

# Matthew Finlayson

[mattfn.github.io](https://mattfn.github.io) [mattbnfin@gmail.com](mailto:mattbnfin@gmail.com)

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

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