Eric Wang

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Education

Harvard University Cambridge, MA
AB in Computer Science and Math. GPA: 4.0/4.0 Expected 2026
Coursework: Data Structures & Algorithms, Machine Learning, Systems Programming, Probability
Activities: Harvard AI Safety, Harvard Tech for Social Good, Harvard Computer Society, Harvard Climbing

Experience

Machine Learning Engineer Intern June 2024 - Present
Analog Devices San Jose, CA
- Built an end-to-end activity classification model with PyTorch by pre-training and fine-tuning with self-supervised learning techniques, utilizing open-source accelerometer data to improve predictive accuracy and efficiency by 28%
- Collaborated in team settings to refine model architecture and adjust training strategies, leading to marked improvements in model generalization across different datasets.

Computer Science Teaching Fellow January 2024 – Present
Harvard University Cambridge, MA
- Teaching Fellow for CS 121 Introduction to Theoretical Computer Science **Fall 2024**
- Teaching Fellow for CS 51 Abstraction and Design in Computation **Spring 2024**

Software Engineer Intern May 2023 - August 2023
Brainspec Boston, MA
- Developed a Python algorithm using OpenCV to determine overlap between a spherical phantom and a voxel in MRS, reducing prior calculation errors by 80% to achieve a precision of less than 5% error
- Interpreted data of 5000+ patients and analyzed trends in neuroimaging with MATLAB

Software Engineer Intern September 2021 - January 2022
Commvault Tinton Falls, NJ
- Streamlined pricing visualization through Microsoft Azure and SQL to display 7 different metrics
- Automated the process of adding, replicating, and backing up new virtual machines to an environment by leveraging Python, Shell Scripting, and the Commvault interface

Projects

Mechanistic Interpretability of Maximum of Lists | *Python, PyTorch* January 2024 - May 2024
- Trained a single-layer, attention only transformer written from scratch to take the maximum number across variable length lists, achieving an average 97.4% test accuracy across all variations
- Performed mechanistic interpretibility on the attention patterns to analyze and write a paper on the results

TaiYo! Solver | *Python, Pymunk, Deep Q-Learning, PyTorch* November 2023
- Engineered a custom game from the ground up, utilizing PyGame for engaging gameplay interfaces and PyMunk for accurate physics simulations
- Implemented and trained a Deep-Q Learning algorithm to autonomously play the game using optimal actions over the state space, outperforming over 80% of human players based on comprehensive gameplay metrics
- Won most ambitious/best idea hack at HackWellesley with a team of 3

Wakey | *React Native, Node.js, Web Sockets, Supabase* October 2023
- Leveraged React Native for a full-stack mobile app designed to synchronize alarms among friends
- Integrated a Node.js backend server, utilized Web Sockets, and used Supabase for metrics storage
- Submitted to and received award for Most Funny Hack at HackHarvard working with a team of 4

Fallsafe | *C++, Arduino* January 2022 - June 2022
- Designed, assembled, and tested a waterproof bath mat to detect falls with 90% accuracy using force sensors, arduino, and C++ leading the team to secure the district's financial support for a patent out of 36 applicants

Technical Skills

Languages: Python, Java, C/C++, Swift, OCaml
Frameworks: PyTorch, React, Node.js, Next.js
Developer Tools: Git, Docker, Amazon AWS, VS Code, Visual Studio