SAM ACQUAVIVA

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EDUCATION

Massachusetts Institute of Technology (MIT), Cambridge, MA

Candidate for Bachelor of Science degree in Computer Science and Cognitive Science, February 2023

- Relevant coursework: Algorithms, Signal Processing, Matrix Methods for Machine Learning, Deep Learning, Advanced Natural Language Processing, Tissue vs. Silicon: Differences in Machine Learning
- 4.9/5.0 GPA

EXPERIENCE

Apple

Machine Learning Intern, May 2022 – Present

- Designed and implemented semi-supervised training pipeline for Siri from high-risk production data
- Generated large-scale datasets of failing interactions and recreated the outcome in an offline environment

X, The Moonshot Factory (Google X)

AI Residency, February 2022 – May 2022

- Implemented state-of-the-art neural-guided program synthesis engine
- Ran hundreds of experiments across thousands of machines to document program performance
- Outlined approach to combine program synthesis methods with completely neural sequence-to-sequence models

John Deere

Software Engineering Intern, June 2021 – September 2021

- Developed computer vision system to identify corn kernels in a noisy production environment
- Modeled and used reinforcement learning methods to automate advanced skid steer maneuvers
- Collaborated with PhD students on a daily basis to ensure solid theoretical bases for models

Cloud Canaries

Software Engineer, January 2021 – May 2021

- Created a data pipeline to robustly store large scale customer data for efficient search
- Built a forecasting system to predict Service Level Agreement compliance for various cloud computing providers

MIT Computer Science and Artificial Intelligence Laboratory

Computational Cognitive Science Group Researcher, May 2020 – May 2021

- Created data collection platform and a novel bandit algorithm to conduct a large-scale dynamic user study
- Collected novel dataset and used collected language data to improve state-of-the-art program synthesis
- Published paper in the 2022 Conference on Neural Information Processing Systems (NeurIPS)

PROJECTS

Acquacchi Chess Engine

samacquaviva.com/projects/acquacchi

- Implemented alpha-beta search with many bit-level optimizations and heuristics
- Written in C and evaluates over 1.5 million positions per second

Kandula

samacquaviva.com/projects/kandula

- Created API and app that enables anyone to customize stock-trading algorithms without programming
- Hosts a plethora of algorithms on the cloud that make real-time trades

SKILLS

Technologies: Python, Javascript, OCaml, Swift, C, PyTorch, TensorFlow, SQL, Docker
Soft Skills: creativity, communication, collaboration, reliability