

Brayden Zhong

613-898-4999 | zhongbrayden@gmail.com | linkedin.com/in/brayden-zhong | github.com/b8zhong

EDUCATION

University of Waterloo

Electrical and Computer Engineering, BAsC

Sep. 2024 – Apr. 2029

Waterloo, ON

- Relevant Coursework: Fundamentals of Programming (C++)

EXPERIENCE

Software Engineering Intern

Stealth Startup

Mar 2025 - Present

Mountain View, CA

- Consumer AI @ Series A (a16z) - built user-facing product and performance analytics.
- Implemented model selection routing algorithms and evaluation ranking.

Software Developer Co-op

Solink

Jan. – Apr. 2025

Kanata, ON

- Developed an event flow system for AI-generated security alerts, allowing users to verify incidents through an interactive UI. Integrated real-time event notifications and dynamic workflows, reducing false alarm investigations by 20%.

Undergraduate Research Assistant

Information Retrieval @ Castorini, under Dr. Jimmy Lin

Nov. 2024 – Present

Waterloo, ON

- Co-author: "Retrieval with Learned Dense and Sparse Representations Using Anserini" (SIGIR Resource 2025)
- Added support for image input and indexes for multimodal searching with benchmarks across eight distinct querying methods.
- Built a distributed searching implementation that achieved 2x faster query processing and 30% improved memory efficiency for HNSW indexes.
- Developed a LLM interface for Anserini's distributed search system, allowing users to query traditional indexes using natural language.

Software Engineer Commissioner

UW Engineering Society

Dec. 2024 – Present

Waterloo, ON

- Co-led the migration of the EngSoc website from PHP/WordPress to a Next.js frontend, improving page load speeds by 40% and enhancing mobile responsiveness for over 6,500 monthly visitors.
- Leveraged Amazon S3 for scalable storage of exam bank files, reducing retrieval times by 50% from existing local storage solution.

Software Developer

UW Reality Labs (Student Design Team)

Sept. 2024 – Jan. 2025

Waterloo, ON

- Maintainer on a developer toolkit for VR development: supporting efficient machine learning models recognizing first-person hand gestures.
- Implemented real-time text generation for object tags in virtual environments.

PROJECTS

Meta ThreatExchange - OSS | *Python, C++*

- Migrated legacy file-and-pickle storage in python-threatexchange CLI to dbm, improving reliability and preparing for deprecation in v2.0.0.
- Integrated FAISS indexing (IndexBinaryIVF, IndexBinaryMultiHash), refactoring storage for modular backend selection.
- Optimized query performance with adaptive indexing, reducing lookup times by 30% on large datasets.

TECHNICAL SKILLS

Programming Languages: JavaScript, TypeScript, HTML/CSS, Python, Java, C++, SQL, Bash

Technologies/Tools: React, Next.js, Node.js, Docker, pytest, Git, VS Code