

Daniel Fried

CONTACT INFORMATION	dfried@cs.cmu.edu dpfried.github.io	
POSITIONS	Assistant Professor , Carnegie Mellon University Language Technologies Institute, School of Computer Science	2022 – present
EDUCATION	UC Berkeley Ph.D. in Computer Science <i>Adviser</i> : Dan Klein <i>Thesis</i> : Learning Grounded Pragmatic Communication	2015 – 2021
	University of Cambridge , Churchill College M.Phil. in Computer Science, <i>with distinction</i> <i>Adviser</i> : Stephen Clark <i>Thesis</i> : Low Rank Tensor Approximations for Compositional Distributional Semantics	2014 – 2015
	University of Arizona B.S. in Computer Science, Mathematics, and Information Science, <i>summa cum laude</i> <i>Thesis Adviser</i> : Mihai Surdeanu <i>Thesis</i> : Predicting Community Traits Using the Language of Food on Social Media	2010 – 2014
FORMER POSITIONS	Postdoc , University of Washington <i>Host</i> : Luke Zettlemoyer	2021 – 2022
	Visiting Researcher , Facebook AI Research <i>Host</i> : Mike Lewis	2021 – 2022
	Research Intern , Google DeepMind <i>Hosts</i> : Aida Nematzadeh, Stephen Clark, Chris Dyer <i>Project</i> : Structured models for language-conditioned video segmentation	Summer 2019
	Research Intern , Microsoft Research <i>Hosts</i> : Hoifung Poon, Chris Quirk, Kristina Toutanova, Scott Wen-Tau Yih <i>Project</i> : Learning to rank for personalized medicine	Summer 2016
	Undergraduate Research Assistant , University of Arizona <i>Advisers</i> : Mihai Surdeanu, Stephen Kobourov, Paul R. Cohen <i>Areas</i> : Question answering, language grounding, data visualization	2012 – 2014
	Research Intern , Nara Institute of Science and Technology <i>Host</i> : Kevin Duh <i>Project</i> : Incorporating relational semantics in word embeddings	Fall 2013
	Research Intern , RWTH Aachen University <i>Hosts</i> : Ali Jannesari, Zhen Li <i>Project</i> : Supervised learning for automatic code parallelization	Summer 2013
	Engineering Intern , Microsoft <i>Project</i> : Data warehousing, analytics, and visualization for Xbox Live	Summer 2012
HONORS & AWARDS	Google Ph.D. Fellowship in Natural Language Processing Outstanding Graduate Student Instructor, UC Berkeley Outstanding Reviewer, ACL Outstanding Reviewer, NeurIPS Tencent AI Lab Fellowship Huawei & Berkeley AI Fellowship Best M.Phil. Student Award, Cambridge Computer Laboratory Churchill Scholarship NDSEG Fellowship Finalist, Hertz Graduate Fellowship	2019 – 2021 2018 2018, 2020, 2021, 2022 2019 2018 – 2019 2017 – 2018 2015 2014 – 2015 2014 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

PAPERS

28. **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
ICLR, 2023
27. **Human-Level Play in the Game of Diplomacy by Combining Language Models with Strategic Reasoning**
FAIR Diplomacy Team
Science, 2022
26. **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
25. **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
24. **G3: Geolocation via Guidebook Grounding**
Grace Luo*, Giscard Biamby*, Trevor Darrell, Daniel Fried, and Anna Rohrbach
Findings of EMNLP, 2022.
23. **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
22. **Reference-Centric Models for Grounded Collaborative Dialogue**
Daniel Fried, Justin Chiu, and Dan Klein
Empirical Methods in Natural Language Processing (EMNLP), 2021
21. **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
20. **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
19. **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
18. **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
17. **Cross-Domain Generalization of Neural Constituency Parsers**
Daniel Fried*, Nikita Kitaev*, and Dan Klein
Annual Meeting of the Association for Computational Linguistics (ACL), 2019
16. **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

