

# Daniel Fried

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| CONTACT<br>INFORMATION | dfried@cs.cmu.edu<br>dpfried.github.io   |                |
| POSITIONS              | <b>Assistant Professor</b> , Carnegie Mellon University<br>Language Technologies Institute, School of Computer Science   | 2022 – present |
|                        | <b>Research Scientist</b> , Meta<br>Currently 20% time   | 2024 – present |
|                        | <b>Research Consultant</b> , GitHub Next<br>20% time   | 2023 – 2024    |
| EDUCATION              | <b>UC Berkeley</b><br>Ph.D. in Computer Science<br><i>Adviser</i> : Dan Klein<br><i>Thesis</i> : Learning Grounded Pragmatic Communication   | 2015 – 2021    |
|                        | <b>University of Cambridge</b> , Churchill College<br>M.Phil. in Computer Science, <i>with distinction</i><br><i>Adviser</i> : Stephen Clark<br><i>Thesis</i> : Low Rank Tensor Approximations for Compositional Distributional Semantics                  | 2014 – 2015    |
|                        | <b>University of Arizona</b><br>B.S. in Computer Science, Mathematics, and Information Science, <i>summa cum laude</i><br><i>Thesis Adviser</i> : Mihai Surdeanu<br><i>Thesis</i> : Predicting Community Traits Using the Language of Food on Social Media | 2010 – 2014    |
| FORMER<br>POSITIONS    | <b>Postdoc</b> , University of Washington<br><i>Host</i> : Luke Zettlemoyer  | 2021 – 2022    |
|                        | <b>Visiting Researcher</b> , Facebook AI Research<br><i>Host</i> : Mike Lewis  | 2021 – 2022    |
|                        | <b>Research Intern</b> , Google DeepMind<br><i>Hosts</i> : Aida Nematzadeh, Stephen Clark, Chris Dyer<br><i>Project</i> : Structured models for language-conditioned video segmentation  | Summer 2019    |
|                        | <b>Research Intern</b> , Microsoft Research<br><i>Hosts</i> : Hoifung Poon, Chris Quirk, Kristina Toutanova, Scott Wen-Tau Yih<br><i>Project</i> : Learning to rank for personalized medicine  | Summer 2016    |
|                        | <b>Undergraduate Research Assistant</b> , University of Arizona<br><i>Advisers</i> : Mihai Surdeanu, Stephen Kobourov, Paul R. Cohen<br><i>Areas</i> : Question answering, language grounding, data visualization  | 2012 – 2014    |
|                        | <b>Research Intern</b> , Nara Institute of Science and Technology<br><i>Host</i> : Kevin Duh<br><i>Project</i> : Incorporating relational semantics in word embeddings   | Fall 2013      |
|                        | <b>Research Intern</b> , RWTH Aachen University<br><i>Hosts</i> : Ali Jannesari, Zhen Li<br><i>Project</i> : Supervised learning for automatic code parallelization  | Summer 2013    |
|                        | <b>Engineering Intern</b> , Microsoft<br><i>Project</i> : Data warehousing, analytics, and visualization for Xbox Live   | Summer 2012    |

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| HONORS &<br>AWARDS | Okawa Research Award  | 2023                   |
|                    | Google Ph.D. Fellowship in Natural Language Processing                | 2019 – 2021            |
|                    | Outstanding Graduate Student Instructor, UC Berkeley                  | 2018                   |
|                    | Outstanding Reviewer, ACL   | 2018, 2020, 2021, 2022 |
|                    | Outstanding Reviewer, NeurIPS   | 2019                   |
|                    | Best M.Phil. Student Award, Cambridge Computer Laboratory             | 2015                   |
|                    | Churchill Scholarship   | 2014 – 2015            |
|                    | NDSEG Fellowship  | 2014                   |
|                    | Finalist, Hertz Graduate Fellowship                                   | 2014                   |
|                    | Outstanding Senior Award in Research, U. Arizona College of Science   | 2014                   |
|                    | Outstanding Senior Award in Academics, U. Arizona Computer Science    | 2014                   |
|                    | Outstanding Senior Award in Academics, U. Arizona Information Science | 2014                   |
|                    | Barry M. Goldwater Scholarship  | 2013                   |
|                    | National Merit Scholar  | 2010 – 2014            |
|                    | Flinn Scholarship, Flinn Foundation of Arizona                        | 2010 – 2014            |
|                    | Presidential Scholar, U.S. Department of Education                    | 2010                   |

