Tri Cao (SWE III - L4)

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Skills

Languages: **Java**, **Python**, Kotlin, TypeScript, JavaScript, Golang, HTML, CSS, SQL, bash
Technologies: Google Cloud Platform, Spanner, gRPC, Protocol Buffer, Terraform, Guice, Spring, Bazel, React, Node.js
Technical fields: Back-End Development, Distributed System, Data Engineering, Front-End Development

Experience

Software Developer | Firebase Backend Google **04-2023 – Current (L4 since 11-2022)**
- Led the development of a new server stack to support Firebase app configurations fetching requests, launching a basic server in PROD for an Early Access Program supporting <10 customers by December 2023, involving extensive research, infrastructure design documentation, and implementation of key components such as load balancing, caching, and database replications.
- Enhanced accessibility for Firebase email alerts (30 variations) by achieving full dark mode support, optimizing screen reader compatibility, and streamlining developer workflow, resulting in reduced KSLO and improved user experience
- Participated in the migration of third-party channel alert delivery systems, including Jira and Slack, to a centralized backend server. Contributed to the development of a CRON job for data migration, designed new RPC APIs, and implemented logic for interaction with external APIs.
- Participating in **an on-call rotation**

Software/Data engineer | Firebase Metrics Google **04-2021 – 04-2023**
- Engineered and maintained data pipeline systems to fuel Firebase usage and revenue data analysis, enabling all of Firebase and cross-PA partners to make data-driven decisions.
- Redesigned Firebase revenue data pipelines with **BigQuery SQL** and internal data warehouse system which allows parallel ad-hoc revenue studies with flexible timelines and data sources, while automating monthly revenue reporting process to save 90% the legacy manual processing time.
- Designed and released a **Python** automated code review bot for data pipeline configurations and SQL queries, permanently enforced good practices and rules for the cross-team shared code base.

Software Engineering Intern | Recommendations AI Google **05-2020 – 08-2020**
- Built and established complex configurations for a new **Java** multi-component service.
- Designed and exposed new RPC APIs to monitor long-running operations and register for front-end notifications.

Software Engineering Intern | Firebase CLI Google **05-2019 – 08-2019**
- Designed, implemented and fully tested Firebase CLI's new project management capabilities. Utilize asynchronous Typescript programming in NodeJS environment.

Software Developer Intern | Cognos Analytics IBM **01-2019 – 04-2019**
- Developed new, highly reusable **React** components to Cognos Anlatylics exploration graph feature, styled with **Sass**. The component allows for subtle configurations to increase its adaptability to different use cases.

Engineering Practicum Intern | Firebase Backend Google **05-2018 – 08-2018**
- Investigated the strongly consistent characteristics of Google **Spanner** database and **Java** server programming.
- Re-implemented the Firebase app creation workflow which enhances immunity from interruption.

Dean Summer Research Internship Carleton University **05-2017 – 08-2017**
- Created a multi-layered tree data structure to efficiently identify all distinct colors within a 2D rectangle on a ground surface

Education

Carleton University *Ottawa, Ontario, Canada*
Bachelor of Computer Science, Co-op Program Jan 2016 – Feb 2021
CGPA: 11.86/12 (**A+**). On **Dean's Honour List** since 2016.