# Venkata S Govindarajan

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

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#### **RESEARCH STATEMENT**

I am a Ph.D. candidate in **Computational Linguistics** at UT Austin *expecting to graduate in May 2024*. I am interested in **Pragmatics**, **Computational Social Science**, and **Natural Language Processing** with a focus on social dynamics (like intergroup bias) in online conversation and communication.

#### **EDUCATION**

The University of Texas at Austin

2019-2024

Ph.D. Computational Linguistics

GPA: 3.92/4

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

#### PEER-REVIEWED PUBLICATIONS

- 1. Anirudh Srinivasan, **Venkata Subrahmanyan Govindarajan**, and Kyle Mahowald (Dec. 2023). "Counterfactually Probing Language Identity in Multilingual Models". In: *Proceedings of the 3rd Workshop on Multi-lingual Representation Learning (MRL)*. Ed. by Duygu Ataman. Singapore: Association for Computational Linguistics, pp. 24–36.
- 2. Venkata S Govindarajan, Juan Diego Rodriguez, Kaj Bostrom, and Kyle Mahowald (Dec. 2023). "Lil-Bevo: Explorations of Strategies for Training Language Models in More Humanlike Ways". In: Proceedings of the BabyLM Challenge at the 27th Conference on Computational Natural Language Learning. Ed. by Alex Warstadt, Aaron Mueller, Leshem Choshen, Ethan Wilcox, Chengxu Zhuang, Juan Ciro, Rafael Mosquera, Bhargavi Paranjabe, Adina Williams, Tal Linzen, and Ryan Cotterell. Singapore: Association for Computational Linguistics, pp. 280–288.
- 3. Venkata S Govindarajan, David Beaver, Kyle Mahowald, and Junyi Jessy Li (July 2023). "Counterfactual Probing for the Influence of Affect and Specificity on Intergroup Bias". In: Findings of the Association for Computational Linguistics: ACL 2023. Toronto, Canada: ACL, pp. 12853–12862.

- 4. Venkata S Govindarajan, Katherine Atwell, Barea Sinno, Malihe Alikhani, David Beaver, and Junyi Jessy Li (May 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. Dubrovnik, Croatia: ACL, pp. 2488–2498.
- 5. Venelin Kovatchev, Trina Chatterjee, **Venkata S Govindarajan**, Jifan Chen, Eunsol Choi, Gabriella Chronis, Anubrata Das, Katrin Erk, Matthew Lease, Junyi Jessy Li, Yating Wu, and Kyle Mahowald (July 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*. Seattle, WA: ACL, pp. 41–52.
- 6. Venkata S Govindarajan, Benjamin Chen, Rebecca Warholic, Katrin Erk, and Junyi Jessy Li (Nov. 2020). "Help! Need Advice on Identifying Advice". In: Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP). Online: ACL, pp. 5295–5306.
- 7. Aaron Steven White, Elias Stengel-Eskin, Siddharth Vashishtha, **Venkata Subrahmanyan Govindarajan**, Dee Ann Reisinger, Tim Vieira, Keisuke Sakaguchi, Sheng Zhang, Francis Ferraro, Rachel Rudinger, Kyle Rawlins, and Benjamin Van Durme (May 2020). "The Universal Decompositional Semantics Dataset and Decomp Toolkit". In: *Proceedings of The 12th Language Resources and Evaluation Conference (LREC)*. Marseille, France: European Language Resources Association, pp. 5698–5707.
- 8. Venkata Govindarajan, Benjamin Van Durme, and Aaron Steven White (2019). "Decomposing Generalization: Models of Generic, Habitual, and Episodic Statements". In: Transactions of the Association for Computational Linguistics (TACL) 7, pp. 501-517.

## **TALKS**

- 1. "Modeling Human Communicative Behavior with NLP" (Feb. 2024). Invited job talk. Ithaca College, NY.
- 2. "Modeling Intergroup Bias" (Jan. 2024). Invited job talk. Georgetown University, Washington D.C.
- 3. "Modeling Generalized Intergroup Bias" (May 2023). Conference talk at EACL. Dubrovnik, Croatia.
- 4. "Help! Need Advice on Identifying Advice" (Nov. 2020). Conference talk at EMNLP. Virtual.
- 5. "Decomposing Generalization" (July 2020). Conference talk at ACL. Virtual.

#### 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
<ul> <li>Analyzing Linguistic Data and Programming for Linguists (LIN350)</li> </ul>	Spring 2020
Introduction to Computational Linguistics (LIN353C)	Fall 2019
Introduction to Computational Linguistics	Fall 2018
Data Structures and Algorithms for Biology	Fall 2016

# Mentorship

Matianyu Zang (undergraduate at Brown University)

Summer 2023-Present

Intergroup Bias dynamics & discourse structure

## **EMPLOYMENT**

The New York Times Summer 2023

Data Science Intern

Built a framework using hierarchical (mixed effects) linear modeling for offline evaluation of novel user and article features to inform model building in algorithmic recommendations. Delivered potential features that could **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, lme4

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

#### PROFESSIONAL SERVICE

# Organizing Committee

# South by Semantics Workshop

2022-24

I am co-organizing a series of talks on semantics, computation and philosophy of language. Our goal is to provide a forum for emerging scholars with UT Austin's rich community of language researchers, and to foster collaboration and dialogue through receptions and dinners organized with the talks.

# Texas Linguistics Society (TLS) Conference

2021-22

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

ACL ARR 2023, EMNLP 2023, ACL 2023, \*SEM 2023-24, SIGDIAL 2022-23

## Volunteer

Underpaid@UT

## 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