Nicholas Tomlin

Education

University of California, Berkeley
Ph.D. Student, EECS
Advisor: Dan Klein

Aug 2019 – May 2025 (Expected)

Brown University
B.A. Mathematics and Linguistics
Advisor: Ellie Pavlick

Aug 2015 – May 2019

Awards & Honors

Superalignment Grant, FAR AI ($150K) 2024
Best Paper Award, CVPR Workshop on Multimodal Algorithmic Reasoning 2024
Evergreen Award for Undergraduate Researcher Mentoring, Berkeley EECS 2024
Outstanding Graduate Student Instructor, UC Berkeley 2023
Highest Score American Crossword Puzzle Tournament 2021
NSF Graduate Research Fellowship 2020
Undergraduate Teaching and Research Award, Brown University 2017

Papers

Efficacy of Language Model Self-Play in Non-Zero-Sum Games
Austen Liao*, Nicholas Tomlin*, Dan Klein
Preprint, 2024.

Autonomous Evaluation and Refinement of Digital Agents
Jiayi Pan, Yichi Zhang, Nicholas Tomlin, Yifei Zhou, Sergey Levine, Alane Suhr
COLM, 2024.

Decision-Oriented Dialogue for Human–AI Interaction
Jessy Lin*, Nicholas Tomlin*, Jacob Andreas, Jason Eisner
TAACL, 2024.

Ghostbuster: Detecting Text Ghostwritten by Large Language Models
Vivek Verma, Eve Fleisig, Nicholas Tomlin, Dan Klein
NAACL, 2024.

Revisiting Entropy Rate Constancy in Text
Vivek Verma*, Nicholas Tomlin*, Dan Klein
EMNLP Findings, 2023.

Pragmatics in Grounded Language Learning (Survey Paper)
Daniel Fried*, Nicholas Tomlin*, Jennifer Hu, Roma Patel, Aida Nematzadeh
EMNLP Findings, 2023.

Neural Unsupervised Reconstruction of Protolanguage Word Forms
Andre He, Nicholas Tomlin, Dan Klein
ACL, 2023.

1In April 2021, an early version of the Berkeley Crossword Solver (in conjunction with Dr.Fill) was the first AI system to outscore all human participants at the American Crossword Puzzle Tournament.
Understanding Game-Playing Agents with Natural Language Annotations
Nicholas Tomlin, Andre He, Dan Klein
ACL, 2022.

Automated Crossword Solving
Eric Wallace*, Nicholas Tomlin*, Albert Xu*, Kevin Yang*, Eshaan Pathak*, Matthew L. Ginsberg, and Dan Klein
ACL, 2022.

LingView: A Web Interface for Viewing FLEw and ELAN Files
Kalinda Pride*, Nicholas Tomlin*, Scott Anderbois
Language Documentation and Conservation, 2020.

Emergent Compositionality in Signaling Games
Nicholas Tomlin, Ellie Pavlick
Annual Meeting of the Cognitive Science Society, 2019.

Incremental Pragmatics and Emergent Communication
Nicholas Tomlin, Ellie Pavlick
NeurIPS Workshop on Emergent Communication, 2018.

Popular Articles
The Unspoken Language of Crossword Puzzles
Scott AnderBois, Kyle Mahowald, Nicholas Tomlin
The Atlantic, 2023.

Work
Microsoft Semantic Machines
Visiting Researcher
Hosts: Jacob Andreas and Jason Eisner

Stanford University
Research Intern, CSLI REU
Advisor: Christopher Potts

Teaching
Berkeley CS188: Introduction to Artificial Intelligence
Co-instructor for course with 178 students. Managed a staff of 15 (u)GSI's, readers, and tutors. Responsibilities included designing and giving lectures, managing homework and project releases, organizing exams, and holding instructor office hours.

Berkeley CS288: Natural Language Processing
Head teaching assistant for a course with 106 students. Responsibilities included creating three new programming assignments, holding office hours, and guest lecturing.

