Andrew Nakamoto

linkedin.com/in/andrewnakamoto

Email : andrewsnakamoto@gmail.com

Mobile : +1-206-499-1583

Education

University of Washington — Seattle, WA

Masters and Bachelors of Science in Computer Science — *Sep. 2022 – Jun. 2026*

GPA: 4.00 - Dean's List

- CSE 446: Machine Learning, CSE 447: Natural Language Processing, and CSE 573: Artificial Intelligence.
- CSE 332: Data Structures and Parallelism, CSE 421: Algorithms, and CSE 333: Systems Programming.
- CSE 452: Distributed Systems, CSE 461: Networks, and MATH 318: Advanced Linear Algebra.

Experience

Meta

Software Engineer Intern — *June 2024 – September 2024*

Implementing configurable functionality to use the latest preference optimization methods (DPO, SimPO, CPO, ORPO, etc.) for LLM alignment in Meta's popular open-source fairseq2 toolkit using Python and PyTorch.

Writing internal FAIR tooling in Python and C++ for local instruction-following task evaluation.

Researching the impact of PO loss variations and PEFT on LLM reasoning, alignment, and memory.

Working within Meta FAIR (Fundamental AI Research) in a role usually reserved for PhD students.

DubHacks

Executive Director — *February 2023 – February 2025*

Leading and managing a team of 20 designers and software engineers and overseeing a $110k+ annual budget.

Implementing and project managing our tech stack using SQL, React, Docker, and Google Suite APIs.

Designing, building, and delivering front end, back end, and full stack solutions that deploy to thousands of users.

Directing the 2024 event for over 1000 projected participants and industry professionals.

UW Allen School Mobile Intelligence Lab

Research Assistant — *January 2024 – Present*

Researching machine learning optimization techniques using Python, Swift, PyTorch, and Onnx with Prof. Shyam Gollakota in the Mobile Intelligence Lab for active noise-cancellation and target speech isolation.

Building an audio application in Objective-C for iOS by optimizing and integrating a system of neural nets that identify characteristic speech traits from target voices in noisy environments and cancel non-target noise in binaural audio.

Projects

DubHacks Judging: Wrote and deployed an application for over 600 users to automate judging for DubHacks 2024. Processed API data, wrote a mapping algorithm for assignments, and built tooling to send automated messages to users and visualize progess. Used Docker, Google Suite APIs, Python, Discord APIs, and MySQL.

Webserver Search Engine: Built a complete web application and server using C and C++ that serves a webpage interface, accepts client search requests, finds relevant documents and webpages in its index, then serves a response over the internet. Wrote a tool to scan files into the server index. Used C, C++, HTTP, TCP/IP, POSIX, Unix/Linux, and DNS protocols.

Sci-Fact LLM: Experimented with several large language model strategies for the OpenBookQA benchmark. Built and fine-tuned a RAG fact-retrieval model that achieved near-human 85% accuracy on the dataset despite limited compute. Used Python, PyTorch, Google Colab, and HuggingFace. Summary paper available on GitHub.

Skills & Passions

Languages & Tools: Java, Python, C/C++, Swift, HTML/CSS, TypeScript, JavaScript, C#, React, Node.js, PyTorch, HuggingFace, SQL, MySQL, PostgreSQL, Git, TCP/ICP, Linux/Unix, Microsoft Azure SQL Database.

Passions: Machine learning, data science, linear algebra, distributed systems and networks, NLP, system design.

Hobbies: Camping/hiking, outdoor conservation, nonprofit management and community engagement, guitar. I love travelling, eating, and organizing big events. Ask me about my favorite tarp shelters!