SEAN YANG

Software Engineering Intern (May-August 2026) / UWaterloo Software Engineering '30 / C++, Java, ML, Full-Stack

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EDUCATION

University of Waterloo   **Waterloo, Ontario**
Candidate for Bachelor of Software Engineering - **CGPA: 4.0/4.0**   Sep 2025 – May 2030 (expected)
- **Activities**: Watonomous Robotics Engineer, Quizbowl Team

LEADERSHIP AND ACTIVITIES

WATonomous   **Waterloo, Ontario**
Robotics Software Engineer   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   **North York, Ontario**
Senior Lecturer & Problem Setter   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

PROJECTS

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^2** 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**

HONORS AND AWARDS

Certificates of Distinction in the Euclid, CSMC, & CCC (Sr. Div.) Contests   **North York, Ontario**
Issued by *University of Waterloo Centre for Education in Mathematics and Computing (CEMC)*   Jun 2025

Computer Science & Chemistry Excellence Awards   **North York, Ontario**
Issued by *A.Y. Jackson Secondary School*   Jun 2025

SKILLS

- **Programming**: Java, C/C++, Python, JavaScript, Tailwind CSS, React, Next.js, ROS 2, Flask, Bash/Shell Scripting
- **Machine Learning**: PyTorch, Transformer Architectures, Deep Learning, NumPy, scikit-learn
- **Tools**: Unix/Unix-like Systems (Linux), Git, CI/CD, Docker, GitHub Actions