

# SEAN YANG

Software Engineering Intern (May-August 2026) / Waterloo SE 2030 / C++, Java, ML, Full-Stack

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## EDUCATION

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### 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

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### Wundernn Market State Prediction

Wunderlab ML Challenge

Oct 2025 – Dec 2025

- Built a custom **Transformer-based time series model** for market state prediction across 32 features
- Achieved **0.396 mean R<sup>2</sup>** through architectural tuning and training optimization
- Implemented custom positional encoding and trained models locally on GPU, placing in the **top 5% of 2500+** participants

### Bucket

Personal Project

Nov 2025 – Present

- Built and deployed a **full-stack student dashboard** using React, Next.js, GraphQL (Hasura), and PostgreSQL
- 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
- Launched and operated the platform for real users, reaching **40+** monthly active users with **493+** created resources

### aicheye's Combat Tagging

Personal Project

Mar 2025 – Present

- Developed and maintained a **Java-based Minecraft mod** enhancing combat mechanics
- Applied OOP design and event-driven architecture for stable performance on low-resource servers
- Reached **700+ downloads** through iterative feature development and community feedback

### seanyang.me

Personal Project

Feb 2025 – Present

- Designed and deployed a personal portfolio using React, Next.js, and Tailwind CSS
- Built a Flask backend for dynamic content and rate limiting, serving **3k+ requests/month**
- Achieved a **100/100 Lighthouse accessibility score** and **1k+ monthly visitors**

## LEADERSHIP AND ACTIVITIES

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### 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

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### 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

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