

## TECHNICAL SKILLS

**Languages:** Python, Java, C++, Go, TypeScript, JavaScript, C#, C, Kotlin, CSS, HTML, SQL, ECMAScript  
**Frameworks/Tools:** React, Angular, Node, Express, Redux, Jest, GraphQL, REST, MongoDB, DynamoDB, S3, Spring Boot, OpenAI API, Prompt Engineering, Jetpack Compose, Unity, Git, Agile, LangChain

## EDUCATION

**Bachelor of Computer Science**, University of Waterloo, cGPA: **96.09%** Sep 2022 - Apr 2025  
**Bachelor of Computer Science**, University of New Brunswick, cGPA: **4.3 / 4.3** Sep 2020 - Aug 2022

- Recognized as top **1/256** of CS undergraduate class by receiving the **Computer Science Prize**.

## WORK EXPERIENCE

**Amazon** May 2024 - Aug 2024  
**Software Development Engineer Intern** Vancouver, BC

*Java | AWS CDK | Lambda | S3 | SNS | SQS | Kinesis | Cloudwatch*

- Developed a pipeline aggregating data from **~18k API requests/min**, supporting a new payment method outage detection system projected to **decrease mean time to detection by 24%**.
- Analyzed cost of several implementation approaches, opting for a path with **83% less cost**.

**Khan Academy** Jan 2024 - Apr 2024  
**Software Engineer Intern** Mountain View, CA

*React | Go | TypeScript | Python | LangChain | GPT-4 | OpenAI API | GraphQL*

- Implemented AI-generated message suggestions for chatbot users, yielding **~7.8 million yearly recommendations**; collaborated with data scientists to create A/B tests.
- Developed "resume conversation" functionality, **saving ~16200 lost conversations annually**.
- Ported Go-based AI workflow to Python-powered pipeline with LangChain.

**Khan Academy** May 2023 - Jul 2023  
**Software Engineer Intern** Mountain View, CA

*React | Go | GPT-4 | OpenAI API | GraphQL | Flow | Jest | CSS*

- Developed and deployed one of the most-requested user features for **Khanmigo AI tutor chatbot**: stopping generation of GPT-4 AI responses, **yielding 975k feature uses/yr**.
- Collaborated on "**Khanmigo Insights**" to enable personalized user interactions by letting Khanmigo learn about the user; **improved response consistency by ~70%** through prompt engineering.
- Led architectural planning** for Khanmigo anti-cheat, **preventing 99% of cheating** with Khanmigo.

**Populus Global Solutions Inc.** May 2022 - Aug 2022  
**Full-Stack Developer Intern** Fredericton, NB

*Angular | TypeScript | Java | Spring Boot | REST | Jest | JUnit | Postgres | SQL | CSS*

- Implemented in-app release notes, **saving 100 hrs/yr** of customer update meetings.
- Converted client-side bulk data export to server-side, **cutting export time by 67%**.

**Mach85 Inc.** Sep 2021 - Dec 2021  
**Junior Software Developer Intern** Fredericton, NB

*C++ | Java | Qt | JavaFX | CMake | Conan*

- Redesigned still-image analysis software to work with real-time video, **cutting analysis time by ~90%**.
- Converted ~40%** of Java codebase to optimized C++, resulting in a **~250% performance improvement**.

## PERSONAL PROJECTS

[Orbit](#)  
*Kotlin | Amazon Web Services (AWS) | DynamoDB | Amazon S3 | Amazon EC2 | Jetpack Compose*

- Android app** for finding, sharing, and saving events taking place in the Waterloo region.

[Imglabs.io](#)  
*React | JavaScript | Next.js | Tailwind UI | Node.js | Supabase*

- Image proxy service** using edge computing. Primarily worked on the user-facing website and **auth**.

[Gun Time](#) | Grade: 100%

- FPS platformer/puzzler game, **over 100 hrs** of development time using **Unity** with **C#**.