Alan Zhu

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Education

University of California, Berkeley

Ph.D. in Computer Science | August 2024 - Present

- NSF Graduate Research Fellow

Carnegie Mellon University

B.S. in Computer Science, Additional Major in Statistics | August 2020 - May 2024

- GPA: 4.0/4.0
- University Honors; Dean's List, High Honors; Senior Leadership Recognition Award

Peer-Reviewed Publications

- Zhang, Z., **Zhu, A.**, Yang, L, Xu, Y., Li, L., Phothilimthana, P. M., Jia, Z. 2024. Accelerating Retrieval-augmented Language Model Serving with Speculation. ICML 2024.
- Miao, X., Oliaro, G., Zhang, Z., Cheng, X., Wang, Z., Wong, R. Y. Y., **Zhu, A.**, Yang, L., Shi, X., Shi, C., Chen, Z., Arfeen, D., Abhyankar, R., Jia, Z. 2024. SpecInfer: Accelerating Generative Large Language Model Serving with Speculative Inference and Token Tree Verification. ASPLOS 2024.
- Cui, Z., Wang, S., Han V. Y., Rae-Gran, T., Yang, W. Y., **Zhu, A**., Hudson, S. E., Ion, A. 2024. Robotic Metamaterials. CHI 2024.

Preprints

- **Zhu, A.**, Asawa, P., Davis, J. Q., Chen, L., Hanin, B., Stoica, I., Gonzalez, J. E., Zaharia, M. 2025. BARE: Leveraging Base Language Models for Few-Shot Synthetic Data Generation. ICML 2025 DataWorld Workshop Oral. arXiv: 2502.01697.
- **Zhu, A.**, Ma, J., Mei, Q. 2025. Efficient Estimation of Shortest-Path Distance Distributions to Samples in Graphs. arXiv: 2502.15890.

Skills

- Programming Languages: Python, R, C, C++, Java
- Scientific Packages: PyTorch, Transformers, TRL, VERL, SkyRL, NetworkX
- Tools: Google Sheets, Google Docs, LaTeX, Git, Conda, Docker
- Languages: English (native), Mandarin (fluent), French (intermediate)

Research Experience

University of California, Berkeley; Department of EECS; Sky Computing Lab

Graduate Student Researcher | August 2024 - Present

- Advised by Prof. Joseph Gonzalez.
- Current research interests in AI agent personalization and specialization, especially in data-scarce settings, as well as evaluation of agentic systems.

Carnegie Mellon University; CS Department; Catalyst Lab

Undergraduate Research Assistant | August 2022 - May 2024

- Worked under the supervision of Prof. Zhihao Jia on ML Systems for speculative decoding and retrieval augmented generation.

University of Michigan; School of Information; Foreseer Group

Undergraduate Research Assistant | May 2021 - May 2024

- Worked under the supervision of Prof. Qiaozhu Mei on a project related to shortest path distances to samples in a graph, with implications on fairness in graph neural networks.

Carnegie Mellon University; HCI Institute; Interactive Structures Lab

Undergraduate Research Assistant | May 2021 - May 2022

- Worked under the supervision of Prof. Alexandra Ion on developing robotic metamaterials, scalable and robust mechanisms composed of grids of cells controlled by selectively placed actuated cells.

Teaching Experience

Carnegie Mellon University | Fall 2021 - Spring 2024

15-251 Great Ideas in Theoretical Computer Science

Fall 2023 - Spring 2024: Head Teaching Assistant

Fall 2023: Associate Head Teaching Assistant

Fall 2021 - Spring 2023: Teaching Assistant

- Led recitations and office hours, graded and provided feedback on student work, managed course logistics, and trained new course staff. Contributed towards development of new course material and infrastructure.

Work Experience

Apple | June 2022 - August 2022

AI/ML Intern

- Worked as part of Siri's Search Data Analytics team and developed a tool to detect heterogeneous effects in A/B tests regression-based variance reduction methods.