SHANGWAY CALVIN HSU

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EXPERIENCE

Intuit
Mountain View, CA

Software Engineer 2 - Payments Platform | Java, Kotlin, Spring Boot, GraphQl, Kubernetes, AWS, SQL/MySQL — *July 2019 – Present*

- Designed and developed a back-end feature to validate credit card information on Intuit's primary card and bank management system.
  - Researched, tested, and selected the most fitting validation platform provided by a partner card-provider company.
  - Integrated with an external platform to enable card verification for users during CRUD operations using Kotlin.
  - Designed and developed a Spring Boot CronJob that validates historical card information from the database (Oracle SQL) — This job ran as a Kubernetes CronJob.
  - Over 12 million cards are now validated which helped increase the approval rate of payment processing by 10%.
- Optimized cache warming on payment scheduling service to scale-up due to increasing amount of customers.
  - Implemented support for the new MySQL database fields in the Java Spring Boot application on CRUD operations.
  - Updated SQL queries and added indexes to filter entries during cache warming.
  - Developed a MySQL database procedure to help populate new database fields so that entries can be filtered during cache warming.
  - Decreased application's local cache size by 50%, giving the application 2-3 extra years of increased performance while new clients onboard.
- Designed and coordinated with the teams throughout Intuit to bring recurring payments and same-day payment scheduling to the Checkout experience.

Software Engineer 1 - Payments Platform | Java, Spring Boot, GraphQl, Kubernetes, SQL, GoLang, SQL — *Aug 2018 – July 2019*

- Gained ownership of a bank account lookup service within the first 4 months of joining.
  - Designed a scheduled GoLang AWS-Lambda function to help cache banking information in AWS Redis, leading to 1.5x improvement in SLA performance.
  - Migrated this service to Intuit's Kubernetes Platform to remove manual deployment and testing. Engineers developing on this service can now take advantage of the platform's automatic deployment-pipeline, auto-scaling deployment, and support.
  - Parallelized lookup operations with GoRoutines, which further improved SLA performance by 1.25x.
- Built GraphQL APIs to help manage user payment data using Java, Spring Boot, DynamoDB, and Oracle SQL.

Qualtrics
Seattle, WA

Software Engineering Intern | NodeJs, AngularJs, TypeScript, SQL, AWS S3 — *Jun 2017 – Sept 2017*

- Developed a file upload feature for all file types within Qualtrics' Customer Experience Management product.
- Implemented RESTful API with AWS S3 and MySQL database to upload, retrieve, and delete files.
- Architected additional API endpoints and data tables to store file metadata before uploading to AWS S3.
- Integrated and tested features on the product's main page to be used by customers globally.

SSL – Space Systems Loral
Palo Alto, CA

Software Engineering Intern | Python, Javascript, HTML, CSS — *Jun 2016 – Sept 2016*

- Designed an internal RESTful Web Server using various Python frameworks, including Flask and Tornado, resulting in the distribution of satellite telemetry to other programmers.
- Implemented real-time data streaming with WebSockets on both server and client sides.
- Created front-end web interfaces using Javascript/CSS/HTML to generate queries and plot historical and streaming data.

SKILLS

Technologies: Spring Boot, AWS, REST, Web Development, Kubernetes, MySql/Oracle SQL/NoSQL, Kafka, JMS, Git
Languages: Java, Kotlin, Python, GoLang, SQL

PROJECTS

Chorus, Chore Management Web App - http://chore-us.herokuapp.com | NodeJs, ExpressJs, MongoDB — *Jan 2017*

- Developed using NodeJs paired with ExpressJs framework and MongoDB/MLab as database.
- Implemented REST server to allow front-end application to retrieve, add, edit, and delete user, chore, and group data.
- Implemented front-end with Google's Material Design and created responsive behavior using jQuery.

Free & For Sale 3.0 Web App | Typescript, Angular 2, NodeJs, Ionic 2 — *Oct 2016*

- Developed using Angular 2 TypeScript framework paired with Ionic 2 and Firebase as the database.
- Created the front-end interface including the item-listing details, inbox/messages, home-page item displays.
- Implemented middle-layer services that communicated with the database for posting listings, updating ratings, updating bids, managing purchases, and sending out notifications.

EDUCATION

University of California, San Diego
Class of 2018, Magna cum laude
B.S. Computer Science, Minor - Cognitive Science
Cumulative GPA: 3.72 - Major GPA: 3.82