




# Saujas Vaduguru

 <https://saujasv.github.io>  
 [svadugur@cs.cmu.edu](mailto:svadugur@cs.cmu.edu)  
 <https://github.com/saujasv>

## Education

- 2022–  
present **Ph.D. in Language and Information Technologies**  
*Language Technologies Institute, School of Computer Science, Carnegie Mellon University*  
ADVISOR: Daniel Fried
- 2017–2022 **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

- May–Aug  
2024 **AI Research Scientist Intern**, Autodesk  
MANAGER: Yewen Pu
- 2019–2022 **Research Assistant**, Language Technologies Research Center, IIIT, Hyderabad
- May–Aug  
2021 **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*

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\*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

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|-----------|---|
| 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

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\*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–)