## JOURNAL PUBLICATIONS

- Tree Search for Language Model Agents**  
Jing Yu Koh, Stephen McAleer, Daniel Fried, and Ruslan Salakhutdinov  
*Transactions on Machine Learning Research (TMLR)*, 2025
- StarCoder: May the Source Be With You!**  
Raymond Li et al. (68 authors from the BigCode Project)  
*Transactions on Machine Learning Research (TMLR)*, 2023
- Human-Level Play in the Game of Diplomacy by Combining Language Models with Strategic Reasoning**  
FAIR Diplomacy Team  
*Science*, 2022
- Syntactic Structure Distillation Pretraining for Bidirectional Encoders**  
Adhiguna Kuncoro\*, Lingpeng Kong\*, Daniel Fried\*, Dani Yogatama, Laura Rimell, Chris Dyer, and Phil Blunsom  
*Transactions of the Association for Computational Linguistics (TACL)*, 2020
- Higher-Order Lexical Semantic Models for Non-Factoid Answer Reranking**  
Daniel Fried, Peter Jansen, Gustave Hahn-Powell, Mihai Surdeanu, and Peter Clark  
*Transactions of the Association for Computational Linguistics (TACL)*, 2015

## CONFERENCE PUBLICATIONS

- SWE-RL: Advancing LLM Reasoning via Reinforcement Learning on Open Software Evolution**  
Yuxiang Wei, Olivier Duchenne, Jade Copet, Quentin Carbonneaux, Lingming Zhang, Daniel Fried, Gabriel Synnaeve, Rishabh Singh, and Sida I. Wang  
*Neural Information Processing Systems (NeurIPS)*, 2025
- Identifying and Interactively Refining Ambiguous User Goals for Data Visualization Code Generation**  
Mert Inan, Anthony Sicilia, Alex Xie, Saujas Vaduguru, Daniel Fried, and Malihe Alikhani  
*Empirical Methods in Natural Language Processing (EMNLP)*, 2025
- Rewarding the Unlikely: Lifting GRPO Beyond Distribution Sharpening**  
Andre He, Daniel Fried, and Sean Welleck  
*Empirical Methods in Natural Language Processing (EMNLP)*, 2025
- mrCAD: Multimodal Refinement of Computer-aided Designs**  
William P. McCarthy, Saujas Vaduguru, Karl D. D. Willis, Justin Matejka, Judith E. Fan, Daniel Fried, and Yewen Pu  
*Findings of EMNLP*, 2025

