Ryan Hui

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TECHNICAL SKILLS

Languages: Python, Java, TypeScript, JavaScript, C, HTML, CSS
Frameworks: React, React Native, Next.js, Node.js
Developer Tools: Git, Docker, Railway, Swagger/OpenAPI, AWS, Google Cloud
Databases: MongoDB, Prisma ORM, PostgreSQL
Libraries: Express.js, Jest, Tailwind CSS

EDUCATION

University of Toronto — Toronto, ON
Honors Bachelor of Science in Computer Science (CO-OP), Minor in English — *Sep. 2023 – May. 2028*
- Courses on Software Engineering, Data Structures and Analysis, Complexity, Software Tools and Systems

EXPERIENCE

Software Developer — Sep. 2025 – Dec. 2025
Savi Finance — *Toronto, ON*
- Built a full-stack **invoicing system** on a **fin-tech** platform, using **TypeScript**, **Go**, and **MongoDB**
- **Migrated** GraphQL backend to Go, improving API performance by 40%, ensuring forward compatibility
- Implemented **RAG pipeline** for AI-concierge features, prompt engineered for product's specification while maintaining prompt safety standards
- Established a **CI/CD** pipeline enforcing Bazel builds, automated tests, and formatting checks across all PRs, standardizing and hardening the team's deployment workflow.
- Configured cloud deployment pipeline using **Docker** and **AWS EC2**, enabling reproducible builds and remote testing via **ngrok**

IT Internship — June 2024 – Sep. 2024
Malvern College International — *Hong Kong*
- Engineered an Arduino-based computer-provisioning system in C++, **eliminating manual setup** steps and significantly accelerating the device onboarding workflow.
- Built a **scheduled** Python XML pipeline to auto-extract and normalize data for 100+ staff, improving reliability.
- Developed a scalable Google Apps Script data pipeline to **fetch**, **clean**, and **aggregate** 4,000+ student records from external APIs, improving data accessibility and reducing administrative overhead.
- Optimized spreadsheet **automation** by rewriting functions, reducing execution time across 1,000+ data rows.

PROJECTS

wingMan | *TypeScript, Next.js, React, Tailwind CSS, Prisma* — Nov. 2025 - Present
- Built a **full-stack** AI-powered dating advice planner with Next.js frontend and RESTful API backend using Prisma ORM with PostgreSQL for data persistence
- Implemented **OAuth 2.0** authentication via NextAuth.js with Google provider, session management, and guest access tokens for anonymous users
- Designed **relational database** schema with normalized tables for user profiles, date records, preferences, and chat history with foreign key constraints and indexed queries for optimized retrieval
- Engineered **system prompts** for Claude API integrating real-time Google Maps API data to generate location-aware date plans with venue recommendations, ratings, hours, and contingency options

Custom Terminal Shell | *C, Unix System Calls, TCP/IP* — Jan. 2025 – April 2025
- Engineered a fully functional command-line interface in C, managing process creation via **fork** and **exec** to execute built-in commands and external system binaries
- Implemented advanced process control allowing asynchronous background execution and sequential pipelines using **pipe** and **dup2** for inter-process I/O redirection
- Architected a custom environment variable system utilizing dynamic memory allocation (**malloc**/**free**) to efficiently store and manipulate user-defined states without memory leaks
- Integrated **TCP/IP** networking using Berkeley sockets to establish client-server communication, enabling remote command execution and robust inter-process data exchange