

WILLIAM YANG

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SKILLS

- **Programming Languages:** Python, JavaScript, TypeScript, C, C++
- **Technologies & Frameworks:** React.js, TailwindCSS, Next.js, SvelteKit, Bootstrap, Vercel, Django, PocketBase, PyGame, Git, SQLite, Postgres



EXPERIENCE

- **Software Developer** March 2025 - Present
Digital Flight Dynamics Remote
 - Engineered **high-fidelity instrument replicas** using React and SVG, for a **study-level simulation** of the Airbus A350-1000 in Microsoft Flight Simulator
 - Optimized **component modularity** in personal code, reducing code bloat by **~40%**
 - Actively contributed through **pull requests, code reviews, and issue tracking** using a professional GitHub workflow in a **5M+ line codebase**
- **Competitive Programming Tutor** September 2023 - March 2025
MMHS Computer Science Club Markham, Canada
 - Mentored groups of **5–10 students** in over **20+ club sessions**, improving problem-solving skills and preparing students for programming contests
 - Developed **lesson plans covering Python, data structures, and algorithms** for various skill levels
 - Monitored student engagement through centralized attendance to **adapt sessions** based on student needs

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 
 - Designed a **true-to-life Airbus A350 FMS**-styled portfolio to showcase passion of aviation and tech
 - Modeled **functional cockpit printer, and other subsystems** to highlight **careful attention to detail**
 - Heavily utilized **SVG** for custom graphics inspired by real Airbus UI

HONORS AND AWARDS

- **Wolfram Award for Best Use of API - IgnitionHacks 2024** August 2024
React.js, Wolfram Alpha API, TensorFlow.js, OpenAI API 
 - Selected as one of **9 winning projects out of 434 participants** at IgnitionHacks 2024
 - Developed **Mathify** in **36 hours**, a web-app which generates video solutions to math problems in the style of 3Blue1Brown
- **Second Place Overall - RecessHacks 4.0** September 2024
Python, OpenAI API, React.js 
 - Achieved **2nd place out of 200+ teams** at RecessHacks 4.0
 - Built **NoteConvert** in **48 hours**, an AI web-app that transforms audio recordings into structured notes
- **Software Engineering Entrance Scholarship** May 2025
University of Waterloo
 - Awarded to **several outstanding** students for **academic excellence and extracurricular initiative**

EDUCATION

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