Brown CSC11570: Design and Analysis of Algorithms
Teaching assistant for a course of 164 students. Responsibilities included writing and grading problem sets, holding office hours, proctoring written and oral exams, teaching recitation sections, and writing and grading the midterm and final exams.
Brown LING0030: Introduction to Linguistic Theory Fall 2018
Teaching assistant for a course of 78 students. Responsibilities included grading problem sets and exams, holding office hours, and offering exam review lectures.

Brown MATH1530: Abstract Algebra Fall 2017
Head teaching assistant for a course of 62 students. Responsibilities included grading homeworks, managing graders, holding office hours, and teaching recitation sections.

Brown MATH1040: Fundamental Problems of Geometry Spring 2017
Grader for an undergraduate course in point-set topology and non-Euclidean geometry. Responsibilities included grading weekly problem sets and midterm exams.

Invited Talks

Detecting Text Ghostwritten by Language Models
Stanford University, Hoover Institute Oct 2024

Language Agents as Rational Agents
BAIR Natural Language Processing Workshop Oct 2024
JHU Computer Science Department Apr 2024
USC Natural Language Processing Group Oct 2023

Decision-Oriented Dialogue for Human–AI Collaboration
Berkeley Multi-Agent Learning Seminar Sep 2023

Language Generation, Grounding, and Pragmatics in Game-Playing Domains
DeepMind Multi-Agent Learning Group Mar 2023
Brown University Computer Science Department Oct 2022

Guest Lectures

Berkeley DATA182: Language Agents as Rational Agents. Fall 2024
Berkeley CS288: Philosophy of Data and Evaluation. Panelist. Fall 2024
Brown CLPS 350: The Linguistics of Crossword Puzzles. Spring 2024
Berkeley CS188: Computational Rationality and LLMs. Fall 2023
Berkeley CS288: Philosophy of Evaluation and Data. Panelist. Fall 2023
Berkeley CS288: The Future of Natural Language Processing. Panelist. Spring 2023
Berkeley CS288: The Future of Natural Language Processing. Panelist. Spring 2022
Berkeley CS288: Pragmatics and Language Grounding. Spring 2022
Berkeley CS288: Pragmatics and Language Grounding. Spring 2021

Department Service

Berkeley Equal Access for Application Assistance 2023
Volunteer reviewer to provide feedback on PhD application materials to students from under-represented backgrounds.

Berkeley Student Committee for Faculty Hiring 2022-2023
Attended and organized student interviews for EECS faculty candidates.

Berkeley PhD EECS Admissions 2019-2022, 2024
Reviewed applications to Berkeley EECS for the Berkeley NLP Group.
Berkeley AI4ALL 2019, 2021-2022, 2024
Co-instructor for one week-long AI program for high school students from underrepresented backgrounds. Designed and taught NLP course materials for four years.

Berkeley EECS Mentoring 2019-2022
Mentor with the Berkeley AI Research Undergraduate Mentoring Program, EECS Buddy, and EECS Peers programs. Held weekly peer mentoring office hours.

Reviewing
NeurIPS (Outstanding Reviewer) 2021-2024
ACL Rolling Review 2022-2024
ICLR 2021-2024
ICML 2020-2022
Annual Meeting of the Cognitive Science Society (CogSci) 2022-2023
ACL Student Research Workshop (ACL-SRW) 2021, 2024
Workshop on Underspecified and Implicit Language (Unimplicit) 2022
Workshop on Visually Grounded Interaction and Language (ViGIL) 2021

Advising
Georgia Zhou. Undergraduate. 2024 – Ongoing
Angela He. Undergraduate. 2024 – Ongoing
Maggie Huan. MS Computer Science. 2024 – Ongoing
Nishant Bhakar. Undergraduate. 2023 – Ongoing
Austen Liao. Undergraduate. 2023 – Ongoing
Vivek Verma. Undergraduate. 2022 – Ongoing
Andre He. Undergraduate. (→ CMU PhD) 2021 – 2024
Lily Zhang. MS Computer Science. (→ Waymo) 2020 – 2021

Last updated: September 28, 2024