10. **Inducing Programmatic Skills for Agentic Tasks**  
Zora Zhiruo Wang, Apurva Gandhi, Graham Neubig, [Daniel Fried](#)  
*Conference on Language Modeling (COLM)*, 2025
11. **RepoST: Scalable Repository-Level Coding Environment Construction with Sandbox Testing**  
Yiqing Xie, Alex Xie, Divyanshu Sheth, Pengfei Liu, [Daniel Fried](#), Carolyn Rose  
*Conference on Language Modeling (COLM)*, 2025
12. **Improving Model Factuality with Fine-grained Critique-based Evaluator**  
Yiqing Xie, Wenxuan Zhou, Pradyot Prakash, Di Jin, Yuning Mao, Quintin Fettes, Arya Talebzadeh, Sinong Wang, Han Fang, Carolyn Rose, [Daniel Fried](#), and Hejia Zhang  
*Annual Meeting of the Association for Computational Linguistics (ACL)*, 2025
13. **Agent Workflow Memory**  
Zora Zhiruo Wang, Jiayuan Mao, [Daniel Fried](#), and Graham Neubig  
*ICML*, 2025
14. **Dynamic Coalition Structure Detection in Natural Language-based Interactions**  
Abhishek N. Kulkarni\*, Andy Liu\*, Jean-Raphael Gaglione, [Daniel Fried](#), and Ufuk Topcu  
*International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, 2025
15. **AutoPresent: Designing Structured Visuals from Scratch**  
Jiaxin Ge\*, Zora Zhiruo Wang\*, Xuhui Zhou, Yi-Hao Peng, Sanjay Subramanian, Qinyue Tan, Maarten Sap, Alane Suhr\*\*, [Daniel Fried](#)\*\*, Graham Neubig\*\*, and Trevor Darrell\*\*  
*Conference on Computer Vision and Pattern Recognition (CVPR)*, 2025
16. **CRScore: Grounding Automated Evaluation of Code Review Comments in Code Claims and Smells**  
Atharva Naik, Marcus Alenius, [Daniel Fried](#), and Carolyn Rose  
*North American Chapter of the Association for Computational Linguistics (NAACL)*, 2025
17. **CodeRAG-Bench: Can Retrieval Augment Code Generation?**  
Zora Zhiruo Wang\*, Akari Asai\*, Xinyan Velocity Yu, Frank F. Xu, Yiqing Xie, Graham Neubig, and [Daniel Fried](#)  
*Findings of NAACL*, 2025
18. **BigCodeBench: Benchmarking Code Generation with Diverse Function Calls and Complex Instructions**  
Terry Yue Zhuo et al. (33 authors from the BigCode project)  
*International Conference on Learning Representations (ICLR)*, 2025
19. **Human-Aligned Chess with a Bit of Search**  
Yiming Zhang, Athul Paul Jacob, Vivian Lai, [Daniel Fried](#), and Daphne Ippolito  
*International Conference on Learning Representations (ICLR)*, 2025
20. **Repetition Improves Language Model Embeddings**  
Jacob Mitchell Springer, Suhas Kotha, [Daniel Fried](#), Graham Neubig, and Aditi Raghunathan  
*International Conference on Learning Representations (ICLR)*, 2025
21. **Dissecting Adversarial Robustness of Multimodal LM Agents**  
Chen Henry Wu, Rishi Shah, Jing Yu Koh, Ruslan Salakhutdinov, [Daniel Fried](#), and Aditi Raghunathan  
*International Conference on Learning Representations (ICLR)*, 2025
22. **Comparative Knowledge Distillation**  
Alex Tianyi Xu\*, Alex Wilf\*, Paul Pu Liang, Alexander Obolenskiy, [Daniel Fried](#), and Louis-Philippe Morency  
*Winter Conference on Applications of Computer Vision (WACV)*, 2024
23. **ECCO: Can We Improve Model-Generated Code Efficiency Without Sacrificing Functional Correctness?**  
Siddhant Waghjale\*, Vishruth Veerendranath\*, Zora Zhiruo Wang, and [Daniel Fried](#)  
*Empirical Methods in Natural Language Processing (EMNLP)*, 2024
24. **What Are Tools Anyway? A Survey from the Language Model Perspective**  
Zora Zhiruo Wang, Zhoujun Cheng, Hao Zhu, [Daniel Fried](#), and Graham Neubig  
*Conference on Language Modeling (COLM)*, 2024

