

# Steven Cao

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## EDUCATION

**University of Waterloo** — *Honours Bachelor of Computer Science, AI Specialization* Sep 2022 — Aug 2027

- Machine Learning, Multi-Agent Systems, Computer Vision, Operating Systems, Cryptography, Compilers, Optimization
- Cumulative grade: 91% (4.0 GPA)

## EXPERIENCE

**Software Engineer** May 2026 — Aug 2026

*Pinterest · Platforms Metric Quality* Toronto, ON

- Deployed domain-specific code generator to produce type-safe constants across Android, iOS and Web repositories, eliminating key-related developer errors, accelerating code reviews and LLM-assisted workflows.
- Optimized Android impression batching to reduce network bottleneck and increase crash-free sessions by **0.2%**.
- Built an internal tool to catalog and track DSL key usage across multiple repositories, centralizing discovery and management.

**AI Developer** Jan 2026 — Apr 2026

*Rocscience · AI Research* Toronto, ON

- Containerized Windows geotechnical engineering software with Wine for execution in Linux Docker containers, enabling on-demand access through an MCP server.
- Developed cost-efficient **ECS** infrastructure for containerized applications using Redis, PostgreSQL and a backend microservice written in Go, supporting user requests, workload orchestration, and usage tracking.

**Mobile Developer** May 2025 — Aug 2025

*Compass Digital* Toronto, ON

- Developed cross-platform food ordering apps with **Flutter** for iOS, Android, and Web, serving more than **100,000** customers.
- Implemented meal plan ordering workflow for more than **100** universities, including presence-based QR-code order verification to reduce food waste and prevent invalid order collection.
- Integrated Google Pay and Apple Pay into Flutter on Web client, enabling **15%** more users to complete payments on platform.

**Android Platform Software Developer** Sep 2024 — Dec 2024

*Ford Motor Company* Waterloo, ON

- Developed application and service layer driver-assist features targeting Ford's next-generation in-vehicle infotainment system.
- Built real-time **C++20** Hardware Abstraction Layer services for towing, safety, and HMI features, connecting Android userspace applications to vehicle network nodes in accordance with AUTOSAR standards.
- Implemented vehicle configuration UI and functionality in **Kotlin** and **Java** with the Android SDK, translating Figma designs into production features.

## PROJECTS

### Pixiverse

- Designed and developed a productivity tracker game in Godot with real-time multiplayer function using Nakama that delivers responsive remote-player behavior under network variance.
- Built interactive mapping, objective navigation, and companion path-following systems.

### Jonsole

- Developed ESP32 firmware in C/FreeRTOS for a mixed-control desktop controller, integrating debounced GPIO, joystick ADC sampling, OLED screen status display, and microphone capture.
- Architected desktop app stack in Rust/Tauri connecting embedded hardware to CLI coding agents through async control routing.

### Proxmox Server

- Built and administered a **Proxmox** home server hosting DNS, media streaming, file synchronization, and game servers.
- Provisioned Kubernetes VMs with **Terraform** and deployed services using reusable **Helm** charts and **Kustomize** overlays.
- Deployed **Llama.cpp** with CUDA acceleration to serve local LLMs for self-hosted AI applications.

## SKILLS

**Languages** Java, Kotlin, Python, C, C++, Rust, Dart, TypeScript, Go, SQL

**Frameworks** Android SDK, Flutter, Node.js, React, FastAPI

**Tools** Linux, AWS, Docker, Terraform, PostgreSQL, Redis, Git, VSCode, IntelliJ IDEA, Android Studio