

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, JavaScript, TypeScript, HTML/CSS, C, C++
- **Frameworks:** React.js, Next.js, React Native, TailwindCSS, SvelteKit, Django, FastAPI, Node.js, Expo
- **Technologies:** REST APIs, PostgreSQL, MySQL, SQLite, Git, Docker, Vercel, Netlify, npm, JetBrains, AWS

EXPERIENCE

• Software Developer

Digital Flight Dynamics

March 2025 - September 2025

Remote

- Designed 20+ production-grade React components in TypeScript simulating Airbus A350-1000 Onboard Information System, shipping to **20,000+ Discord community members**
- Developed interactive loadsheet calculator with real-time weight & balance computations using React hooks and state management via Git-based workflow
- Refactored 15+ modular UI components across OIS dashboard and settings menus, reducing code size by ~40%

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

• Canadian Computing Competition Solutions Repository

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

September 2024 - Present



- 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
- 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



- Co-architected full-stack gamified SAT prep platform with multiplayer duels, serving 50+ registered users
- Built Django REST API with 10+ endpoints handling game state management and user sessions via SQLite database
- Built React frontend with 30+ reusable components using React hooks for real-time game state synchronization and interactive UI
- Automated SAT question acquisition using Python BeautifulSoup web scraper to extract and parse 1,000+ questions from public question banks

• Mathify - Top 9 at IgnitionHacks 2024

React.js, Wolfram Alpha API, TensorFlow.js, OpenAI API, Manim

August 2024



- Selected as **(1 of 9 winners out of 434 participants)** for best use of Wolfram Alpha API at IgnitionHacks 2024
- Built React.js frontend with interactive problem submission interface, allowing users to input mathematical equations and receive animated step-by-step solutions
- Integrated backend to handle Wolfram Alpha API requests for equation parsing and symbolic computation