25. **Human-Agent Cooperation in Games under Incomplete Information through Natural Language Communication**  
Shenghui Chen, [Daniel Fried](#), and Ufuk Topcu  
*International Joint Conference on Artificial Intelligence (IJCAI)*, 2024
26. **Evaluating Large Language Model Biases in Person-Steered Generation**  
Andy Liu, Mona T. Diab, and [Daniel Fried](#)  
*Findings of ACL*, 2024
27. **Is the Pope Catholic? Yes, the Pope is Catholic. Generative Evaluation of Intent Resolution in LLMs**  
Akhila Yerukola, Saujas Vaduguru, [Daniel Fried](#), and Maarten Sap  
*Annual Meeting of the Association for Computational Linguistics (ACL)*, 2024
28. **VisualWebArena: Evaluating Multimodal Agents on Realistic Visual Web Tasks**  
Jing Yu Koh, Robert Lo\*, Lawrence Jang\*, Vikram Duvvur\*, Ming Chong Lim\*, Po-Yu Huang\*, Graham Neubig, Shuyan Zhou, Ruslan Salakhutdinov, and [Daniel Fried](#)  
*Annual Meeting of the Association for Computational Linguistics (ACL)*, 2024
29. **TroVE: Inducing Verifiable and Efficient Toolboxes for Solving Programmatic Tasks**  
Zhiruo Wang, Graham Neubig, and [Daniel Fried](#)  
*International Conference on Machine Learning (ICML)*, 2024
30. **Amortizing Pragmatic Program Synthesis with Rankings**  
Yewen Pu, Saujas Vaduguru, Priyan Vaithilingam, Elena Glassman, and [Daniel Fried](#)  
*International Conference on Machine Learning (ICML)*, 2024
31. **Asking More Informative Questions for Grounded Retrieval**  
Sedrick Keh, Justin T. Chiu, and [Daniel Fried](#)  
*Findings of NAACL*, 2024
32. **Generating Pragmatic Examples to Train Neural Program Synthesizers**  
Saujas Vaduguru, [Daniel Fried](#), and Yewen Pu  
*International Conference on Learning Representations (ICLR)*, 2024
33. **Sotopia: Interactive Evaluation for Social Intelligence in Language Agents**  
Xuhui Zhou\*, Hao Zhu\*, Leena Mathur, Ruohong Zhang, Haoifei Yu, Zhengyang Qi, Louis-Philippe Morency, Yonatan Bisk, [Daniel Fried](#), Graham Neubig, and Maarten Sap  
*International Conference on Learning Representations (ICLR)*, 2024
34. **WebArena: A Realistic Web Environment for Building Autonomous Agents**  
Shuyan Zhou\*, Frank Xu\*, Hao Zhu\*\*, Xuhui Zhou\*\*, Robert Lo\*\*, Abishek Sridhar\*\*, Xianyi Cheng, Yonatan Bisk, [Daniel Fried](#), Uri Alon, and Graham Neubig  
*International Conference on Learning Representations (ICLR)*, 2024
35. **API-Assisted Code Generation for Question Answering on Varied Table Structures**  
Yihan Cao\*, Shuyi Chen\*, Ryan Liu\*, Zhiruo Wang, and [Daniel Fried](#)  
*Empirical Methods in Natural Language Processing (EMNLP)*, 2023
36. **Symbolic Planning and Code Generation for Grounded Dialogue**  
Justin Chiu, Wenting Zhao, Derek Chen, Saujas Vaduguru, Alexander Rush, and [Daniel Fried](#)  
*Empirical Methods in Natural Language Processing (EMNLP)*, 2023
37. **Pragmatics in Language Grounding: Phenomena, Tasks, and Modeling Approaches**  
[Daniel Fried\\*](#), Nicholas Tomlin\*, Jennifer Hu, Roma Patel, and Aida Nematzadeh  
*Findings of EMNLP*, 2023
38. **Execution-Based Evaluation for Open-Domain Code Generation**  
Zhiruo Wang, Shuyan Zhou, [Daniel Fried](#), and Graham Neubig  
*Findings of EMNLP*, 2023
39. **Data Augmentation for Code Translation with Comparable Corpora and Multiple References**  
Yiqing Xie, Atharva Naik, [Daniel Fried](#), Carolyn Rose  
*Findings of EMNLP*, 2023

