




Saujas Vaduguru

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Education

- 08/22–
05/27 **Ph.D. in Language and Information Technologies**
Language Technologies Institute, School of Computer Science, Carnegie Mellon University
ADVISOR: Daniel Fried
- 07/17–
06/22 **B.Tech. in Computer Science and M.S. (by Research) in Computational Linguistics**
International Institute of Information Technology (IIIT), Hyderabad
ADVISORS: Monojit Choudhury, Dipti Misra Sharma
THESIS: Program Synthesis for Linguistic Rules

Experience

- 05/24–
08/24 **AI Research Scientist Intern**, Autodesk
MANAGER: Yewen Pu
- 2019–2022 **Research Assistant**, Language Technologies Research Center, IIIT, Hyderabad
- 05/21–
08/21 **Research Intern**, Chandar Research Lab, MILA
MENTORS: Sarath Chandar, Prasanna Parthasarathi

Publications

- [13] *Success and Cost Elicit Convention Formation for Efficient Communication*
Saujas Vaduguru, Yilun Hua, Yoav Artzi, Daniel Fried
Preprint, 2025
- [12] **mrCAD: Multimodal Refinement of Computer-aided Designs**
William P. McCarthy*, **Saujas Vaduguru***, Karl D. D. Willis, Justin Matejka, Judith E. Fan, Daniel Fried, Yewen Pu
Findings of the Association for Computational Linguistics: EMNLP, 2025
- [11] *Identifying & Interactively Refining Ambiguous User Goals for Data Visualization Code Generation*
Mert Inan, Anthony Sicilia, Alex Xie, **Saujas Vaduguru**, Daniel Fried, Malihe Alikhani
Conference on Empirical Methods in Natural Language Processing (EMNLP), 2025
- [10] *Analyzing Information Sharing and Coordination in Multi-Agent Planning*
Tianyue Ou, **Saujas Vaduguru**, Daniel Fried
Preprint, 2025
- [9] **Is the Pope Catholic? Yes, the Pope is Catholic. Generative Evaluation of Intent Resolution in LLMs**
Akhila Yerukola, **Saujas Vaduguru**, Daniel Fried, Maarten Sap
62nd Annual Meeting of the Association for Computational Linguistics (ACL), 2024

*equal contribution

- [8] *Amortizing Pragmatic Program Synthesis with Rankings*
Yewen Pu, **Saujas Vaduguru**, Priyan Vaithilingam, Elena Glassman, Daniel Fried
41st International Conference on Machine Learning (ICML), 2024
- [7] *Generating Pragmatic Examples to Train Neural Program Synthesizers*
Saujas Vaduguru, Daniel Fried, Yewen Pu
12th International Conference on Learning Representations (ICLR), 2024
- [6] *Symbolic Planning and Code Generation for Grounded Dialogue*
Justin Chiu, Wenting Zhao, Derek Chen, **Saujas Vaduguru**, Alexander Rush, Daniel Fried
Conference on Empirical Methods in Natural Language Processing (EMNLP), 2023
- [5] *Adapting to Gradual Distribution Shifts with Continual Weight Averaging*
Jared Fernandez, **Saujas Vaduguru**, Sanket Vaibhav Mehta, Yonatan Bisk, Emma Strubell
Poster at the Workshop on High-dimensional Learning Dynamics
40th International Conference on Machine Learning (ICML), 2023
- [4] *Probing Negation in Language Models*
Shashwat Singh, Shashwat Goel, **Saujas Vaduguru**, Ponnurangam Kumaraguru
Poster at the 8th Workshop on Representation Learning for NLP (RepL4NLP), 2023
- [3] *Stress Rules from Surface Forms: Experiments with Program Synthesis*
Saujas Vaduguru, Partho Sarthi, Monojit Choudhury, and Dipti Sharma
International Conference on Natural Language Processing (ICON), 2021
- [2] *Efficient Pragmatic Program Synthesis with Informative Specifications*
Saujas Vaduguru, Kevin Ellis, Yewen Pu
Contributed talk at the Workshop on Meaning in Context: Pragmatic Communication in Humans and Machines, 2021
- [1] *Sample-efficient linguistic generalizations through program synthesis: Experiments with phonology problems*
Saujas Vaduguru, Aalok Sathe, Monojit Choudhury, and Dipti Sharma
Proceedings of the 18th SIGMORPHON Workshop on Computational Research in Phonetics, Phonology, and Morphology, 2021

Honors and Awards

2021	MITACS Globalink Research Internship
2017–2021	Dean’s List Award for Academic Performance, IIIT, Hyderabad
2015	Honourable Mention, International Linguistics Olympiad

Academic Service

ORGANIZER: First Workshop on Theory of Mind at ICML 2023

REVIEWER:* **NeurIPS 2025**, ICLR 2025, ACL Rolling Review (October 2025, May 2025, February 2025, June 2024, **August 2024**), EMNLP 2023, ACL 2023, BlackboxNLP@EMNLP 2023–2024, NILLI@EMNLP 2021

*Boldface indicates recognition as Outstanding Reviewer or Top Reviewer

Teaching Experience

- Fall 2023* **Teaching Assistant**, Advanced Natural Language Processing, *Carnegie Mellon University*
Spring 2020 **Teaching Assistant**, Computational Linguistics I, *IIT, Hyderabad*

Invited Talks

- Fall 2024* Learning to synthesize programs from informative examples, *MPI Tübingen*
Fall 2023 Program synthesis from informative examples, *CMU Software Research Seminar*

Outreach

Pāṇini Linguistics Olympiad Team leader and coach for Indian team at the International Linguistics Olympiad (2018, 2019, and 2021), Co-chair of Problem Committee and Jury (2018–2021), Member of the Problem Committee (2022–)

Proficiencies

Programming languages Python, JavaScript

Frameworks Pytorch, HuggingFace Transformers