

Matthew Finlayson

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EDUCATION	University of Southern California (USC) Viterbi School of Engineering Ph.D. in Computer Science, Natural Language Processing.	Aug 2023–Present
	Harvard University John A. Paulson School of Engineering and Applied Sciences A.B. Cum Laude in Field/Highest Honors in Computer Science and Linguistics (Joint) GPA 3.9/4.0.	Sep 2015–May 2021
RESEARCH	USC Dill Lab and INK Lab Ph.D. researcher advised by Swabha Swayandipta and Xiang Ren.	Aug 2023–Present
	The Allen Institute for AI (AI2), Aristo Pre-doctoral researcher advised by Peter Clark and Ashish Sabharwal.	Aug 2021–Jul 2023
	Harvard University Computer Science and Linguistics Undergraduate researcher advised by Stuart Shieber and Yonatan Belinkov.	Jan 2019–May 2021
PUBLICATIONS & PREPRINTS	<ul style="list-style-type: none">[1] “Logits of API-Protected LLMs Leak Proprietary Information” Matthew Finlayson, Xiang Ren, and Swabha Swayamdipta. ArXiv 2024.[2] “Closing the Curious Case of Neural Text Degeneration.” Matthew Finlayson, John Hewitt, Alexander Koller, Swabha Swayamdipta, and Ashish Sabharwal. ICLR 2024 main conference.[3] “Attentiveness to Answer Choices Doesn’t Always Entail High QA Accuracy.” Sarah Wiegreffe, Matthew Finlayson, Oyvind Tafjord, Peter Clark, and Ashish Sabharwal. EMNLP 2023 main conference.[4] “Decomposed Prompting: A Modular Approach for Solving Complex Tasks.” Tushar Khot, Harsh Trivedi, Matthew Finlayson, Yao Fu, Kyle Richardson, Peter Clark, and Ashish Sabharwal. ICLR 2023 main conference.[5] “Lila: A Unified Benchmark for Mathematical Reasoning.” Matthew Finlayson, Swaroop Mishra, Pan Lu, Leonard Tang, Sean Welleck, Chitta Baral, Tanmay Rajpurohit, Oyvind Tafjord, Ashish Sabharwal, Peter Clark, and Ashwin Kalyan. EMNLP 2022 main conference.[6] “What Makes Instruction Learning Hard? An Investigation and a New Challenge in a Synthetic Environment.” Matthew Finlayson, Kyle Richardson, Ashish Sabharwal, and Peter Clark. EMNLP 2022 main conference.[7] “Causal Analysis of Syntactic Agreement Mechanisms in Neural Language Models.” Matthew Finlayson, Aaron Mueller, Sebastian Gehrmann, Stuart Shieber, Tal Linzen, and Yonatan Belinkov. ACL 2021 main conference.	
HONORS	National Science Foundation Graduate Research Fellowship Program (GRFP) honorable mention.	Mar 2023
	Center for Undergraduate Research in Viterbi Engineering USC CURVE Award	2023, 2024

INVITED TALKS	Carnegie Mellon University Language Technologies Institute	Jan 2024
	<i>What top-p sampling has to do with the softmax bottleneck.</i>	
	Instituto Superior Técnico (IST) & Unbabel Seminar	Feb 2023
	<i>Comprehensively evaluating LMs as general-purpose math reasoners</i>	
	Seminar on Formal Languages and Neural Networks (FLaNN)	Nov 2022
	<i>What can formal languages tell us about instruction learning?</i>	
	Allen Institute for AI (AI2)	Sep 2022
	<i>A Unified Benchmark for Mathematical Reasoning</i>	
SERVICE	Reviewer	2022-Present
	ARR, ACL, EMNLP, NeurIPS, ICLR, MathNLP, MATH-AI, CoNLL	
	Mentor	Sep 2023-Present
	Masters students: Shahzaib Saqib Warraich	
	Undergraduates: Ryan Wang, Jacky Mo	
TEACHING	Harvard CS-51: Abstraction and Design in Computation	Jan 2020–May 2021
	Head Teaching Fellow	
	Harvard CS-187: Computational Linguistics and NLP	Sep 2019–Dec 2020
	Curriculum developer, Teaching Fellow	
EXPERIENCE	Microsoft, Natural Language Experiences, SWE Intern	Jun–Aug 2020
	Improved and personalized text prediction in Microsoft Office.	
	Hikma Health, SWE Intern	Jun–Aug 2019
	Developed a mobile electronic health record system for healthcare professionals working with refugees.	
SOFTWARE	OpenLogProbs	Dec 2023-Present
	Retrieves full-vocabulary outputs from API-protected large language models.	
OTHER	Harvard First-Year Outdoor Program	Aug 2018–May 2021
	Mentored incoming first-year students on week-long backpacking trips.	
	Harvard Sailing Club	Aug 2018–May 2021
	Vice President. Taught sailing basics to beginners weekly.	
	Computer languages: Python, OCaml, LLM prompting ;)	
	Human languages: English, Tagalog, some Vietnamese, some Spanish.	
	Hobbies: surfing, birding, cycling, ortholinear keyboards, sailing.	