15. **Pragmatically Informative Text Generation**
Sheng Shen, Daniel Fried, Jacob Andreas, and Dan Klein
North American Chapter of the Association for Computational Linguistics (NAACL), 2019
14. **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
13. **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
12. **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
11. **Effective Inference for Generative Neural Parsing**
Mitchell Stern, Daniel Fried, and Dan Klein
Empirical Methods in Natural Language Processing (EMNLP), 2017
10. **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
9. **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
8. **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
7. **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
6. **Incorporating both Distributional and Relational Semantics in Word Representations**
Daniel Fried and Kevin Duh
International Conference on Learning Representations (ICLR) Workshop, 2015
5. **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
4. **Maps of Computer Science**
Daniel Fried and Stephen Kobourov
Pacific Visualization Symposium (PacificVis), 2014
3. **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
2. **A Generative Probabilistic Framework for Learning Spatial Language**
Colin Dawson, Jeremy Wright, Antons Rebguns, Marco Valenzuela Escárcega, Daniel Fried, and Paul Cohen
International Conference on Development and Learning, 2013. **Best Paper Award**
1. **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

*, **: equal contribution

INVITED TALKS *Using Language Strategically in Context*. CoRL Workshop on Strategic Multi-Agent Interactions, 2022; Johns Hopkins University, 2023.
Contextual Communication in Programming. LTI Future of Code Generation Seminar, 2022
Reasoning About Actions and Rewards in Language Interactions. MIT CPL, 2022. (with Jessie Lin)
Modularity in Grounded Interaction. ViGIL Workshop, NAACL 2021. (with Rudy Corona)
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

TEACHING

Instructor: CS188, Artificial Intelligence, UC Berkeley, Summer 2018

- Co-taught (with Anwar Baroudi) a 160-student upper-division undergraduate introduction to AI.
- Topics: search, games, Markov decision processes, reinforcement learning, graphical models, and machine learning.
- Prepared and delivered lectures; co-managed an 8-person course staff; designed exams; co-supervised redesign of a course project; managed course logistics; held office hours and graded.
- Received UC Berkeley’s Outstanding Graduate Instructor Award.
- *Teaching effectiveness rating*: 6.2 / 7. The department average is 5.9 / 7. Rated in the top 25% of instructors for this course in the last 10 years by teaching effectiveness.

Teaching Assistant: CS188, Artificial Intelligence, UC Berkeley, Fall 2017

- Teaching assistant for a 600-student upper-division undergraduate course.
- Taught a weekly section of students; helped design a machine learning project which has been completed by over 4,000 students at Berkeley in semesters since; helped write course notes, exams, and section problems; held office hours and graded.
- *Teaching effectiveness rating*: 4.6 / 5. The department average is 4.3 / 5.

Teaching Assistant: CS245, Intro to Discrete Structures, University of Arizona, Spring 2012

Teaching Assistant: ISTA100, Great Ideas of the Information Age, University of Arizona, Fall 2011

Guest Lecturer: 11-777, Multimodal Machine Learning, CMU. *Pragmatics in Grounded Language Interactions*, Spring 2022 & Fall 2022

Guest Lecturer: ASE389, Multi-Agent Systems, UT Austin. *Pragmatic Language Games*, Fall 2021

Guest Lecturer: CS288, Natural Language Processing, UC Berkeley. *Grounded Semantics*, Spring 2020 & Spring 2021

Project Design: CS288, Natural Language Processing, UC Berkeley, Spring 2020

SERVICE

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

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

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

Area chair: EMNLP 2022, ACL 2023

Reviewing: TACL 2022–2024; ACL Rolling Review 2021–2022; ACL 2018–2022; EMNLP 2016–2021; NAACL 2019, 2021; AACL-IJCNLP 2020; EACL 2017, 2021; NeurIPS 2019–2022; ICML 2019; ICLR 2021–2022; 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

EECS Peer Advisor, UC Berkeley, 2019–2021

Treasurer, CS Graduate Student Association, UC Berkeley, 2016–2018

EECS Graduate Admissions Committee, UC Berkeley, 2017 & 2019

Student Ambassador, College of Science, University of Arizona, 2011–2014

Vice President, Association for Computing Machinery, University of Arizona, Fall 2011