Venkata S Govindarajan

HE/HIM/HIS
DEPARTMENT OF LINGUISTICS,
THE UNIVERSITY OF TEXAS AT AUSTIN

RESEARCH STATEMENT

I am a Ph.D. candidate in Computational Linguistics at UT Austin *expecting to graduate in May 2024*. I am interested in **computational social science and pragmatics**, with a focus on social dynamics (like intergroup bias) in online communication. I have also studied how individuals perform pragmatic acts like giving advice, and surveyed the diversity of generalizations available across predicates and arguments in English.

EDUCATION

The University of Texas at Austin

Ph.D. Computational Linguistics

Committee: Jessy Li, David Beaver, Kyle Mahowald & Malihe Alikhani

University of Rochester

2017–2019

M.S. Computational Linguistics

GPA: 3.75/4

Advisor: Aaron Steven White

Indian Institute of Technology Madras

2012–2017

B.Tech & M.Tech Biological Engineering

GPA: 8.68/10

PUBLICATIONS

Govindarajan, V. S., D. Beaver, K. Mahowald & J. J. Li. 2023. Counterfactual Probing for the Influence of Affect and Specificity on Intergroup Bias. In *Findings of the Association for Computational Linguistics: ACL* 2023, 12853–12862. Toronto, Canada: Association for Computational Linguistics.

Govindarajan, V. S., K. Atwell, B. Sinno, M. Alikhani, D. Beaver & J. J. Li. 2023. How people talk about each other: Modeling Generalized Intergroup Bias and Emotion. In *Proceedings of the 17th Conference of the European Chapter of the Association for Computational Linguistics*, 2488–2498. Dubrovnik, Croatia: Association for Computational Linguistics.

Kovatchev, V., T. Chatterjee, V. S. Govindarajan, J. Chen, et al. 2022. longhorns at DADC 2022: How many linguists does it take to fool a Question Answering model? A systematic approach to adversarial attacks. In *Proceedings of the First Workshop on Dynamic Adversarial Data Collection*, 41–52. Seattle, WA: Association for Computational Linguistics.

Govindarajan, V. S., B. Chen, R. Warholic, K. Erk & J. J. Li. 2020. Help! Need Advice on Identifying Advice. In *Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 5295–5306. Online: Association for Computational Linguistics.

White, A. S., E. Stengel-Eskin, S. Vashishtha, V. S. Govindarajan, et al. 2020. The Universal Decompositional Semantics Dataset and Decomp Toolkit. In *Proceedings of The 12th Language Resources and Evaluation Conference (LREC)*, 5698–5707. Marseille, France: European Language Resources Association.

Govindarajan, V., B. V. Durme & A. S. White. 2019. Decomposing Generalization: Models of Generic, Habitual, and Episodic Statements. Transactions of the Association for Computational Linguistics (TACL) 7. 501-517.

TALKS

Modeling Generalized Intergroup Bias and Emotion. 2023. Conference talk & poster at EACL. Dubrovnik, Croatia. May 2023.

Help! Need Advice on Identifying Advice. 2023. Conference talk at EMNLP. Virtual. Nov 2020.

Decomposing Generalization: Models of Generic, Habitual, and Episodic Statements. 2023. *Conference talk at ACL*. Virtual. July 2020.

TEACHING & MENTORSHIP

Teaching

Principal Instructor at UT Austin

Summer 2022

Language and Computers (LINS313)

Introductory course to computational studies of language. Summer course over 5 weeks with 3 students. Designed and developed lectures, assignments, discussion topics, and supervised final projects over last 2 weeks.

Teaching Assistant

I served as TA on the following courses, where my responsibilities included holding office hours, grading assignments, and occasional substitute lectures:

Machine Learning Toolbox for Text Analysis (LIN373N)	Spring 2021
Analyzing Linguistic Data and Programming for Linguists (LIN350)	Spring 2020
Introduction to Computational Linguistics (LIN353C)	Fall 2019
Introduction to Computational Linguistics	Fall 2018
Data Structures and Algorithms for Biology	Fall 2016

Mentorship

Yuki Zhang (undergraduate at Brown University)

Intergroup Bias dynamics & discourse structure

Summer 2023-Present

WORK EXPERIENCE

The New York Times Summer 2023

Data Scientist Intern

Built a framework for offline evaluation of novel user and article features to inform model building in algorithmic recommendations. Predicted that potential features like EASE would boost engagement up-to 2% while diversifying recommendations.

Amazon Summer 2021

Alexa Applied Scientist Intern

Implemented an unsupervised method for detecting data drift in NLU models, and validated the approach on simulated and customer data. Received return internship offer for summer 2022.

SKILLS

Programming Languages: Python, Swift, Javascript, R, SQL, Julia, LISP

Tools & Frameworks: pyTorch, Transformers, Tensorflow, Keras, scikit-learn, statsmodels, SciPy, Pandas,

SwiftUI, CoreML, BigQuery, Ime4

Languages: English (native), Tamil (native), Hindi (intermediate)

PROFESSIONAL SERVICE

Organizing Committee

South by Semantics Workshop

2022-2024

I am co-organizing a series of talks on semantics, computation and philosophy of language with Samuel Cantor, a graduate student in philosophy. To provide a forum for emerging scholars with UT Austin's rich community of language researchers, we invited 5 early career researchers to present their work during the 2022-2023 academic year, with more planned this year. We procured funding of 8000\$ from the College of Liberal Arts, the Graduate School, and the Linguistics & Philosophy departments, and also organized receptions after the talks to foster dialogue and collaboration.

Texas Linguistics Society (TLS) Conference

2021, 2022

TLS is an annual student-run academic conference by the Department of Linguistics at UT Austin which includes presentations in all areas of linguistics. I served on the organizing committee and was involved in reviewing and assigning submissions for review, website design, scheduling, logistics for a fully virtual conference, and chairing keynote sessions and talks.

Reviewer

EMNLP 2023, ACL 2023, *SEM 2023, SIGDIAL 2023, SIGDIAL 2022

APPS

DeTeXt: I built an open source app for iOS, iPadOS and macOS that predicts the best LaTeX commands corresponding to hand-drawn symbols using deep neural networks. Built using SwiftUI, Combine, PencilKit and CoreML, the app has over 10,000 downloads.

AWARDS

NASSLI Student Grant (800 USD)	Summer 2022
COLA Supplemental Graduate School Fellowship (5000 USD)	Spring 2020
Silver medal at International Genetically Engineered Machine (iGEM)	Fall 2016
Indian Biological Engineering Competition (iBEC) grant (15,000 USD)	Fall 2016
National BIRAC-IdeaThon on Antimicrobial Resistance Finalist	Fall 2016
Second runner up in 3M-CII Young Innovators Challenge	Spring 2015