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RAYMOND CHAU
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EDUCATION

Berkeley, CA	University of California, Berkeley	August 2017 – May 2021
<ul style="list-style-type: none">• Major: B.S. in Electrical Engineering and Computer Sciences. In-major GPA: 3.42.• Relevant Coursework: Data Structures; Algorithms; Computer Architecture; Discrete Math; Data Science; Software Engineering; Artificial Intelligence; Database Systems; Computer Security; Computer Graphics.		

EMPLOYMENT

Solutions Engineer	Capital Group (Irvine, CA)	October 2021 – Present
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SKILLS

- **Languages:** Python; Java; C; C++; C#; SQL; Javascript; Swift; Ruby on Rails; HTML; CSS
- **Technologies:** Git; NumPy; Pandas; Docker; Unity 3D; React; Amazon Web Services (AWS)

SOFTWARE PROJECTS

Personal Website: www.raymondchau.dev (for more information and project links)

ActionMap

Politically Informative RESTful Web Application

- Built a web application that politically informs users by allowing them to view political representatives and events.
- Implemented a **RESTful** application programming interface to allow 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

- 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 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 on locations 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.

MOOChase

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.