

Zachary Koo

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Summary

Full Stack Developer with 4 years of professional experience building scalable web applications. Skilled in React, TypeScript, Node.js, and PostgreSQL, with recent focus on AI feature integration and front-end modernization. Passionate about clean code, testing, and delivering great user experiences.

Skills

Languages: Python, JavaScript, TypeScript, Java, C/C++, C#, Go, PHP

Front-End: React, Angular, Vue, Redux, React Query

Back-End: Node.js, Express, Sequelize, Firebase, REST APIs

Databases: PostgreSQL, MySQL, ElasticSearch, SQLite

Tools & Other: AWS (S3), Docker, CI/CD, Cypress, Jest, Storybook

Education

BSc in Computer Science,

University of Calgary, Calgary

Japanese Language Exchange Program: 2018–2019

Senshu University, Tokyo

Experience

Disco inc. - Toronto (Remote), AB | Full Stack Engineer | 05/2025 - CURRENT

- Developed backend services in Go and TypeScript, including curriculum generation, video transcription pipelines, and an LLM-driven learning assistant.
- Engineered major platform features such as the event drawer, member leaderboard, CSV importer, and end-to-end video upload system.
- Led migration from legacy useStyles to modern CSS Modules, improving code maintainability and front-end performance.
- Established an end-to-end testing foundation with robust integration coverage, significantly increasing reliability across core workflows.

GDM inc. - Calgary (Remote), AB | Full Stack Engineer | 05/2023 - 05/2025

- Introduced and standardized modern tooling (Redux, React Query, ESLint), resulting in measurable improvements in performance, consistency, and developer workflow.
- Designed and delivered production features across both front-end and back-end for Converge, taking ownership of complex cross-system integrations.
- Diagnosed and resolved critical test and production issues, improving stability and reinforcing a strong engineering quality culture.

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- Built a comprehensive testing ecosystem including API automation, Storybook-driven component tests, and unit test suites, significantly reducing regression rates.

University of Calgary (Japanese Language Website) - Calgary (Remote), AB | Web Developer | 05/2024 - CURRENT

- Developed an interactive Japanese learning platform using React, including quiz engines, study features, and content delivery tools for students and faculty.
- Partnered directly with academic leadership to define product requirements and shape the educational experience.
- Implemented scalable content storage using Amazon S3, enabling reliable hosting for large media and learning assets.

Honest Empathy - Calgary (Remote), AB | Full Stack Engineer | 09/2022 - 06/2023

- Built modular, responsive React interfaces and scalable multi-tenant REST APIs using Node, Express, and Sequelize.
- Engineered a real-time chat system with Firebase for instant message delivery.
- Introduced automated testing with Cypress and Jest, reducing manual QA time and improving deployment confidence.

Projects

[Distributed System](#) | Academic

- Built a peer-to-peer distributed system in Java using B-multicast and UDP, supporting 120+ concurrent requests with low latency and fault-tolerant synchronization.

Competitions & Certificates

2021| Calgary Collegiate Programming Contest 6th place

2020| Alberta Collegiate Programming Contest 12th place

2019| Japanese N2 Language Test