

Aaron Ye

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Education

University of Waterloo

Waterloo, ON

Bachelor of Mathematics, Honours Mathematics

- **Relevant coursework:** CS 135 (Designing Functional Programs), CS 146 (Elementary Algorithm Design and Data Abstraction (Advanced Level))
- **GPA:** 92% overall, 94% faculty average (Math + CS courses)

Experience

Fullstack Developer ↗

Sep 2024 – April 2025

EurekaHACKS | *JavaScript/TypeScript, Next.js/React, PostgreSQL, AWS, TailwindCSS*

Remote, Canada

- Engineered a comprehensive hackathon site, including event information, an admin dashboard, and an applicant portal with a secure authentication system featuring email verification using AWS SES, OAuth login, password reset emails, and session handling, ensuring applicant data privacy and platform integrity with zero security incidents across **400+** users.
- Supported **400+** users and **200+** concurrent users with fast, reliable application submission and review by designing and building the relational database schema and all queries, reducing redundancy and optimizing performance.
- Reduced no-show rate by **76%** by implementing a streamlined RSVP feature, enabling organizers to accurately forecast attendance and optimize food, venue, and resource planning.
- Improved efficiency and user satisfaction across **32,000+** platform views by designing a responsive landing page and dashboard and implementing backend workflow logic, enabling faster submission and review cycles.

Freelance Software Engineer

Mar 2023 – Mar 2024

Freelance | *JavaScript/TypeScript, discord.js, Node.js, Docker, MySQL, SQLite*

Remote, Canada

- Processed **600+** cryptocurrency transactions via REST APIs by developing Discord bots that automated tipping, payments, and giveaways, ensuring secure and reliable operations for server users.
- Supported **3,100+** users by building custom bots with Discord.js and MySQL/SQLite, including moderation features like blacklisting users from using the bot to prevent misuse.
- Ensured reliable bot operations and secure feature usage by preventing **100%** of unauthorized bot commands through user-specific authorization and error handling, supporting smooth interaction across multiple servers.

Technical Projects

Dime Defender (Hack the North 2024 Finalist) ↗

Sep 2024 - Sep 2024

- Built a Chrome Extension that intercepts Shopify and Amazon checkout pages, extracting and processing **100%** of cart data (items, quantities, and prices), then triggering an interactive, Ace Attorney-style debate between AI lawyers to help users decide whether to complete the purchase with real-time insights and near-zero (<**100ms**) latency.
- Achieved uninterrupted, **real-time** courtroom debates by implementing audio prefetching strategies, eliminating gaps between spoken lines and keeping user engagement high.

Mr. Goose (JAMHacks 2025 First Place) ↗

May 2025 – May 2025

- Developed Mr. Goose, an AI-powered VS Code extension that guides users through coding challenges by prompting them with questions and updates code context on each file save, ensuring real-time, guidance with **100%** file coverage.
- Architected a state-based interaction framework for Mr. Goose, enabling dynamic learning sessions where users fill in code blanks, with adaptive hints and feedback based on their progress to promote active problem-solving.

Awards

11x Hackathon Winner

Various Dates

- Notable wins: Hack the North 2025 & 2024 finalist, JAMHacks 2025 first & best developer tools, Hack the Valley sponsor prize, EurekaHACKS 2024 first place, STEMist Hacks 2024 first place, FOCUS Hacks 2024 first place

Technical Skills

Languages: Java, Python, Go (Golang), C++, SQL, JavaScript (JS), TypeScript (TS), Kotlin, HTML, CSS, LaTeX, Racket

Libraries/Frameworks: React, Next.js, SvelteKit (Svelte), Astro, ElysiaJS, Tailwind CSS, Flask, Gin, FastAPI, React Native, NumPy, Matplotlib, MediaPipe, OpenCV, PyTorch, Pandas

Other: Object-oriented programming (OOP), Git, Docker, Linux, PostgreSQL, MySQL, SQLite, Amazon Web Services (AWS), Vercel, Socket.io, Prisma, OAuth, Node.js, Supabase, Bun