

SEAN YANG

Waterloo, Ontario, Canada

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EDUCATION

University of Waterloo

Candidate for Bachelor of Software Engineering

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

Waterloo, Ontario

Sep 2025 – May 2030 (expected)

LEADERSHIP AND ACTIVITIES

WATonomous

Robotics Software Engineer

- Developing and maintaining software for an autonomous vehicle using ROS 2 and C++
- Designing and testing predictive modelling systems for external agent behaviour to enhance vehicle safety
- Collaborating with a multidisciplinary team to integrate software with hardware components

Waterloo, Ontario

Sep 2025 – Present

AYJ Coding Club

Senior Lecturer & Problem Setter

- Led bi-weekly lectures on advanced programming topics including recursion, dynamic programming, graph algorithms, and trees
- Authored original competitive programming problems in C++ with 250+ total submissions from students
- Implemented custom graders to support automated evaluation of problems on the club's C++ online judge
- Mentored junior members in algorithm design and problem-solving strategies

North York, Ontario

Jun 2024 – Jun 2025

PROJECTS

seanyang.me

Personal Project

- Built and deployed a personal portfolio website from scratch using Tailwind CSS, React, and Next.js
- Integrated a serverless REST API with Google Cloud Run for dynamic content, chosen for cost efficiency and simplicity
- Designed UI/UX independently, achieving a 100/100 accessibility score on Google Lighthouse
- Deployed with Netlify CI/CD, custom domain, and HTTPS; reached 1.04k unique visitors in the last 30 days

Feb 2025 – Present

aicheye's Combat Tagging

Personal Project

- Developed a Minecraft mod (700 LOC, 10 classes) in Java with Gradle to enhance default combat mechanics
- Applied OOP design, event handling, and resource management to ensure stable performance on hardware-limited servers
- Iterated on features based on community feedback, reaching 390+ downloads worldwide on Modrinth

Mar 2025 – Present

Quoridor

A.Y. Jackson Secondary School

- Implemented the full strategy game Quoridor in Java (1.7k LOC, 5 classes) as a solo project
- Designed a minimax-based game agent and improved runtime by 100x using alpha-beta pruning and transposition caching
- Developed pathfinding algorithms and heuristic ordering to strengthen AI move selection
- Documented all classes with Javadocs to ensure maintainability and clarity

May 2024 – Jun 2024

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)

- Achieved top 25% nationally across multiple mathematics and programming contests

North York, Ontario

Jun 2025

Computer Science & Chemistry Excellence Awards

Issued by A.Y. Jackson Secondary School

- Recognized among top students in Computer Science and Chemistry over four years of study

North York, Ontario

Jun 2025

SKILLS, LANGUAGES, INTERESTS

- **Soft Skills:** Critical Thinking, Leadership, Conflict Resolution
- **Programming:** Java, C/C++, Python, JavaScript, Tailwind CSS, React, Next.js, ROS 2, LaTeX, SQL (Supabase)
- **Tools:** Unix/Unix-like Systems, Git, CI/CD, Docker, Overleaf, Figma, Foxglove Studio
- **Interests:** Films, Political Philosophy, Swimming, Biking, Trivia