Yufeng (Jimmy) Li

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EDUCATION

University of California, Berkeley Expected Dec 2023
Bachelor of Arts in Computer Science GPA:3.84/4.0

Relevant Coursework: Database Systems, Operating Systems and System Programming, Data Structures, Principles and Techniques of Data Science, Computer Security, Introduction to Artificial Intelligence, Introduction to Full-Stack Web Development, Machine Structures

WORK EXPERIENCE

Rimble **Sep 2023 - Current**
Backend Software Engineer Intern

- Implemented an **AWS Lambda** function in **Python** to update esports match data in **AWS DynamoDB**, which collects and generalizes **over 500** matches data **per hour** from **7** different esports platform APIs.

Amazon **May 2023 - Aug 2023**
Software Development Engineer Intern, Alexa AI - Information

- Developed a similar search feature on the reservation search engine using **Java**, **AWS ECS**, and **Docker**, which performs searches based on various information from a reservation request. The feature handled approximately **120** requests daily.
- Designed and extended the recommendation feature to the Alexa skill for reservation booking, utilizing **ASK SDK** in Java, **AWS S3**, and **APL** (Alexa UI framework), which provides customers with a list of alternative options in cases of unavailability. The feature resolved **70%** of the reservation request failures.
- Created **AWS CloudWatch** metrics and conducted **A/B Testing** on various recommendation logic. Leveraging their efficacy metric to optimize the information selection logic for similar searches, increased the recommendation adoption rate by **20%**.
- Implemented Unit Tests and Integration Tests with **JUnit** and **Mockito**, which achieved **96%** code coverage.

Amazon **Sep 2022 - Dec 2022**
Software Development Engineer Intern, Alexa AI - Information

- Designed and developed **RESTful APIs** with **AWS Lambda** and **API Gateway,** using **Java**, **TypeScript**, and **AWS CDK**, to enable multi-point-of-interest (POI) searches within routes through the Alexa location search engine.
- Created an Alexa Skill in **ACDL** (Alexa frontend language) and **Java**, using **ASK SDK** and **Dagger**, which leverages the APIs, and allows customers to plan road trips with natural conversational interactions on their devices.
- Utilized **Parallel Computing** (Parallel Stream in Java) on the multi-POI search algorithm, enabling parallel execution of API calls and data processing, which resulted in a **50%** reduction in API response latency.
- Built a multi-stage **CI/CD** pipeline for the service with **AWS CDK** in **TypeScript**. Implemented the **Integration Test** package and automated the testing within the Alpha stage.

PROGRAMMING PROJECTS

Pintos - OS System **Spring 2023**

- Developed an Operating System with **C** that supports user programs on process control, multi-threading, and file operations.
- Built an expandable file system (Fast File System) that provides a **high throughput rate** for file access.
- Designed and implemented the kernel mode of the OS that can handle system calls, interrupts, priority thread scheduling (MLFQS), user-level synchronization (lock and semaphore), and file I/O.

End-to-End Encrypted File-Sharing System **Spring 2023**

- Constructed a secure file storage server with **Go**, which is designed to allow authenticated users to store and share files.
- Utilized **security techniques**, such as RSA, Argon2, Hash, HMAC, and Digital Signatures, to achieve data protection in an unsecure database by implementing User Authentication and Data Encryption.

NumC **Summer 2022**

- Created a simple version of NumPy with **C** as the underlying code, which optimizes function operations with **SIMD** (Intel Intrinsics), **OpenMP** (Multi-threading), and **Cache blocking**, resulting in a **65 times** runtime speedup.

Spam Email Classifier **Spring 2022**

- Implemented an email classifier in **Python**, leveraging a **logistic regression model** with **scikit-learn**, which achieved **83%** accuracy in classifying spam emails. Utilized **NumPy** and **Matplotlib** to derive and visualize numeric features from email text.

SKILLS

Languages: Java, Python, C, C++, Go, TypeScript, JavaScript, HTML, CSS, SQL, RISC-V, XML
Frameworks and Tools: AWS (Lambda, ECS, API Gateway, S3, DynamoDB), Docker, Dagger, Spring Boot, Node.js, React, Git