Alan Zhou

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### **EDUCATION**

### • University of British Columbia

Vancouver, BC

Major in Computer Science, B.Sc.; GPA: 4.10/4.33

Sep 2023 - Jun 2027

- Courses: Software Construction, Models of Computation, Data Structures & Algorithms
- Activities: Competitive Programming Team (ACM ICPC); Film Society; Intramurals

## SKILLS

- Languages: C++, Golang, JavaScript, TypeScript, Python, Kotlin, Java, OCaml, HTML/CSS
- Frameworks/Tools: gRPC, GraphQL, Next.js, Node.js, PostgreSQL, Redis, Git, AWS, Docker, Kubernetes

#### EXPERIENCE

• SafeBite 🗗 Toronto, ON

Software Engineering Intern

May 2024 - Sept 2024

- Architected and implemented the core PostgreSQL database schema, drove key system design decisions, and developed front-end features of the business-facing web app with Next.js.
- Implemented **Stripe webhooks** for seamless payment processing, developed and integrated **Row-Level Security** policies, ensuring robust user data protection and secure transactions.
- Developed and deployed **containerized microservices** using **Docker** to ensure consistency and seamless integration with serverless architecture

• Littledrop 🖸 Vancouver, BC

Software Engineering Intern

May 2023 - Jan 2024

- Utilized Node.js and TypeScript to develop GraphQL APIs for multiple projects, leveraging JWT and OAuth2 for authentication and Redis for session management/caching
- Enhanced performance of the client management portal by reducing database query latencies by over 200% through indexing essential items in the existing PostgreSQL database.

• Mozilla 🗹 San Francisco, CA

Open Source Developer

Jan 2024 - Present

- Worked on **Firefox browser toolkits** in JavaScript and C++. Improved reader mode functionality by rolling out a **custom themes menu** and adding **accessibility features**, leveraging **Mercurial** for version control and **Phabricator** for collaboration.
- Developed custom **unit and integration tests** using **Mocha** to validate new features and code changes. Utilized in-house CI/CD tools to automate the testing process.

#### Projects

• UBC Talks ♥ □

- Developed a reddit-esque discussion platform using **Typescript**, **Next.js**, **and Supabase** aimed at facilitating communication and collaboration related to courses/course selection among UBC students
- Implemented **OAuth2.0** flow for authorization, and **deployed serverless container** to Google Cloud Run using **Docker**

• PrettyGrader • Sep 2023

- Developed a Chrome extension using HTML, CSS, and JavaScript that revamped the default UI of the autograder for my CPSC 110 class, used by over 800 students
- Improved readability by implementing a **clean design**, and added extra features such as **syntax highlighting** and improved dashboard navigation