

# Jesse Mu

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## Education

- 2018– **Ph.D. in Computer Science, Stanford University**  
– Advisor: Noah Goodman
- 2017–2018 **MPhil in Advanced Computer Science, with distinction, University of Cambridge**  
– Advisors: Ekaterina Shutova, Helen Yannakoudakis
- 2013–2017 **B.A. in Computer Science, *summa cum laude*, Boston College**  
– Advisors: Joshua K. Hartshorne, Timothy J. O’Donnell

## Experience

- 2023– **Member of Technical Staff, Anthropic**
- 2022 **Research Intern, DeepMind**  
– Advisors: Joel Leibo and Jane Wang
- 2021 **Research Intern, FAIR, Meta**  
– Advisors: Edward Grefenstette and Tim Rocktäschel
- 2020 **Visiting Researcher, Language and Intelligence Group (LINGO), MIT**  
– Advisor: Jacob Andreas
- 2019–2020 **Course Consultant, Codecademy**  
– Course advisor/designer for Deep Learning and Text Generation course
- 2017 **Applied Scientist Intern, Alexa AI, Amazon**

## Publications

- 2023 **Learning to Compress Prompts with Gist Tokens**  
Jesse Mu, Xiang Lisa Li, and Noah Goodman. In *Advances in Neural Information Processing Systems (NeurIPS)*
- 2023 **Characterizing tradeoffs between teaching via language and demonstrations in multi-agent systems**  
Dhara Yu, Noah Goodman, and Jesse Mu. In *Proceedings of the 45th Annual Meeting of the Cognitive Science Society (CogSci)*
- 2022 **Improving Intrinsic Exploration with Language Abstractions**  
Jesse Mu, Victor Zhong, Roberta Raileanu, Minqi Jiang, Noah Goodman, Tim Rocktäschel, and Edward Grefenstette. In *Advances in Neural Information Processing Systems (NeurIPS)*
- 2022 **Improving Policy Learning with Language Dynamics Distillation**  
Victor Zhong, Jesse Mu, Luke Zettlemoyer, Edward Grefenstette, and Tim Rocktäschel. In *Advances in Neural Information Processing Systems (NeurIPS)*

- 2022 **STaR: Bootstrapping Reasoning with Reasoning**  
Eric Zelikman, Yuhai Wu, **Jesse Mu**, and Noah Goodman. In *Advances in Neural Information Processing Systems (NeurIPS)*
- 2022 **Active Learning Helps Pretrained Models Learn the Intended Task**  
Alex Tamkin, Dat Nguyen, Salil Deshpande, **Jesse Mu**, and Noah Goodman. In *Advances in Neural Information Processing Systems (NeurIPS)*
- 2022 **In the ZONE: Measuring difficulty and progression in curriculum generation**  
Rose Wang, **Jesse Mu**, Dilip Arumugam, Natasha Jaques, and Noah Goodman. In *NeurIPS Deep RL Workshop*
- 2022 **Emergent Covert Signaling in Adversarial Reference Games**  
Dhara Yu, **Jesse Mu**, and Noah Goodman. In *Proceedings of the 5th Workshop on Emergent Communication: New Frontiers*
- 2021 **Multi-party Referential Communication in Complex Strategic Games**  
Jessica Mankewitz, Veronica Boyce, Brandon Waldon, Georgia Loukatou, Dhara Yu, **Jesse Mu**, Noah Goodman, and Michael Frank. In *NeurIPS Meaning in Context (MiC) Workshop*
- 2021 **Emergent Communication of Generalizations**  
**Jesse Mu** and Noah Goodman. In *Advances in Neural Information Processing Systems (NeurIPS) (previously NAACL 2021 Workshop on Visually Grounded Interaction and Language)*
- 2021 **Calibrate Your Listeners! Robust Communication-based Training for Pragmatic Speakers**  
Rose E. Wang, Julia White, **Jesse Mu**, and Noah Goodman. In *Findings of the 2021 Conference on Empirical Methods in Natural Language Processing (EMNLP)*
- 2020 **Compositional Explanations of Neurons**  
**Jesse Mu** and Jacob Andreas. In *Advances in Neural Information Processing Systems (NeurIPS) [oral (top 1.1%)]*
- 2020 **Learning to Refer Informatively by Amortizing Pragmatic Reasoning**  
Julia White, **Jesse Mu**, and Noah Goodman. In *Proceedings of the 42nd Annual Meeting of the Cognitive Science Society (CogSci)*
- 2020 **Shaping Visual Representations with Language for Few-shot Classification**  
**Jesse Mu**, Percy Liang, and Noah Goodman. In *Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics (ACL) (previously NeurIPS 2019 Workshop on Visually Grounded Interaction and Language)*
- 2019 **Learning Outside the Box: Discourse-level Features Improve Metaphor Identification**  
**Jesse Mu**, Helen Yannakoudakis, and Ekaterina Shutova. In *Proceedings of the 2019 North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL)*
- 2019 **Do we need natural language? Exploring “restricted” language interfaces for complex domains**  
**Jesse Mu** and Advait Sarkar. In *CHI '19 Extended Abstracts on Human Factors in Computing Systems*
- 2019 **The meta-science of adult statistical word segmentation: Part 1**  
Joshua K. Hartshorne, Lauren Skorb, Sven L. Dietz, Caitlin R. Garcia, Gina L. Iozzo, Katie E. Lamirato, James R. Ledoux, **Jesse Mu**, Kara N. Murdock, Jon Ravid, Alyssa A. Savery, James E. Spizzirro, Kelsey A. Trimm, Kendall D. van Horne, and Juliani Vidal. *Collabra* 5(1):1

