

# 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

## EXPERIENCE

### Grafana Labs

June 2023 – August 2023

*Backend Cloud Database Software Engineering Intern*

*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 metrics testing in development and operations clusters

### AFX Tech

January 2023 – Present

*Tech Lead/Software Developer*

*Berkeley, CA*

- Developed React and Flask webapp that manages PostgreSQL database of 1k+ dancers with bulk data ingestion, user authentication, and team switching through request forms, admin review/approval, email automation, and database updates
- Expanding webapp functionality with algorithmic team matching, financial management, and dancer preference support
- Leading team of 7 developers through project and design scoping, task and deadline management, and member mentorship

### Aperture Finance

June 2022 – August 2022

*Fullstack Software Engineering Intern*

*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

## PROJECTS

### 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 fullstack 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

### Net Impact Berkeley

August 2021 – Present

*Project Manager*

*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
- Consulted for 4 social impact companies/non-profits to develop revenue-building, ESG, marketing, and financial strategies

## INTERESTS & SKILLS

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