ETHAN XAVIER GAN

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TECHNICAL SKILLS

Python, Java, C++, Arduino C, SQL, JavaScript, Cloud Computing (Azure Certified), SolidWorks, MATLAB, GitHub, CSS, HTML, Square Commerce, Adobe Creative Cloud, Microsoft Office, Google Suite.

EXPERIENCE

Project Team Member (January 2025–April 2025)
WATERLOO EXPERIENCE (WE) ACCELERATE PROGRAM, Waterloo, ON
- Designed an AI-Chatbot-driven fraud prevention tool for seniors using Microsoft Azure services to help reduce the increasing rate of financial fraud among seniors.
- Planned user experience interactions through UX Design flow diagrams and a wireframe mockup to minimize user prompting required before a fraud score.
- Collaborated with a remote team of five over Microsoft teams bi-weekly to develop a viable product idea.

Science and Technology Education Instructor (2023-Present)
PRINCIPAL ACADEMY, 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, leading to 60% growth.

Coding Contest Manager (2023-2024)
THORNHILL SECONDARY SCHOOL COMPUTER CLUB, Thornhill, ON
- Led a team of students to launch coding contests on graph theory and other concepts for 50+ participants.
- Created automated input/output test suites for judging problem submissions saving 40+ person-hours.

Media Coordinator (2022-2024)
PRINCIPAL ACADEMY, Vaughan, ON
- 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.
- Customized credit/debit card payment process on Square platform for course SKUs.

PROJECTS

WALKALONG HOVERCRAFT | Arduino C, SketchUp, TinkerCAD, 3D Printing & Design, Servo/Motors (Link)
- 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. Wrote test cases for C code and power vs. weight refinements.

TANKRUNNERS | Java, JFrame, JPanel, OOP (Github)
- Developed and debugged a procedurally generated dungeon adventure game with adaptive AI enemies and random map generation to test pathfinding algorithms.

E-WASTE EVERYWHERE | CSS, HTML, GitHub (Github)
- Leveraged GitHub web-hosting to highlight environmental impact of e-waste and promote sustainable practices.
- Implemented CSS for user-centric responsive design on various devices.

EDUCATION

Bachelor of Applied Science in Systems Design Engineering, Honours (Graduating May 2029)
UNIVERSITY OF WATERLOO, Waterloo, ON
Relevant Courses: Microsoft Azure AI and Azure Fundamentals Certified, WHMIS 2015 Certified, SYDE 121 (C++), SYDE 101L (Solidworks/CAD), SYDE 113 (MATLAB), CodeAcademy Full Stack Engineer
Awards: President's Scholarship of Distinction 2024, TELUS Entrance Scholarship 2024