WILLIAM YANG

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Education

- **University of Waterloo** *September 2025 - April 2030*
  Honours Bachelor of Software Engineering, Co-op Waterloo, Canada

Skills

- **Programming & Languages:** Python, JavaScript, TypeScript, C, C++
- **Frameworks & Tools:** React.js, Next.js, React Native, TailwindCSS, SvelteKit, Django, FastAPI, PocketBase, PostgreSQL, SQLite, Git, Expo, Docker

Experience

- **Software Developer** *March 2025 - Present*
  Digital Flight Dynamics Remote
  - Engineered high-fidelity Airbus A350-1000 instrument replicas using React and SVG for a study-level flight simulation
  - Fully developed OIS loadsheet+settings menus, shipped to production using professional Git workflow
  - Refactored **15+** modular components across OIS dashboard, reducing code redundancy by **~40%**
- **Competitive Programming Tutor** *September 2023 – March 2025*
  MMHS Computer Science Club Markham, Canada
  - Mentored **5–10** students weekly across **20+** sessions, fostering algorithmic problem-solving skills
  - Delivered lessons in Python to diverse skill levels, adapting teaching style to maximize engagement
  - Analyzed attendance and engagement data to refine sessions, boosting retention and participation

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
- **A350 Flight Management System Portfolio** *August 2025 - Present*
  Next.js, TypeScript, React.js, TailwindCSS, SVG
  - Engineered a fully interactive Airbus A350 FMS-style portfolio with functional cockpit printer and subsystems in TypeScript, replicating real-world avionics precision
  - Designed custom SVG graphics and UI components based on Airbus instruments for detailed immersion

Honors and Awards

- **Finalist - Hack The North** *September 2025*
  Cohere, Pinecone, Gemini, Blacksheep, Nano Banana
  - 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
  - Achieved **Top 12 Finalist** out of **1,000+ participants** 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 in **36 hours**, a web app converting math problems into animated explanations using Wolfram Alpha API (parsing), Manim (diagrams), and OpenAI API (explanations)
  - Selected as **1 of 9 winners** out of **434 participants** for best use of Wolfram Alpha API
- **Software Engineering Entrance Scholarship** *May 2025*
  University of Waterloo
  - Awarded to several outstanding students for academic excellence and extracurricular initiative