

Alan Qi

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Education

University of California, Berkeley

Bachelor of Arts in Computer Science

Activities: CS Honors Society (UPE) Member, SIG Poker Tournament (Top 10)

Thomas Jefferson High School for Science and Technology

Advanced Studies Diploma

Berkeley, CA

May 2024

3.89 GPA

Alexandria, VA

4.00 GPA

Experience

Amazon

Software Development Engineer Intern

Seattle, WA

May 2023 - August 2023

- Designed Multi-Agent Triager Bot, a service that analyzes logs associated with any user request to an Alexa device, resulting in an average 75% reduction in time used to identify the root causes of bugs affecting Alexa
- Implemented a fully configurable and extensible design that enables users to set up new configurations for the service and onboard the analysis of new bug types within seconds.
- Developed an AWS Lambda service with API Gateway running in CLI and AWS console using Java and TypeScript
- Deployed the tool into production, which is used by over 10 engineers across various Amazon Alexa teams

NextEra Energy, Inc.

Software Engineer Intern

Juno Beach, FL

May 2022 - August 2022

- Designed a proof of concept (POC) demonstrating the viability of blockchain technology in creating an estimated \$80,000 per year worth of business value for offloaded clean energy
- Developed a full stack Proof of Work (PoW) blockchain prototype that handles transactions across wallets where the frontend is built with JS, HTML, and CSS and the backend is built with Python, Flask, and PubNub API
- Presented the POC and the prototype to the executive team and other key stakeholders with demonstrated interest

Biomedical Cybernetics Laboratory

Student Researcher

Boston, MA

September 2019 - January 2021

- Worked under Professor Gil Alterovitz of Harvard Medical School to investigate drug resistant tuberculosis (TB)
- Conducted ML model analysis on 200,000 cells of genetic data with Python modules numpy and pandas to identify genes of interest involved in conferring drug resistance capability to TB strains
- Evaluated gene to gene interactions of various RNA sequences with bash shell scripts using the O2 HPC cluster
- Authored a research paper titled "Characterizing gene-mediated drug resistance in multidrug-resistant TB"

Projects

Secure File System | Golang

- Designed a secure file sharing system between users that protects files against various attacks by adversaries
- Enables users to create an account, log in, perform various file operations in their own namespace such as file storage and modification, share files with other users, and revoke user access to their files

Multigranularity Locking | Java

- Implemented multiple granularity locking (MGL) functionality in a database management system (DBMS)
- Enables concurrency control in DBMS by setting different types of locks (e.g. SIX, IS, IX) on multi-granular objects, enforces multigranularity constraints on all descendants, and escalates locks to ancestors

Gitlet | Java

- Developed a version-control system that mimics the core functionality of the popular software Git
- Enables users to input commands on terminal, regularly saving system state, and handles error cases accordingly
- Features SHA-1 content addressable serialization, file version logging, restoration, branching, and merging

Skills

Languages: Python, Java, SQL, C, C++, Go, TypeScript, JavaScript, HTML, CSS

Frameworks, Libraries, etc.: AWS CDK, AWS Lambda, JUnit, Mockito, Flask, React.js, Postman, PostgreSQL

Developer Tools: AWS Cloudwatch, Git/GitHub (Version Control), Jira (Agile)