

Ethan Qiu

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EDUCATION

University of Toronto

Bachelor of Science — Computer Science Specialist

Sep. 2024 – Present

GPA: 3.82/4.0

EXPERIENCE

Software Engineer (Co-op)

General Dynamics Mission Systems–Canada

May 2025 – Present

- Designed and developed a key plugin tool, including location configuration and support using **Java Maven**, **PowerShell scripting**, and custom installers.
- Built a custom application testing library in **Python**, increasing testing efficiency by **50%**.
- Participated in **agile sprints**, **PI planning**, and **code reviews** to improve delivery speed and code quality.

Full Stack Developer

University of Toronto Machine Intelligence Student Team (UTMIST)

May 2025 – Present

- Implemented full authentication system and backend endpoints using **Django REST APIs** and **PostgreSQL**.
- Streamlined deployment workflows with **GitHub Actions CI/CD**, reducing deployment errors by **90%**.
- Supported **1,000+** students and researchers, ensuring reliable access and rapid iteration cycles.

Tournaments Director

Hart House Debating Club

Sep. 2024 – Present

- Led a team of **20+** organizers, planning workflows that enabled **30%** of deliverables to be completed early.
- Developed **Python and JavaScript Automation Tools** that reduced turnaround time on key tasks by **25%**.
- Organized events for **360+** students, achieving a **91%** satisfaction rate and exceeding revenue targets by **\$7,000**.

PROJECTS

Bounce Back — Mental Wellness Mobile App | React Native, Firebase, PyTorch, BERT, Docker, Google Cloud

- Developed a mobile app using **React Native** and **Firebase** to support emotional recovery.
- Built fine-tuned **BERT** models with **PyTorch** for real-time sentiment analysis and emotion classification, used in conjunction with **LLMs** to generate personalized recommendations.
- Containerized and prepared deployment infrastructure with **Docker** and **Google Cloud** for future scalability.

Hyacinthe — AI Navigation for Visually Impaired Users | Python, PyTorch, YOLO, OpenCV

- Implemented a real-time navigation system achieving **90%** sign detection accuracy using fine-tuned **YOLO** model.
- Built end-to-end speech guidance system, integrating custom **STT** and **TTS** modules for real-time audio feedback.
- Won **1st place at GeeseHacks 2025** among **200+ participants** for technical innovation and social impact.

RT1M — Financial & Goal Planning App | React, Firebase, LangChain, Vercel

- Created a web app using **React** and **Firebase** to enable personalized, detailed long-term financial goal setting.
- Built an AI chatbot using **LangChain**, **LLMs**, and a **RAG** workflow for dynamic goals and financial guidance.
- Implemented and deployed the app on **Vercel** for beta testing.

Shop Buddy — AI Shopping Assistant | React, Node.js, TypeScript, Express

- Developed a responsive frontend using **React** and Vite, featuring customizable filters and multi-store browsing.
- Built a **RAG** workflow with SerpAPI and **OpenAI API** to generate solutions and product recommendations.
- Created a secure **backend** with **Node.js**, **Express**, **Helmet**, and **CORS**, ensuring safe API interactions.

TECHNICAL SKILLS

Languages: Python, Java, JavaScript/TypeScript, C/C++, SQL

Frameworks: React, Django, Node.js, Express

Tools: Docker, Git, GitHub, GitLab, Firebase, Google Cloud

Libraries: PyTorch, LangChain, pandas, NumPy

Concepts: REST APIs, CI/CD, Agile, Distributed Systems