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Kevin Song

Software Engineer

github.com/SongRe
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EDUCATION

University of Waterloo

Bachelor of Software Engineering (BSE)

Sep 2020 - Apr 2025

3.7/4.0 cGPA

TECHNICAL SKILLS

Languages | Java, TypeScript, JavaScript, C++, C, C#, Go, Python, Kotlin, PHP, HTML/CSS, Bash

Technologies | React, React Native, REST APIs, gRPC, Spring, NodeJS, Expo, PyTorch, Svelte, Redux, GraphQL

Databases | SQL, MongoDB, MySQL, Redis

EXPERIENCE

Stealth Startup | Software Engineer Intern - Mobile

May 2024 - Aug 2024

TypeScript, React Native, GraphQL, MySQL, NodeJS

- Optimized explore page venue loading times by **40%** using a pre-fetching algorithm built in **GraphQL** and **TypeScript**, improving user engagement and allowing a seamless scrolling experience
- Architected and implemented a high-throughput PDF receipt generation API handling **10,000+** daily requests with **sub-150ms** response times, enabling automated documentation for all venue bookings

Veeva Systems | Software Engineer Intern - Safety Intake Team

Jan 2024 - Apr 2024

Java, Spring, Mockito, JUnit

- Designed and implemented a multi-threaded XML parsing algorithm in **Java** to transform diverse medical records into database records, achieving a throughput of **300MBps** and facilitating processing of pharmaceutical data
- Expanded platform capabilities by adding localizations, data validation, and error handling to support Japanese medical files, ensuring compliance and usability for pharmaceutical professionals in Japan

Baron Biosystems | Software Engineer Intern

May 2023 - Aug 2023

C++, Svelte, PHP, MongoDB, Redis

- Developed an adaptive workout scheduling algorithm using **C++** and **WebAssembly** to generate personalized training plans tailored to time-constrained fitness targets, increasing premium user engagement by **40%**
- Increased user engagement by **15%** by integrating Garmin API to import workout and fitness data
- Led frontend modernization from **PHP** to **Svelte**, reducing page load times across the platform by **50%**

Prodigy Education | Software Engineer Intern - Educators Team

Sep 2022 - Dec 2022

TypeScript, React, React Native, GraphQL

- Reduced **GraphQL** endpoint latency by **90%** through data loaders and batching
- Boosted teacher activity by **15%** by implementing deep linking with **React Native**, allowing direct navigation from push notifications and streamlining access to key features for educators
- Raised teacher retention rate by **40%** by developing a new onboarding flow in **React**
- Led a data collection initiative using **Segment**, increasing teacher analytics throughput by **30%**

blueRover | Full Stack Developer

Jan 2022 - Apr 2022

JavaScript, React, ExpressJS, NodeJS, MongoDB

- Scaled monthly report generation throughput by over **10x** using **JavaScript** and **ExpressJS**, enabling faster client data insights delivery
- Reduced **RESTful API** latency by **70%** by optimizing server-side report generation, resulting in a significantly enhanced premium user experience

PROJECTS

uC++ Language Server | C++

June 2024 - Present

- Developed a custom language server and VSCode extension for uC++ by extending **Clang**'s infrastructure to support its unique syntax and semantics, enhancing the learning experience for University of Waterloo students studying concurrency
- Integrated the project with the Language Server Protocol (LSP) to enable features like syntax highlighting, code completion, and real-time error detection in IDEs like Visual Studio Code