Matthew Finlayson

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Education

University of Southern California Aug 2023–Present
Viterbi School of Engineering
Ph.D. in Computer Science, Natural Language Processing.

Harvard University 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

USC Dill Lab and INK Lab Aug 2023–Present
Ph.D. researcher advised by Swabha Swayandipta and Xiang Ren.

Allen Institute for AI (AI2), Aristo Aug 2021–Jul 2023
Pre-doctoral researcher advised by Peter Clark and Ashish Sabharwal.

Harvard University Computer Science Jan 2019–May 2021
Undergraduate researcher advised by Stuart Shieber and Yonatan Belinkov.

Awards

National Science Foundation Mar 2023
Graduate Research Fellowship Program (GRFP) honorable mention.

Publications

[1] "Closing the Curious Case of Neural Text Degeneration"
Matthew Finlayson, John Hewitt, Alexander Koller, Swabha Swayamdipta, and Ashish Sabharwal
ArXiv 2023.

[2] "Attentiveness to Answer Choices Doesn't Always Entail High QA Accuracy."
Sarah Wiegreffe, **Matthew Finlayson**, Oyvind Tafjord, Peter Clark, and Ashish Sabharwal.
EMNLP 2023.

[3] "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 oral presentation.

[4] "Līla: 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.

[5] "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 oral presentation.

[6] "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 2022.

Invited talks

Instituto Superior Técnico (IST) & Unbabel Seminar Feb 2023
Comprehensively evaluating LMs as general-purpose math reasoners

Seminar on Formal Languages and Neural Networks (FLaNN) Nov 2022
What can formal languages tell us about instruction learning?

Allen Institute for AI (AI2) Sep 2022
A Unified Benchmark for Mathematical Reasoning

Teaching

Harvard School of Engineering and Applied Sciences

CS-51: Abstraction and Design in Computation Jan 2020–May 2021
Head Teaching Fellow

CS-187: Computational Linguistics and NLP Sep 2019–Dec 2020
Curriculum developer, Teaching Fellow

Service

ACL, EMNLP, NeurIPS, MathNLP, MATH-AI, CoNLL 2022-2023
Reviewing

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.

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.

Harvard Outing Club Aug 2015–May 2021
Led regular hiking trips to improve outdoor access for Harvard affiliates.

Computer languages: Python, OCaml, few-shot prompting ;)
Human languages: English, Tagalog, some Vietnamese, some Spanish.
Hobbies: birding, cycling, mechanical keyboards, sailing.