- 2017 **Evaluating hierarchies of verb argument structure with hierarchical clustering**  
 Jesse Mu, Joshua K. Hartshorne, and Timothy J. O'Donnell. In *Proceedings of the 2017 Conference on Empirical Methods in Natural Language Processing (EMNLP)*
- 2017 **Parkinson's disease subtypes identified from cluster analysis of motor and non-motor symptoms**  
 Jesse Mu, Kallol Ray Chaudhuri, Concha Bielza, Jesús de Pedro Cuesta, Pedro Larrañaga, and Pablo Martinez-Martin. *Frontiers in Aging Neuroscience* 9:301

## Honors and awards

- 2021 Open Philanthropy AI Fellowship  
 2018 Finch Family Fellowship, Stanford School of Engineering  
 2018 NSF Graduate Research Fellowship  
 2017 John J. Neuhauser Award in Computer Science, Boston College  
 2017 Thomas I. Gasson, S.J. Award, Boston College  
 2017 Phi Beta Kappa  
 2017 Churchill Scholarship  
 2016 Barry M. Goldwater Scholarship  
 2013 Gabelli Presidential Scholarship, Boston College

## Teaching

- 2023 Teaching Assistant, CS 224n Natural Language Processing with Deep Learning, Stanford  
 2022 Teaching Assistant, CS 221 Artificial Intelligence: Principles and Techniques, Stanford  
 2020 Guest Lecturer, Structure and Interpretation of Deep Networks, MIT IAP  
 2014–2016 Teaching Assistant, Computer Science I, Boston College

## Leadership and service

- 2020–2021 Organizer, Stanford NLP Seminar  
 2014–2017 Co-president, Boston College Computer Science Society

### Reviewing

- 2023 ICLR, TMLR (**expert reviewer**), ACL, NeurIPS  
 2022 ICLR (**highlighted reviewer**), ICML (**outstanding reviewer**), TMLR, ACL Learning with Natural Language Supervision (LNLS) Workshop, NeurIPS Language and Reinforcement Learning (LaReL) Workshop, NeurIPS Workshop on Interactive Learning for Natural Language Processing (InterNLP)  
 2021 NAACL, ACL, EMNLP, NeurIPS (**outstanding reviewer**), NeurIPS Meaning in Context Workshop