40. **AutoReply: Detecting Nonsense in Dialogue Introspectively with Discriminative Replies**  
 Weiyan Shi, Emily Dinan, Adi Renduchintala, Daniel Fried, Athul Paul Jacob, Zhou Yu, and Mike Lewis  
*Findings of EMNLP*, 2023
41. **Generating Images with Multimodal Language Models**  
 Jing Yu Koh, Daniel Fried, and Ruslan Salakhutdinov  
*Neural Information Processing Systems (NeurIPS)*, 2023
42. **Pragmatic Inference with a CLIP Listener for Contrastive Captioning**  
 Jiefu Ou, Benno Krojer, and Daniel Fried  
*Findings of ACL*, 2023
43. **Contrastive Decoding: Open-ended Text Generation as Optimization**  
 Xiang Lisa Li, Ari Holtzman, Daniel Fried, Percy Liang, Jason Eisner, Tatsunori Hashimoto, Luke Zettlemoyer, and Mike Lewis  
*Annual Meeting of the Association for Computational Linguistics (ACL)*, 2023
44. **Grounding Language Models to Images for Multimodal Inputs and Outputs**  
 Jing Yu Koh, Ruslan Salakhutdinov, and Daniel Fried  
*International Conference on Machine Learning (ICML)*, 2023
45. **Coder Reviewer Reranking for Code Generation**  
 Tianyi Zhang, Tao Yu, Tatsunori B. Hashimoto, Mike Lewis, Wen-tau Yih, Daniel Fried, and Sida I. Wang  
*International Conference on Machine Learning (ICML)*, 2023
46. **DS-1000: A Natural and Reliable Benchmark for Data Science Code Generation**  
 Yuhang Lai\*, Chengxi Li\*, Yiming Wang\*, Tianyi Zhang\*, Ruiqi Zhong\*, Luke Zettlemoyer, Scott Wen-tau Yih, Daniel Fried, Sida I. Wang, and Tao Yu  
*International Conference on Machine Learning (ICML)*, 2023
47. **InCoder: A Generative Model for Code Infilling and Synthesis**  
Daniel Fried\*, Armen Aghajanyan\*, Jessy Lin, Sida I. Wang, Eric Wallace, Freda Shi, Ruiqi Zhong, Wen-tau Yih, Luke Zettlemoyer, and Mike Lewis  
*International Conference on Learning Representations (ICLR)*, 2023
48. **Natural Language to Code Translation with Execution**  
 Freda Shi, Daniel Fried, Marjan Ghazvininejad, Luke Zettlemoyer, and Sida I. Wang  
*Empirical Methods in Natural Language Processing (EMNLP)*, 2022
49. **Neural Theory-of-Mind? On the Limits of Social Intelligence in Large LMs**  
 Maarten Sap, Ronan Le Bras, Daniel Fried, and Yejin Choi  
*Empirical Methods in Natural Language Processing (EMNLP)*, 2022
50. **G3: Geolocation via Guidebook Grounding**  
 Grace Luo\*, Giscard Biamby\*, Trevor Darrell, Daniel Fried, and Anna Rohrbach  
*Findings of EMNLP*, 2022
51. **Inferring Rewards from Language in Context**  
 Jessy Lin, Daniel Fried, Dan Klein, and Anca Dragan  
*Annual Meeting of the Association for Computational Linguistics (ACL)*, 2022
52. **Reference-Centric Models for Grounded Collaborative Dialogue**  
Daniel Fried, Justin Chiu, and Dan Klein  
*Empirical Methods in Natural Language Processing (EMNLP)*, 2021
53. **Modular Networks for Compositional Instruction Following**  
 Rodolfo Corona, Daniel Fried, Coline Devin, Dan Klein, and Trevor Darrell  
*North American Chapter of the Association for Computational Linguistics (NAACL)*, 2021
54. **Learning to Segment Actions from Observation and Narration**  
Daniel Fried, Jean-Baptiste Alayrac, Phil Blunsom, Chris Dyer, Stephen Clark, Aida Nematzadeh  
*Annual Meeting of the Association for Computational Linguistics (ACL)*, 2020

