

ETHAN XAVIER GAN

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Summary of Qualifications

- Microsoft Azure-certified aspiring engineer with experience designing accessible AI-driven solutions for financial fraud.
- Self-driven and fast-learning web application developer using React.js and Github.

Experience

WE Accelerate - Microsoft Division

January 2025 – April 2025

Project Team Member

Waterloo, ON

- Independently designed the full user experience and interface for a conceptual AI-powered fraud prevention tool for seniors, emphasizing clarity and minimal prompting.
- Created UX flow diagrams and interactive wireframes to simulate interactions with tools such as Azure AI Foundry, Azure Search, and DeepSpeech.
- Collaborated bi-weekly with a 5-person team via Microsoft Teams to align product scope, define user needs, and present a functional design proposal.

Principal Academy

February 2023 – May 2025

Science and Technology Education Instructor

Vaughan, ON

- Designed and taught a game-oriented 1-week object-oriented curriculum for Python, Java and Scratch for capacities of 20+ students of grades 4-12 for the online Summer Coding Camp.
- Applied Adobe Creative Cloud to optimize UX, branding, logo design and multimedia content creation on www.principalacademy.ca and promotional campaigns of up to 10% conversion.

Thornhill Secondary School Computer Club

September 2023 – June 2024

Coding Contest Manager

Thornhill, ON

- Led a team of students to launch coding contests on graph theory and other concepts for 50+ participants.
- Built automated input/output test suites to streamline problem submission evaluation to save 40+ hours of judging.

Projects

Portfolio Website 🐙 | *React, JavaScript, React Router, CSS, HTML, Markdown, Netlify*

- Built a responsive, modular React website featuring dynamic project showcases rendered from Markdown and organized using component-based architecture.
- Achieved Lighthouse scores of 92 (Performance), 95 (Accessibility), and 100 (Best Practices) through code splitting and semantic HTML.

TankRunners: Procedural Tank Game 🐙 | *Java, JFrame, JPanel, OOP*

- Developed a procedurally generated dungeon adventure game featuring adaptive AI enemies and dynamic map generation, enabling rigorous pathfinding algorithm testing.
- Implemented an AI-driven enemy system utilizing weighted randomness for decision-making and A* pathfinding for optimized navigation, reducing resource load and enhancing gameplay fluidity.

WalkAlong Hovercraft 🚢 | *Arduino C, SketchUp, TinkerCAD, 3D Printing & Design, Servo/Motors*

- Built a functional 1/32 scale hovercraft to demonstrate airflow and Bernoulli's principle.
- Used Arduino C to communicate rudder movements and motor intensity through a remote receiver, SketchUp for drafting 3D designs, and TinkerCAD for 3D printing.

E-Waste Everywhere Website 🐙 | *CSS, HTML, GitHub Pages*

- Built a responsive static website using GitHub Pages to raise awareness about e-waste and promote sustainable practices.

Skills

Languages: Python, Java, JavaScript, C++, Arduino C, SQL

Web Development: React.js, HTML, CSS, Markdown, GitHub Pages, Netlify

Tools & Platforms: Git, GitHub, Bash, VS Code, Figma, Anaconda, Azure

Certifications: Microsoft Azure AI Fundamentals, Microsoft Azure Fundamentals, TCPS 2: CORE-2022, WHMIS 2015.

Relevant Coursework: Digital Computation (*C++*), Visualization (*SolidWorks/CAD*), Elementary Engineering Math (*MATLAB*), Intro Design (*Human Factors and Design Process*)

Education

University of Waterloo

September 2024 – April 2029

Bachelor of Applied Science in Systems Design Engineering, Honours

Waterloo, ON

- Cumulative average: 89%
- **Awards:** President's Scholarship of Distinction (2024), TELUS Entrance Scholarship (2024)