

Stanley Fu

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EDUCATION

University of Western Ontario – Bachelor of Engineering in Electrical Engineering + Ivey Business Sep 2024 - Apr 2029

Double Major in Electrical Engineering and Ivey Business

- **88% Avg**, Dean's Honor List.

EXPERIENCE

VP Marketing | UWO Algorithmic Trading Sep 2025 - Present

University Of Western Ontario

- Lead marketing efforts as the club transitioned to a new marketing team
- Work closely with members to document and share research.

Founder & Lead Developer | uwoeng.com Apr 2025 - Present

React, JavaScript, Vite, HTML/CSS, Supabase (Postgres)

- An **academic analytics platform** for Western Engineering students that centralizes GPA trends, course/professor ratings, and program pathways into one data-driven dashboard.
- Built a system that annually **ingests student form submissions** and compiles them into **visual**, year-over-year engineering discipline averages, enabling students to understand GPA cutoffs and discipline trends.
- Designed a **relational Postgres database** supporting **CRUD operations** for course and professor ratings, reviews, comments, and aggregated analytics.
- Developed a **course progression view** to help students navigate engineering pathways, including Western's dual-degree structure, which lacks centralized online resources.
- **Collaborate** with engineering students to validate course sequences and ensure academic accuracy.

CAD & 3D Printing Instructor | STEMphilic kids camp Mar 2023 – Apr 2023

Fraser Academy, Vancouver BC

- Designed and delivered the **first CAD and 3D printing curriculum** at STEMphilic, introducing students to parametric modelling, design constraints, and additive manufacturing fundamentals.
- Planned and managed the equipment budget, selecting cost-effective 3D printers, filament, tools, and safety equipment to support hands-on learning within **budget constraints**.
- Taught hands-on workshops covering CAD workflows, slicing, printer setup, and troubleshooting, guiding students from concept to finished prints.

PROJECTS

Western Engineering Discord Community | Founder & Administrator May 2024 – Present

- Founded and manage a 500+ member Discord community for Western Engineering students, supporting course discussions, academic collaboration, and resource sharing.
- Partnered with the Undergraduate Engineering Society (UES) to distribute official announcements and improve student engagement across engineering programs.

AI-Powered Business Case Analysis and Study Platform | Full-Stack Web App June 2025 - Sep 2025

OpenAI Responses API, React, JavaScript, Tailwind CSS, Supabase

- Built a platform that **uploads and auto-segments casebooks** into individual cases, pairing each case with a **side-panel AI chat** for real-time analysis.
- Implemented **Retrieval-Augmented Generation (RAG)** using indexed case content and the **OpenAI Responses API** to deliver grounded, case-specific AI reasoning.
- Designed a **content hashing system** to detect duplicate cases, reducing redundant token usage and lowering inference costs.
- Extending the platform with **AI-generated narration (ElevenLabs)**.

Synchronous Finite State Machine (FSM) Design on FPGA | Digital Logic & FPGA Nov 2025 - Dec 2025

Quartus Prime, ModelSim, Verilog, DE1-SoC FPGA

- Designed and implemented two digital logic assignments with uniquely defined **FSM** specifications, including state encoding, input sequences, and outputs.
- Built synchronous finite state machines using **D flip-flops**, with logic minimized via **Karnaugh maps** and **Boolean algebra**.
- Analyzed timing behavior and validated correctness through simulation and **waveform** inspection against personalized requirements.

Analog Function Generator PCB Design & Verification | *Analog Electronics & PCB Design*

Nov 2025 – Dec 2025

Altium Designer, Micro-Cap, TL082 Op-Amps, Oscilloscope, Dual Power Supply

- Designed and analytically calculated a multi-stage analog function generator (square, triangle, sine) for a specified target frequency.
- Verified circuit behavior using Micro-Cap simulations and validated performance through hardware testing with a dual power supply and oscilloscope.
- Designed the PCB in Altium Designer, prepared files for fabrication, assembled and soldered components onto the manufactured PCB, and tested the final device to achieve a 10 Vp-p sine output.

Power Outage Monitoring and Data Visualization System | *Embedded + Client Software*

Jan 2025 - May 2025

ESP32, INA219 Current Sensor, C++, Chart.js

- Built an **ESP32**-based power monitoring device as part of a **6-person team**, integrating a current sensor, RTC, and SD logging to capture timestamped outage data for assessing power reliability in hospitals and healthcare facilities.
- Developed a companion dashboard to visualize power usage and outages, using **interactive Chart.js graphs**.

SKILLS

Code: C, C++, Python, Java, JavaScript, SQL, HTML/CSS, MATLAB, Git

Software: Quartus Prime, LTspice, MATLAB, Fusion360, Micro-Cap, Altium Designer, Microsoft Office Suite

Hardware: ESP32, DE1-SoC FPGA

Tools / Libraries: React, Tailwind CSS, Chart.js, Supabase, OpenAI Responses API, Playwright, Selenium

Other Coursework: Algorithms, Data Structures, Statistics, Digital Systems, Circuit Analysis