55. **Cross-Domain Generalization of Neural Constituency Parsers**  
Daniel Fried\*, Nikita Kitaev\*, and Dan Klein  
*Annual Meeting of the Association for Computational Linguistics (ACL)*, 2019
56. **Are You Looking? Grounding to Multiple Modalities in Vision-and-Language Navigation**  
 Ronghang Hu, Daniel Fried, Anna Rohrbach, Dan Klein, Trevor Darrell, and Kate Saenko  
*Annual Meeting of the Association for Computational Linguistics (ACL)*, 2019
57. **Pragmatically Informative Text Generation**  
 Sheng Shen, Daniel Fried, Jacob Andreas, and Dan Klein  
*North American Chapter of the Association for Computational Linguistics (NAACL)*, 2019
58. **Speaker-Follower Models for Vision-and-Language Navigation**  
Daniel Fried\*, Ronghang Hu\*, Volkan Cirik\*, Anna Rohrbach, Jacob Andreas, Louis-Philippe Morency, Taylor Berg-Kirkpatrick, Kate Saenko, Dan Klein\*\*, and Trevor Darrell\*\*  
*Neural Information Processing Systems (NeurIPS)*, 2018
59. **Policy Gradient as a Proxy for Dynamic Oracles in Constituency Parsing**  
Daniel Fried and Dan Klein  
*Annual Meeting of the Association for Computational Linguistics (ACL)*, 2018
60. **Unified Pragmatic Models for Generating and Following Instructions**  
Daniel Fried, Jacob Andreas, and Dan Klein  
*North American Chapter of the Association for Computational Linguistics (NAACL)*, 2018
61. **Effective Inference for Generative Neural Parsing**  
 Mitchell Stern, Daniel Fried, and Dan Klein  
*Empirical Methods in Natural Language Processing (EMNLP)*, 2017
62. **Improving Neural Parsing by Disentangling Model Combination and Reranking Effects**  
Daniel Fried\*, Mitchell Stern\*, and Dan Klein  
*Annual Meeting of the Association for Computational Linguistics (ACL)*, 2017
63. **Towards Using Social Media to Identify Individuals at Risk for Preventable Chronic Illness**  
 Dane Bell, Daniel Fried, Luwen Huangfu, Mihai Surdeanu, and Stephen Kobourov  
*Language Resources and Evaluation Conference (LREC)*, 2016
64. **Low-Rank Tensors for Verbs in Compositional Distributional Semantics**  
Daniel Fried, Tamara Polajnar, and Stephen Clark  
*Annual Meeting of the Association for Computational Linguistics (ACL)*, 2015
65. **Analyzing the Language of Food on Social Media**  
Daniel Fried, Mihai Surdeanu, Stephen Kobourov, Melanie Hingle, and Dane Bell  
*International Conference on Big Data*, 2014
66. **Maps of Computer Science**  
Daniel Fried and Stephen Kobourov  
*Pacific Visualization Symposium (PacificVis)*, 2014
67. **Predicting Parallelization of Sequential Programs Using Supervised Learning**  
Daniel Fried, Zhen Li, Ali Jannesari, and Felix Wolf  
*International Conference on Machine Learning and Applications*, 2013
68. **A Generative Probabilistic Framework for Learning Spatial Language**  
 Colin Dawson, Jeremy Wright, Antons Rebguns, Marco Valenzuela Escarcega, Daniel Fried, and Paul Cohen  
*International Conference on Development and Learning*, 2013. **Best Paper Award**
69. **Bayesian Geometric Modeling of Indoor Scenes**  
 Luca Del Pero, Joshua Bowdish, Daniel Fried, Bonnie Kermgard, Emily Hartley, and Kobus Barnard  
*Conference on Computer Vision and Pattern Recognition (CVPR)*, 2012

#### WORKSHOP PUBLICATIONS

70. **SantaCoder: Don't Reach for the Stars**  
 Loubna Ben Allal\*, Raymond Li\*, Denis Kocetkov\*, et al. (41 authors from the BigCode Project)  
*Deep Learning for Code Workshop*, 2023. **Best Paper Award**

