

WILLIAM YANG

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EDUCATION

• University of Waterloo

Honours Bachelor of Software Engineering, Co-op

September 2025 - April 2030

Waterloo, Canada

SKILLS

- **Languages:** Python, C++, C, TypeScript, JavaScript, SQL, Bash
- **Frameworks:** React.js, Next.js, TailwindCSS, Node.js, FastAPI, Django, React Native
- **Tools:** REST APIs, Websockets, AWS, Docker, Linux, Git, Gitlab CI/CD, PostgreSQL, Supabase, Vercel, Agile

EXPERIENCE

• Software Developer

Digital Flight Dynamics

March 2025 - September 2025

Remote

- Designed 20+ scalable React components in TypeScript for high fidelity simulation of Airbus A350-1000 Onboard Information System, shipping to **20,000+ Discord community members**
- Developed an interactive loadsheet calculator with real-time weight & balance computations using React hooks and centralized state management, supporting core pre-flight workflows within the OIS
- Refactored 15+ modular UI components across OIS dashboard and settings menus, reducing code size by ~40% and improving maintainability

PROJECTS

• Maatchaa - Finalist at Hack The North

Cohere, Pinecone, Gemini, Blacksheep, Nano Banana, Supabase, PostgreSQL, Full-Stack Development

September 2025



- Achieved **Top 12 Finalists** out of **1,000+ participants** and **250+ projects** at Canada's largest hackathon
- Built Maatchaa, a platform that connects Shopify storefronts with trending YouTube Shorts using semantic search with Cohere vector embeddings and Pinecone Vector DB
- Engineered video processing pipeline with YouTube Data API for ingestion, Gemini 2.5 Flash for multimodal content analysis, and Supabase PostgreSQL for scalable storage
- Developed Next.js dashboard with TypeScript and Tailwind CSS for real-time analytics and merchant insights

• VibeTrade - Cursor for Day Trading

LangGraph, AI Voice Agents, FastAPI, WebSockets, Next.js, Radix UI, Supabase, Alpaca Trading API, ElevenLabs, Service Workers

November 2025



- Engineered a LangGraph agent with 5 tool-calling endpoints to enable real-time agentic decision-making over user portfolio based on live BTC data.
- Built a FastAPI backend with 20+ REST/WebSocket endpoints for live price streams, trade execution, ElevenLabs STT/TTS pipelines, and cross-service event propagation, achieving sub-200ms server-side latency.
- Developed a Next.js + Radix UI trading dashboard with TradingView charts and Supabase-backed portfolio state, allowing for real-time alerts, and voice agent based interactive trading.

• Canadian Computing Competition Solutions Repository

React.js, TailwindCSS, JavaScript, PocketBase, Agile, Full-Stack Development

September 2024 - September 2025



- Revamped and scaled the largest solution repository for the CCC using React.js, serving **3,000+ users** and **270+ curated solutions**
- Developed Python automation pipeline to reorganize and standardize 1,000+ test case files with inconsistent file paths and data formats, enabling automated test case access
- Migrated legacy HTML-only site to modern React.js + TailwindCSS SPA, improving UX and mobile compatibility
- Integrated community forum using PocketBase API, enabling 30+ community-submitted solutions

• SATDuel - Competitive SAT Prep Platform

React.js, Django, SQLite, Python, REST APIs, Netlify, AWS, Full-Stack Development

July 2024 - September 2024



- Built full-stack gamified SAT prep platform with multiplayer duels, real-time scoring, and user authentication
- Developed Django REST API with 10+ endpoints for authentication, game logic, and session persistence via SQLite database
- Automated SAT question acquisition using Python BeautifulSoup web scraper to extract and parse 1,000+ questions from public question banks