Raymond Chau

SOFTWARE ENGINEER

San Francisco Bay Area

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Education

University of California, Berkeley — *Berkeley, CA*

Bachelor of Science in Electrical Engineering and Computer Sciences. Major GPA: 3.42 — *Aug. 2017 – May 2021*

Work Experience

HH Imports

Software Engineer — *May 2020 – Aug. 2020*

- Implemented and tested an internal **Ruby on Rails** web application to handle and visualize important business transactions.
- Developed an internal **React** application to oversee and analyze financial operations, approve purchases and expenditures, and manage employees.

Technical Skills

- **Languages:** Python, Java, C, C++, C#, SQL, Javascript, Swift, Ruby on Rails, HTML, CSS
- **Technologies:** Git, NumPy, Pandas, Docker, Unity 3D, React

Projects

ActionMap

Politically Informative RESTful Web Application

- Built a web application that politically informs users by allowing them to view political representatives and events in their area.
- Implemented a **RESTful** application programming interface to allows users to share, and view news items in their locality.
- Developed in **Ruby on Rails** while following the **Agile lifecycle** and incorporating the **model-view-controller** design pattern.
- Utilized **Travis CI** for code quality tests, syntax reviews, and to validate commits based on custom test cases.
- Utilized **Codecov** to measure and increase test coverage of the codebase.

Epidemic Simulator

Simulator for Epidemics

- Developed an epidemic simulator in **Python** that allows the user to view the effects of different infection parameters.
- Utilized **NumPy** for data simulation and **Matplotlib** for data visualization.

6-Pack Abs

iOS Fitness Mobile Application

- Built an **iOS mobile application** that conveniently, through auditory cues, guides users through an abdominal workout routine.
- Developed fully in **Swift** and utilized **UITableView** to display the exercises while following the **model-view-controller** design pattern.

CalTours

iOS Campus Tour Mobile Application

- Built a campus tour **iOS mobile application** that gives users information about various points of interest around the Cal campus.
- Developed in **Swift** while storing and encoding the points of interest in **JSON**.
- Utilized **PageViewController** to display the various points of interest while following the **model-view-controller** design pattern.

MOOCbase

Relational Database Management System

- Developed a custom relational database management system in **Java** to better understand the internals of databases.
- Implemented **multi granularity locking** to support concurrent execution, **database recovery** in case of crashes, **query optimization** for faster queries, support for **B+ tree indices**, and efficient join algorithms.

UnicornBox

Encrypted File Sharing System

- Developed in **Go** an end-to-end encrypted file sharing system to allow users to safely and securely share files.
- Implemented **Argon2** asymmetrical key encryption, **RSA** digital signature keys, and file integrity checks.
- Utilized **salting** and **SHA-256** hashing for safe storage of user passwords.

Honors & Awards

Feb. 2019 **Best Hardware Hack,** TreeHacks Hackathon — *Stanford, CA*

Nov. 2018 **Best Use of Algolia,** CalHacks 5.0 Hackathon — *Berkeley, CA*