71. **Modeling Perspective-Dependent Ambiguity in Grounded Collaborative Dialogue**  
Justin Chiu, Wenting Zhao, Alexander M. Rush, and Daniel Fried  
*Wordplay: When Language Meets Games Workshop*, 2022
72. **Interactive Assignments for Teaching Structured Neural NLP**  
David Gaddy, Daniel Fried, Nikita Kitaev, Mitchell Stern, Rodolfo Corona, John DeNero, and Dan Klein  
*Teaching NLP Workshop at NAACL*, 2021
73. **Challenges for Using Social Media for Early Detection of Type II Diabetes Mellitus**  
Dane Bell, Daniel Fried, Luwen Huangfu, Mihai Surdeanu, and Stephen Kobourov  
*International Workshop on Social Media World Sensors*, 2016
74. **Learning Low-Rank Tensors for Transitive Verbs**  
Daniel Fried, Tamara Polajnar, and Stephen Clark  
*Advances in Distributional Semantics Workshop*, 2015
75. **Incorporating both Distributional and Relational Semantics in Word Representations**  
Daniel Fried and Kevin Duh  
*International Conference on Learning Representations (ICLR) Workshop*, 2015

#### PREPRINTS

76. **Analyzing Information Sharing and Coordination in Multi-Agent Planning**  
Tianyue Ou, Saujas Vaduguru, Daniel Fried  
*arXiv*, 2025
77. **MetaLint: Generalizable Idiomatic Code Quality Analysis through Instruction-Following and Easy-to-Hard Generalization**  
Atharva Naik, Lawanya Baghel, Dhakshin Govindarajan, Darsh Agrawal, Daniel Fried, Carolyn Rose  
*arXiv*, 2025
78. **From Reproduction to Replication: Evaluating Research Agents with Progressive Code Masking**  
Gyeongwon James Kim, Alex Wilf, Louis-Philippe Morency, Daniel Fried  
*arXiv*, 2025
79. **CodeBenchGen: Creating Scalable Execution-based Code Generation Benchmarks**  
Yiqing Xie, Alex Xie, Divyanshu Sheth, Pengfei Liu, Daniel Fried, and Carolyn Rose  
*arXiv*, 2024

\*, \*\*: equal contribution

#### STUDENTS

PhD thesis advisor:

- Andre He (with Sean Welleck)
- Jing Yu (JY) Koh (with Ruslan Salakhutdinov)
- Andy Liu (with Mona Diab)
- Saujas Vaduguru
- Zhiruo (Zora) Wang (with Graham Neubig)

MLT thesis advisor:

- Alex Xie (with Matt Gormley and Vincent Hellendoorn)

PhD committee member:

- Shuyan Zhou
- Aman Madaan
- Ta-Chung Chi
- Nikitha Rao
- Frank Xu
- Ritam Dutt

- Ruohong Zhang
- So Yeon (Tiffany) Min
- Anthony Sicilia (Northeastern)
- Kush Jain
- Brendon Boldt
- Nicholas Tomlin (UC Berkeley)
- Sanjay Subramanian (UC Berkeley)
- Liangke Gui
- Xing Han Liu (McGill)
- Xuhui Zhou
- Yuxiang Wei (UIUC)

