

SEAN YANG

Seeking Software Engineering Internships (16 Weeks; May–Aug 2026) / Waterloo SE 2030 / C++, Python, ML, Full-Stack

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EDUCATION

University of Waterloo

Candidate for Bachelor of Software Engineering – Cumulative GPA: 4.0/4.0

Expected May 2030

- **Activities:** Wautomous Robotics Engineer, Quizbowl Team

PROJECTS

Wundernn Market State Prediction

Wunderlab ML Challenge

Oct 2025 – Dec 2025

- Designed a **Transformer-based time series model** for noisy financial sequences
- Outperformed the participant average (0.396 vs 0.309 mean R²) and placing **top 5% of 2900+ competitors**
- Evaluated sinusoidal vs learnable positional encodings, ultimately combining both to improve long-range dependency capture
- Tuned model depth and dropout to reduce overfitting, prioritizing validation performance over leaderboard gains
- Trained and evaluated models locally on GPU, iterating on architecture under practical compute constraints

Bucket (Student Dashboard)

Personal Project

Nov 2025 – Present

- Built and deployed a **full-stack student dashboard** using React, Next.js, GraphQL (Hasura), and PostgreSQL
- Launched and operated the platform for real users, reaching **40+ monthly active users** with **493+ created resources**
- Designed backend data models and **GraphQL APIs** to support course management, grade tracking, and real-time queries
- Implemented **Google OAuth** authentication and **Dockerized microservices** for local development and deployment

Combat Tagging (Minecraft Mod)

Personal Project

Mar 2025 – Present

- Developed and maintained a **Java-based Minecraft mod** enhancing combat mechanics applying event-driven architecture
- Reached **700+ downloads** through iterative feature development and community feedback

seanyang.me

Personal Portfolio

Feb 2025 – Present

- Designed and deployed a web portfolio using React, Next.js, Tailwind CSS with a lightweight Flask backend
- Achieved a **100/100** Lighthouse accessibility score and **1k+ monthly visitors**

LEADERSHIP AND ACTIVITIES

WATonomous

Robotics Software Engineer

Waterloo, Ontario

Sep 2025 – Present

- Developed concurrent robotics software in C++ using **ROS 2** for autonomous vehicle systems
- Built and evaluated predictive models for external agent behavior to improve safety decisions
- Maintained **Docker-based development environments** to support reproducible testing and deployment

AYJ Coding Club

Senior Lecturer & Problem Setter

North York, Ontario

Jun 2024 – Jun 2025

- Led bi-weekly lectures on algorithms and data structures for competitive programming to **50+ high school students**
- Authored original problems and automated **C++ graders** with **250+ total submissions** from students on the club's online judge

HONORS AND AWARDS

Certificates of Distinction in the Euclid, CSMC, & CCC (Sr. Div.) Contests

Issued by University of Waterloo Centre for Education in Mathematics and Computing (CEMC)

North York, Ontario

Jun 2025

Computer Science & Chemistry Excellence Awards

Issued by A.Y. Jackson Secondary School

North York, Ontario

Jun 2025

SKILLS

- **Programming Languages:** C++, Python, Java, Javascript
- **Frameworks & Technologies:** Git, Linux, React, Next.js, Docker, Tailwind CSS, GraphQL (Hasura), Flask
- **Machine Learning:** PyTorch, Time Series Modelling, Model Evaluation & Tuning