

Yifan Zhong

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EDUCATION

University of California, Los Angeles

M.S. in Computer Science

Los Angeles, CA

09/2022 – 06/2024

University of California, Berkeley

B.S. in Electrical Engineering and Computer Science

Berkeley, CA

05/2022

INTERNSHIP EXPERIENCE

Shepherd Money

San Francisco, CA

Backend Engineer Intern

06/2023 – 09/2023

- Migrated the backend of a personal finance management app from **Node.js** to **Spring Boot**, effectively consolidating multiple banking data sources within a unified, streamlined application.
- Integrated the external services from TD Ameritrade, EODHD, and Yahoo Finance, providing real-time stock market data retrieval and comprehensive investment strategy analysis for users.
- Augmented application reliability by incorporating **JUnit tests** with **Mockito**, boosting test coverage from 50% to 97%.
- Reduced overall API response time from 3000ms to below 500ms by optimizing the implementation and indexing of data entities in **MongoDB Atlas** and simplifying the business logic.

Microsoft

Shanghai, China

Software Engineer Intern

07/2021 – 09/2021

- Implemented **REST APIs** with **X++ (Dynamic AX)** empowering vendors to convert unsettled receivables into digital assets for immediate transactions on a decentralized financial system to ease the cash flow pressure.
- Optimized the **Dynamics 365** database schema by designing new data entities to store aggregated data in **Visual Studio**, establishing new data linkage, and enabling integration with the DeFi system through **OData Protocol**.
- Boosted operational efficiency by 40% through a strategic overhaul of the user workflow in Dynamics 365, which streamlined digital asset management and automated transaction settlement via the DeFi backend.

Dahua Technology Co., Ltd.

Hangzhou, China

Engineer Intern

06/2019 – 09/2019

- Enhanced the new hire onboarding experience by designing the frontend of a tutorial website, utilizing **HTML**, **CSS**, and **Bootstrap** to effectively document maintenance manuals.
- Developed backend APIs using **Python**, **Flask**, and **MongoDB** for the website, facilitating user registration and login, video uploads, and online forum interactions.
- Expedited the orientation experience for a cohort of 12 interns, reducing the new hire onboarding timeline by one week.

PROJECTS

Pintos

01/2022 – 05/2022

- Designed a lightweight **operating system** for the **x86** instruction set architecture in C with support for argument passing, process control and file operation system calls, and floating-point operations.
- Implemented and integrated a **multi-threading** system for user programs, featuring an efficient alarm clock and strict priority scheduler with priority donation for kernel threads to prevent deadlock.
- Developed an extensible file system for optimized concurrent disk operations, featuring a write-back buffer cache utilizing NRU replacement policy and a trilevel indexed inode file structure for fast random file access.

End-to-End Encrypted File Sharing System

03/2022 - 05/2022

- Developed **Go-based** file system APIs, facilitating encrypted file storage and concurrent modifications across multiple devices.
- Engineered a bi-directional file sharing mechanism with a lockbox-style authorization and authentication schema, enabling file owners to grant and recursively revoke file access to other users.
- Decreased the I/O latency for large files by 80% through tokenization of file contents, effectively transforming linear time file modification into a constant time process.

TECHNICAL SKILLS

- **Programming Languages:** Java, C/C++, Python, Go, SQL, Assembly Language (RISC-V), HTML/CSS, JavaScript, X++, Ruby
- **Frameworks/Toolkits:** Spring Boot, Mockito, Flask, Bootstrap, OpenMP, MPI, CUDA, Merlin, MediaCodec, React, Node.js, Ruby on Rails, jQuery, JUnit 5, pandas, scikit-learn, NumPy, Jinja, Open Data Protocol, Linux, Git, Azure, MongoDB, Heroku, AWS EC2, Android Studio, Visual Studio, Dynamics 365, Postman, LaTeX, Docker, Kubernetes