An Le

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Education

University of California, Berkeley Berkeley, CA

Bachelor of Arts in Computer Science *Aug. 2020 – May 2024*

Relevant Coursework: Data Structures, Computer Architecture, Algorithms, Databases, Computer Security, Convex Optimization, Machine Learning, Compilers, Operating Systems, Networking Protocols, Computer Graphics

Experience

Software Engineer Aug. 2024 – Present

IXL Learning *San Mateo, CA*

- Working on Rosetta Stone as a part of the RSM Complete team building an end-to-end analytics platform for enterprise and education that will replace the current outdated platform.
- Creating responsive webpages and UI components for reporting and analytics using NextJS, Typescript and Sass.
- Using NestJS, Kysely, and GraphQL to develop an optimized API for querying Rosetta Stone usage data for over 200,000 users and over 43,000 businesses.
- Implementing a new database service using Java, Spring Boot, MySQL, and RabbitMQ to optimize data aggregation for Rosetta Stone usage and managing user data, replacing the need to query databases spread across different microservices.

Projects

Encrypted File Sharing System | *Go, Git*

- Leveraged computer security principles to build a secure file sharing system in Go.
- Developed client API that uses encryption schemes such as AES-CTR and public key encryption to securely share and store files.
- Used other tools such as message authentication codes and digital signatures to add integrity and authenticity for file sharing and storage.

PintOS | *C, x86, Git*

- Worked in a team of 4 to develop a miniature operating system in C.
- Implemented system calls to support executing user programs, multi-threading, and file operations.
- Developed a strict priority scheduler for multi-threaded programs.
- Implemented a file system based on FFS (Fast File System) with a buffer cache to optimize file I/O.
- Wrote detailed design documents to help solidify understanding of project goals and implementation.

BearMaps | *Java, Git, JUnit*

- Created backend for a mapping API of Berkeley, CA.
- Added rasterization API that generates a visual map based on the user's query.
- Built a router that calculates the shortest path between two locations to be displayed to the user.
- Used a Trie to add autocomplete feature, which returns locations that the user is most likely looking for from a partial query.

Technical Skills

Languages: Java, Python, C/C++, SQL, JavaScript/TypeScript, HTML/CSS, Go (Programming Language)
Frameworks/Tools/Libraries: React, Next.js, NestJS, GraphQL, Kysely, JUnit, Git, Bitbucket, VS Code, IntelliJ, NumPy, GDB, Sass, RabbitMQ, Spring Boot