

HAO WEI FU

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EDUCATION

Carnegie Mellon University, Pittsburgh

B.S. in Information Systems, B.S. in Computer Science

Expected Graduation: May 2024

WORK EXPERIENCE

Yahoo, Mountain View, CA, Software Engineering Intern

Jun – Aug 2023

- Developed and launched a robust AWS Network Firewall architecture for a VPN, enhancing network security across the organization, serving 2800 employees.
- Initialized CloudWatch and CloudTrail monitoring, identifying and protecting access from 29800 hazardous IP addresses.
- Leveraged Kubernetes for efficient deployment, scaling, and management of Docker containers to update security patches, bolstering core application's performance and reliability.

GovTech, Singapore, Software Engineering Intern

Jun – Aug 2021

- Developed and launched a robust AWS Network Firewall architecture for a VPN, enhancing network security across the organization, serving 2800 employees.
- Initialized CloudWatch and CloudTrail monitoring, identifying and protecting access from 29800 hazardous IP addresses.
- Leveraged Kubernetes for efficient deployment, scaling, and management of Docker containers to update security patches, bolstering core application's performance and reliability.

Razer, Singapore, Software Engineering Intern

Feb – Jul 2020

- Implemented a MongoDB database and Redis cache to capture dynamic, unstructured gaming data for new games onboarded, decreasing developer workload and improving data capture efficiency.
- Conducted meticulous API testing between Razer and partner games, identifying and rectifying 3 critical bugs, rectifying the misreporting of 26% of transactions under \$9.32.
- Developed advanced SQL queries in fraud detection for Razer Gold transactions, elevating fraudulent detection rates by 28% and contributing to substantial cost savings.

OPEN-SOURCE CONTRIBUTIONS

[Zulip](#)

Nov 2022

- Added a phone number custom profile field type to user profiles with validation of international phone numbers.
- Refactored testing suite to ensure changes passed CI/CD pipeline (frontend and backend Ubuntu/Debian tests).

PROJECTS

[Distributed Cache](#)

Feb 2023

- Designed and implemented a robust caching protocol across a distributed system for a server, leveraging Java RMI, Java threading, and concurrency management techniques.
- The system featured whole file caching, ensuring open-close session semantics on concurrent file access and used an LRU mechanism for cache management.

[Concentrated Liquidity Market Maker](#)

Dec 2022

- Designed and implemented a CLMM on Algorand referencing Uniswap's V3 implementation.
- Picked up three layers of code from Teal, to Pyteal then Beaker to successfully deploy the project on local version of Algorand blockchain hosted on CMU Docker machines.

[Psst. have you heard this?](#)

Apr 2021

- Developed a 2D scroller game that works with Spotify's API, basic functionalities of Spotify's app included.
- Wrote algorithm to recommend similar songs based on KNN algorithm and song data points.
- Aggregated data from user's top songs over various time periods, classified them into MBTI personalities.

COURSEWORK

Cloud Computing, Distributed Systems, Networking, Databases, Computer Systems, Parallel and Sequential Data Structures, Database Design and Development, Principles of Functional Prog, Principles of Imperative Prog, App Dev and Design

SKILLS

Certifications: AWS Developer Associate, AWS Cloud Certified Professional

Programming Languages: Python, Java, Golang, C, SQL, Typescript, JavaScript, SML, Ruby, x86 Assembly, Solidity, HTML, CSS

Databases: DynamoDB, SimpleDB, Redis, MySQL, MongoDB

Frameworks/Technologies: Terraform, Kubernetes, AWS, Docker, Containers, Apache Storm, Athenz, Linux, Github Actions, Git, Flask, Node.js, React, GraphQL, (security stuff)