

# Alan Chang

📍 Irvine, CA

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## 🎓 Education

### University of California, Irvine

*Bachelor of Science (B.S.) in Computer Science*

**September 2020 - June 2024**

Regents' Scholar & Dean's Honors List (Fall 2020 – Present) - GPA: 3.96

## { } Technical Skills

### Languages

Python, JavaScript, TypeScript, Java, SQL, C, C++, Go, MIPS Assembly, Lisp, Prolog, HTML/CSS

### Frameworks & Libraries

React, Express.js, Node.js, Redux, Flask, Scikit-learn, Numpy, Framer Motion, MySQL, PostgreSQL, MongoDB, Couchbase, Apache Spark, Neo4j, Cassandra

### Other

Git, AWS (S3, RDS, EC2, Lambda, API Gateway, CloudWatch, CloudFormation), Nginx, Bash, Linux

## 📁 Experience

### Amazon

*Software Development Engineer Intern - Seattle, WA*

**June – September (2 years)**

Summer 2022 & 2023

#### Summer 2022

- Prototyped a full-stack configuration system in TypeScript for customized data visualization layouts on AWS Cost Explorer (CE) pages, validating component layouts on save via AWS Lambda and storing layouts with checked versioning to AppConfig.
- Demonstrated successful prototype to organization leaders, leading to formation of a full development team and project estimated to impact 4-6 CE development teams with cumulative saved development costs of \$100,000s in 2023-24.

#### Summer 2023

- Building operational monitoring metrics and dashboards via CloudWatch and internal AWS tools for 90%+ faster detection, diagnosis & resolution of system issues in new AWS CE page/component architecture expected to affect 10s of new CE pages.
- Automating future creation of dashboards for new CE pages via CDK constructs/pipelines and standardized metrics interfaces.

### Commit the Change @ UCI

*Technical Director - Irvine, CA*

**June 2022 - June 2023**

Planned and executed the construction of 5 pro bono, large-scale, customized software projects for nonprofit organizations by UCI student developers during the 2022-23 school year, with expected outcomes of 1,000s in NPO labor hours / \$10,000s+ in funds saved.

- Continued work by previous technical directors to further Agile-ify project development through building & automating 4 project CI/CD pipelines, and driving weekly trajectory planning with technical leads & nonprofit partners for short feedback loops.
- Constructed an internal tool for developers to easily generate pull requests for issues and notify leads on requested code reviews.
- Facilitated project handoffs to nonprofits by migrating internal deployments to external cloud providers (AWS, DigitalOcean).
- Redesigned club website to integrate new design language and Framer Motion animations for a more cohesive & interactive user experience, generating ~20,000 page visits on Google Analytics from August 2022 redesign to August 2023 (+89% YoY increase).

## 📄 Projects

### Hourglass

*React Native, Flask, CockroachDB, scikit-learn, Google Calendar/OAuth2*

**March 2023**

- Created a mobile application for automatically scheduling user tasks within desired time ranges, using a k-nearest neighbors algorithm to recognize scheduling preferences and recommend better schedule orders for users.
- Implemented Google's OAuth2 login flow for connecting to Google Calendar and interfaced with the Google Calendar API for users to import events from their personal Google calendars and export scheduled tasks from the app back to Google Calendar.

### Moodacado

*React, Express.js, scikit-learn, Flask, PostgreSQL*

**March 2021**

- Spotify mood tracking app created at LA Hacks 2021, using recent listening activity, fetched via Spotify authentication flow.
- Trained a machine learning model deployed in Flask to recognize mood descriptors of 2,000+ songs, in order to classify the emotions of users' recently played songs.
- Designed and implemented fullstack functionality for a friend system allowing users to friend each other using Spotify IDs and see each other's recently played songs and moods.