WILLIAM YANG

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Education

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

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 modular components, reducing code redundancy by **~40%**
- **Competitive Programming Tutor** *September 2023 - March 2025*
  MMHS Computer Science Club Markham, Canada
  - Mentored groups of **5–10 students** in over **20+ club sessions**, enabling a majority of students to achieve certificates of distinction on the Canadian Computing Competition
  - Developed lesson plans covering Python, data structures, and algorithms for various skill levels
  - Monitored attendance and engagement data to optimize lesson material, sustaining student engagement

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

- **Wolfram Award for Best Use of API - IgnitionHacks 2024** *August 2024*
  React.js, Wolfram Alpha API, TensorFlow.js, OpenAI API
  - 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 API
- **Second Place Overall - RecessHacks 4.0** *September 2024*
  Python, OpenAI API, React.js
  - Built NoteConvert, an AI web app transforming audio lectures into structured, searchable notes using OpenAI API (transcription/summarization) and React.js
  - Achieved **2nd place** out of **200+ participants** at RecessHacks 4.0
- **Software Engineering Entrance Scholarship** *May 2025*
  University of Waterloo
  - Awarded to **several outstanding** students for academic excellence and extracurricular initiative

Skills

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