Yifan Wang

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Education

University of California, Berkeley GPA: 4.0/4.0

B.S. Electrical Engineering and Computer Science, B.A. Applied Math *Class of 2026*

Coursework: **CS70** Discrete Math & Probability (A+), **CS61B** Data Structures & Algorithms (A+), **CS61C** Machine Structures, **CS170** Efficient Algorithms (A+), **EECS126** Probability Theory (A+), **MATH113** Abstract Algebra

Experience

Course Staff, EECS 126 (Probability & Random Processes) Jan 2025 – Present

Course staff (UCS1) *Berkeley, CA*

- Held office hours, and graded homework and exams for a class of 261, focusing on advanced probability concepts such as probability laws, random variables, Poisson processes, Markov chains, statistical and Bayesian inference

Roche May 2024 – Aug 2024

Software Engineer, Cloud Platform Intern *Santa Clara, CA*

- Developed Proof of Concept for a tenant hierarchy microservice using Spring and Postgres, improving SQL query performance by 10-100x on select endpoints, reducing runtime from 400ms to under 10ms
- Implemented endpoints for microservices supporting role groups and tenancy with Spring Boot, Node.js, and AWS
- Developed and implemented an LLM tool using Retrieval-Augmented Generation (RAG) in Python, automating test case generation for endpoints, streamlining workflows and reducing manual effort in the development process

Berkeley Consulting Sep 2023 – Present

Account Manager, Project Manager *Berkeley, CA*

- Implemented a configurable product recommendation system in Python and Java, replacing a manual process, resulting in annual savings exceeding $1,000,000 in labor and product expenses
- Researched and recommended approaches for improving CapitalOne's ETL (batch, on-demand, and streaming) pipelines, Spark workflows, for their internal enterprise feature platform

Each 1 Teach 1 Jun 2021 – Aug 2021

Software Intern *San Francisco, CA*

- Collaborated with MIT Media Lab and Sugar Labs on MusicBlocks, a music-based programming language for computer science education
- Worked closely with Marin Bike Museum curators to develop an app tailored to their tour needs

Projects

MIT Battlecode - 2x Finalist (2024, 2025) | *Java*

- Placed top 10 twice out of 400+ teams in MIT's premier programming competition
- Leveraged artificial intelligence, pathfinding, distributed algorithms, and communications to write an autonomous player, managing a robot army to play a real-time strategy game
- Flown out to MIT all-expenses-paid to participate in the final tournament

Los Altos Hacks VII - 2nd Place | *Flask, PyTorch, Librosa, Java*

- Placed second out of 425 students at the largest high school hackathon in the nation, by leveraging machine learning and AI to identify the reasons behind baby cries
- Aggregated and cleaned data from a variety of online sources

TerseLang | *C#, Blazor*

- Created a programming language designed to write programs in as least bytes as possible
- Maintained and wrote documentation for codebase of over 5400 lines of code
- Online interpreter with syntax highlighting and documentation: https://gymhgy.github.io/TerseLang/

ASCII Webcam | *C#, OpenCV, Javascript, HTML/CSS*

- Developed an efficient algorithm to render grayscale images using ASCII characters
- Demo: https://gymhgy.github.io/ASCIIWebcamOnline/

Skills

Languages and Tools: C#, C, Java (Spring Boot), JavaScript (Node.js), Python, Git, SQL, Postgres, C++

Interests: Chess, Swimming, SCUBA Diving, Ham Radio, Advent of Code, Calisthenics