

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, Express.js, Expo
- **Technologies:** REST APIs, PostgreSQL, MySQL, SQLite, Git, Docker, GCP, Vercel, Netlify, npm, bun, JetBrains

EXPERIENCE

• Software Developer

March 2025 - September 2025

Digital Flight Dynamics

Remote

- Designed **20+ production-ready** React components replicating Airbus A350-1000 Onboard Information System for Microsoft Flight Simulator, awaiting release to **20,000+ Discord community members**
- Engineered loadsheet calculator, and settings menus using React, TypeScript, and SVG via Git-based workflow
- Refactored **15+ modular components** across OIS dashboard, reducing code redundancy by **~40%**
- Meticulously referenced official Airbus Flight Crew Operating Manuals (FCOMs) to ensure authentic A350 operational behavior and instrument accuracy

PROJECTS

• Canadian Computing Competition Solutions Repository

September 2024 - Present

React.js, TailwindCSS, JavaScript, PocketBase



- Revamped, scaled, and open-sourced the largest solution repository for the CCC in **3 weeks**, with **3,000+ users** and **270+ curated solutions**
- Leveraged Python to automate, standardize, and simplify access to **1,000+ test cases** for CCC problems
- Migrated legacy HTML-only site to a modern and responsive React.js + TailwindCSS interface
- Integrated PocketBase for a community forum, allowing **dozens** of new user-submitted solutions

• SATDuel - Competitive SAT Prep Platform

July 2024 - September 2024

React.js, Django, SQLite, Python, REST APIs, Netlify



- Co-architected full-stack gamified SAT prep platform with multiplayer duels, tournaments and practice modes, serving **50+ registered users**
- Developed React frontend with **20+ interactive components** and Django REST API with **10+ endpoints** handling auth, questions, match history, and scoring via SQLite backend
- Automated SAT question acquisition using Python scraper to extract **1,000+ SAT questions** from questionbanks
- Built client-side adaptive difficulty algorithm for solo practice without server overhead

HONORS AND AWARDS

• Finalist - Hack The North

September 2025

Cohere, Pinecone, Gemini, Blacksheep, Nano Banana, Youtube Data API, Supabase, PostgreSQL



- Built Maatchaa, a platform that connects Shopify storefronts with trending YouTube Shorts using Cohere multimodal vector embeddings, Gemini video analysis, and AI-generated product visuals
- Engineered video processing pipeline with YouTube Data API, Gemini 2.5 for content analysis, and Supabase PostgreSQL for storage, with React frontend for merchant dashboard and product discovery
- Achieved **Top 12 Finalist** out of **1,000+ participants** and **250+ projects** at Canada's largest hackathon

• Wolfram Award for Best Use of API - IgnitionHacks 2024

August 2024

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



- Developed Mathify, a web app converting math problems into animated explanations using Wolfram Alpha API (parsing), Manim (diagrams), and OpenAI API (explanations)
- Built React frontend with problem submission interface and integrated Python backend for Wolfram API calls
- Selected as **1 of 9 winners** out of **434 participants** for best use of Wolfram Alpha API