- CLPsych 2021 workshop at NAACL 2021 (Reviewer).
- ACL 2021 (Reviewer for the Computational Social Science and Cultural Analytics track).

### **Mentoring**

- PhD students at the Lazer Lab, Network Science Institute, Northeastern University: Hong Qu, Ata Uslu, Burak Ozturan, Alyssa Smith.
- PhD student as part of the Cross-Disciplinary Mentoring Initiative at the Network Science Institute, Northeastern University: Abby Leung.
- As part of the NAACL 2024 Student Research Workshop: Milo Knell, undergrad student at Harvey Mudd College.

### **Teaching**

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

## **GRANTS & AWARDS**

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### **Co-authored Grants**

- An Annotated Dataset of Local and National U.S. News Articles about Transgender Issues – NetSeed: Seedling Research Award 2024 (\$10,000 awarded to support the project)
- Modeling Co-Decisions: A Computational Framework Using Language and Metadata – NSF (Award No. 2008761)
- Advanced Topic Modeling Methods to Analyze Text Responses in COVID-19 Survey Data – NSF (Award No. 2031736)

## **Awards**

- Outstanding Study Design Award at ICWSM 2023
- Ann G. Wylie Dissertation Fellowship, University of Maryland, 2023
- Jacob K. Goldhaber Travel Grant, University of Maryland, 2023
- International Conference Student Support Award, University of Maryland, 2023
- Computer Science Department Travel Award, University of Maryland, 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, 2017.