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| TEACHING      | <p><b>Instructor: 11-891, Neural Code Generation</b>, CMU, 2024 – present</p> <p><b>Instructor: 11-777, Multimodal Machine Learning</b>, CMU, 2023 – present</p> <p><b>Instructor: 11-877, Advanced Multimodal Machine Learning</b>, CMU, Spring 2024</p> <p><b>Instructor: 11-711, Advanced NLP</b>, CMU, Fall 2023</p> <p><b>Instructor: CS188, Artificial Intelligence</b>, UC Berkeley, Summer 2018</p> <p><b>Teaching Assistant: CS188, Artificial Intelligence</b>, UC Berkeley, Fall 2017</p> <p><b>Teaching Assistant: CS245, Intro to Discrete Structures</b>, University of Arizona, Spring 2012</p> <p><b>Teaching Assistant: ISTA100, Great Ideas of the Information Age</b>, University of Arizona, Fall 2011</p> <p><b>Project Design: CS288, Natural Language Processing</b>, UC Berkeley, Spring 2020</p>   |
| INVITED TALKS | <p><i>Abstractions of Agent Actions</i>. IVADO Workshop on the Safety and Capabilities of Agents 2025.</p> <p><i>Improving NLP Systems with Speaker Listener Games</i>. Pragmatic Reasoning in Language Models Workshop, COLM 2025.</p> <p><i>Code Generation With and For Agents</i>. IVADO Bootcamp Focusing the State of Agents 2025.</p> <p><i>Improving NLP Systems with Speaker Listener Games</i>. <b>Keynote Address</b>, Society for Computation in Linguistics (SCiL) 2025.</p> <p><i>Inducing Functions to Improve LLM Agents</i>. Deep Learning For Code Workshop, ICLR 2025; REALM Workshop, ACL 2025.</p> <p><i>Planning and Inferring with LLMs for Grounded, Interactive Tasks</i>. Forum for Artificial Intelligence, UT Austin. Fall 2024</p> <p><i>Benchmarks and Tree Search for Multimodal LLM Agents</i>. SpLU-RoboNLP Workshop, ACL 2024. Summer 2024</p> <p><i>Interacting with LLMs for Grounded Tasks</i>. NILLI Workshop, EMNLP 2023. Spring 2023</p> <p><i>Interacting with (code) LLMs</i>. MIT Neurosymbolic Reading Group. Spring 2023</p> <p><i>InCoder, SantaCoder, and StarCoder: Findings from Training Open-Source Code LLMs</i>. Bloomberg AI; GitHub Next. Spring 2023</p> <p><i>Using Language Strategically in Context</i>. CoRL Workshop on Strategic Multi-Agent Interactions, 2022; Johns Hopkins University, University of Pennsylvania, UT Austin. Spring 2023</p> <p><i>Contextual Communication in Programming</i>. LTI Future of Code Generation Seminar, 2022</p> <p><i>Reasoning About Actions and Rewards in Language Interactions</i>. MIT CPL, 2022. (with Jessy Lin)</p> <p><i>Modularity in Grounded Interaction</i>. ViGIL Workshop, NAACL 2021. (with Rudy Corona)</p> |



*Learning Grounded Pragmatic Communication.* University of Arizona, TTI-Chicago, University of Southern California, Purdue, Carnegie Mellon University, UC Irvine, Université de Montréal/Mila, Allen Institute for Artificial Intelligence, Facebook AI Research, Google Research, Stanford Cognition and Language Workshop. Spring 2021

*Pragmatic Models for Generating and Following Grounded Instructions.* Stanford NLP Seminar, University of Arizona, USC ISI. Fall 2018–Spring 2019

**ACADEMIC  
SERVICE**

**Workshop co-organizer:** Workshop on Large Language Models for Agents, ICLR 2024

**Workshop co-organizer:** 3rd UnImplicit Workshop, EACL 2024

**Workshop co-organizer:** 2nd UnImplicit Workshop, NAACL 2022

**Workshop co-organizer:** 2nd Advances in Language and Vision Workshop, NAACL 2021

**Workshop advisory board:** Theory of Mind in Communicating Agents, ICML 2023

**Outstanding reviewer awards:** ACL 2018, NeurIPS 2019, ACL 2020, ACL 2021, ACL 2022

**Senior area chair:** ACL 2024

**Area chair:** EMNLP 2022–2024, ACL 2023, ACL Rolling Review 2024–present

**Ethics chair:** NAACL 2024

**Action Editor:** TACL 2025–present

**Reviewing:** TACL 2022–2025; ACL Rolling Review 2021–2024; ACL 2018–2022; EMNLP 2016–2021; NAACL 2019, 2021; AACL-IJCNLP 2020; EACL 2017, 2021; NeurIPS 2019–2023; ICML 2019, 2023; ICLR 2021–2023; AKBC 2021; COLING 2018; \*SEM 2016–2018; NAACL-SRW 2016, 2018; ACL-SRW 2020; IJCAI 2016; SpLU-RoboNLP 2019, 2021; NeuralGen 2019; ViGIL 2019, 2021; DeepLo 2019; ALVR 2020, 2021; LaReL 2020; Cooperative AI 2021; Meaning in Context 2021