

# 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++, Bash, SQL
- **Frameworks:** React.js, Next.js, React Native, TailwindCSS, SvelteKit, Django, FastAPI, Node.js, Expo, shadcn/ui
- **Technologies:** RESTful APIs, PostgreSQL, Git, Docker, Vercel, Netlify, Supabase, AWS, OAuth, Agile, CI/CD

## EXPERIENCE

### • Software Developer

March 2025 - September 2025

Digital Flight Dynamics

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 centralized state management across dashboard components
- 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

September 2025

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



- 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

September 2024 - Present

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



- 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

July 2024 - September 2024

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



- 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
- Implemented React frontend with 30+ reusable components and React hooks for dynamic UI updates and user interactions
- 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

August 2024

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



- 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