

HEATHER YUAN

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EDUCATION

University of California, Berkeley
B.A. Computer Science

Class of 2024
GPA: 3.71

Relevant Coursework * = *in progress*

Databases, Computer Architecture, Efficient Algorithms, Operating Systems*, Data Structures and Algorithms, Discrete Math and Probability, Optimization Models*, Principles of Data Science, Linear Algebra, Information Devices and Systems

Technical Skills

Python, Java, C, Go, RISC-V, React.js, Javascript/Typescript, HTML/CSS, Flask, SQL, Pandas, Git, Kubernetes/Docker, AWS

WORK EXPERIENCE

Grafana Labs

Backend Software Engineering Intern

June 2023 – August 2023

Remote

- Reduced component startup time by 92% by sampling and persisting index header data to disk with Protocol Buffers
- Decreased long-term query latency by 80% by reducing disk thrashing with config to limit concurrent disk accesses
- Won AI division and top 5 in hackathon by building query generator/explainer with LLMs, and Flask API in Docker
- Rolled out features to production Kubernetes clusters with evidence-backed testing in development and operations clusters

Aperture Finance

Full-Stack Software Engineering Intern

June 2022 – August 2022

Mountain View, CA

- Implemented end-to-end Ethereum smart contract that maintains database of time-weighted average supply rate prices by querying from the blockchain to take custody of \$10m+ and optimize lending strategy yield by 175%+
- Deployed React webpage that lists, visualizes, sorts, and searches through user data on yield-farming positions
- Refactored entire React webapp codebase into Typescript to resolve and prevent 100+ type errors

TECHNICAL PROJECTS

AFX Tech Roster

Python, React.js, Flask, PostgreSQL

- Developed table schema and full-stack form to handle database operation requests and approvals with user authentication
- Integrated SendGrid with webapp to automate email distribution to appropriate dancers based on database updates
- Connected PostgreSQL database to React app with Flask RESTful API that supports CRUD database operations

Recreational Sports Facility Capacity Analysis

Python, PostgreSQL, AWS, Pandas

- Created an Amazon EC2 hosted shell script that uses Selenium to web scrape time-series data from campus gym's crowd capacity API and write to an Amazon RDS hosted PostgreSQL database
- Utilized Pandas to conduct data analysis and visualize crowd capacity over time with Plotly on Streamlit webapp
- Implemented a Discord alert bot to notify server members based on user set personal capacity and hour preferences

FlashGPT

Python, React.js, Flask

- Developed full stack React webapp with Flask that generates interactive flashcards from user-inputted class notes and creates vocabulary quizzes that provide a feedback score on the similarity between term definition and user attempts
- Utilized LLMs with custom prompts to OpenAI API to summarize input text and generate vocab terms and definitions

RookieDB

Java

- Implemented a relational database management system with support for Alternative 2 B+ tree indices, join algorithms, query optimization, and multigranularity locking for concurrency control and ARIES recovery
- Wrote JUnit tests for each of the database management system's functionalities and utilized them to optimize efficiency

LEADERSHIP EXPERIENCE

Net Impact Berkeley

Project Manager

August 2021 – Present

Berkeley, CA

- Managed a team of 5 associates to develop a social impact marketing campaign for a women's film festival fundraiser
- Built and managed 10+ professional client relations through outreach, project-planning meetings, and scope development

INTERESTS & SKILLS

Social Impact, Dance, Musical Theatre, Cooking, Fitness, Reading, Gut Health, Mandarin