

Alex Quarrie

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EDUCATION

University of Waterloo

Waterloo, ON

B.A.Sc. Honours Computer Engineering

Sep. 2023 – Apr. 2028

- **Distinctions:** GPA 4.0/4.0, 5× Dean's Honours List, 4× Outstanding Co-op Performance Rating
- **Relevant Coursework:** DSA, Systems programming, Operating systems, Databases, Networks, Compilers

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, Go, Rust, SQL, Swift, HTML, CSS

Frameworks: React, Next.js, React Native, Node.js, Express, FastAPI, Flask, Django, Tailwind, PyTorch

Tools: AWS, Azure, Docker, PostgreSQL, MongoDB, Redis, Firebase

EXPERIENCE

Roo — Software Engineer

San Francisco, CA Jan. 2026 – Present

- Designed and built features for our continuous education platform using Express, Prisma, React, and AWS, driving a **20%** increase in traffic and extending the platform to our React Native mobile app
- Led a design overhaul and performance improvement project for our university platform with TailwindCSS and Redis increasing user retention by **11%** and application rates by **50%**
- Wrote unit, integration, and E2E tests with Jest and Cypress, achieving **95% coverage** across new features

Deloitte — Software Engineer

Toronto, ON Apr. 2025 – Aug. 2025

- Created a financial analysis and RAG chatbot PoC using LangGraph, Matplotlib, and AI Search, acquiring a **95%** stakeholder approval rating
- Built an automated data pipeline with a custom ML model built using Pytorch and deployed using Azure Functions, Blob Storage, and SQLServer for a **\$2M engagement**
- Increased automated test coverage by **30%** across critical backend logic and UI using Pytest and Selenium

WSIB — Software Engineer

Toronto, ON Sep. 2024 – Dec. 2024

- Built a web app using Flask, React, Docker, SQL, and Azure OpenAI that ingests and indexes internal documents, enabling fast semantic search and saving **1k+** employees **2 hours/day** each
- Revamped CI/CD pipelines with Azure and GitHub Actions improving deployment efficiency by **25%**
- Researched and prototyped emerging tools including Terraform and Microsoft Power Platform for future adoption

OpenText — Software Engineer

Waterloo, ON Jan. 2024 – Apr. 2024

- Developed tooling and scripts using Bash, PowerShell, and Python to reduce operational task times by up to **95%**
- Managed deployment and support of Windows, macOS, and Linux systems and VMs for **1k+ users** using Azure

PROJECTS

What's That Dog | *PyTorch, Flask, React Native, AWS, Docker*

- Developed a convolutional neural network image classification model to identify dog breeds using PyTorch and deployed it via a Dockerized Flask API on AWS ECS with Fargate achieving 97% accuracy
- Built a cross-platform mobile application enabling real-time image uploads, predictions, and confidence scoring using React Native, Expo, S3 and MongoDB

CommunoLearn | *Next.js, TypeScript, Prisma, Google Cloud, Vercel*

- Created a full-stack collaborative productivity platform supporting scheduling, meetings, project tracking, messaging, and GenAI features
- Implemented type-safe APIs with tRPC and Zod on Next.js server routes, PostgreSQL storage, real-time messaging via WebSockets, and Google Calendar/Drive integrations

SpaSense | *ESP32, C++, MQTT, Go, SQLite*

- Designed an IoT hot tub monitor using an ESP32 to collect temperature, pH, and environmental data, transmitted telemetry over Wi-Fi via MQTT and housed the system in a custom waterproof 3D-printed enclosure
- Engineered a Go backend that stores sensor telemetry in SQLite, enabling real-time data access and historical analysis served to web and mobile clients