Alexander Haigh

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CORE SKILLS

Python, C/C++/C#, SQL, CUDA, OPENMPI, Tensorflow, Pytorch, Microsoft Office Suite

EDUCATION

University of Manitoba — Winnipeg, Manitoba, Canada

Bachelor of Science in Computer Engineering — GPA: 3.64/4 — December, 2025

- Co-op/IIP option - Software Engineering Focus - Arts Minor
- Dean's Honor List, Faculty of Engineering

WORK EXPERIENCE

Amiron Ventures — Winnipeg, Manitoba

Software Engineer — October, 2025 – Present

- Developed and maintained web and mobile applications deployed across Android and iOS platforms.
- Authored technical documentation for cross-functional engineering projects
- Designed AI agents to streamline and accelerate core business operations
- Built CAN bus integrations to export and manipulate vehicle telemetry data

University of Manitoba — Winnipeg, Manitoba

Teaching Assistant — September, 2025 – December, 2025

- Assisted in teaching and administering a senior-level engineering course.
- Graded assignments and projects; provided academic support during weekly office hours.
- Delivered lectures and led class discussions in the professor's absence.

Norima Consulting Inc — Winnipeg, Manitoba

Student Developer, Banking and Wealth Management — April, 2025 – August, 2025

- Designed and trained YOLOv8/YOLOv11 object detection models for high-speed sports tracking, driving a data collection pipeline and achieving a 96% average F1 score.
- Worked with tools like pytorch, roboflow, .NET, and react.
- Completed project enabled sports coach to increase his portfolio of managed clients.

Student Developer, Insurance Transformation — April, 2024 – August, 2024

- Built a data-driven financial planning tool reducing planner workload from 40 hours to 15, integrating OpenAI APIs for intelligent document processing.
- Engaged clients through regular consultations to ensure technical development remained aligned with stakeholder needs and project objectives.

Wawanesa Insurance — Winnipeg, Manitoba

Application Developer, Application Delivery — May, 2023 – September, 2023

- Contributed to maintenence of a P&C web application, supporting server integration and connectivity.
- Developed JavaScript automation tests that reduced manual testing time from hours to minuites.
- Used SQL scripts to diagnose database issues and support application debugging.

PROJECT WORK

ESP32 Interactive LED Gaming System (UMake 2026) — March, 2026

- Collaborated in a team to design an interactive ESP32-based gaming system during UMIEEE UMake 2026, achieving the highest score in the competition.
- Developed firmware to control dual 8×8 LED matrices and a custom wireless controller using ESP-NOW.
- Created a real-time web interface using HTML, CSS, JavaScript, and Node.js, supported by a reverse proxy to manage multiple user connections.

Elmer's Manufacturing Grain Cart Simulator — September, 2024 – April, 2025

- Worked with a team of engineering students to implement a showroom simulator for the Elmer's manufacturing Haulmaster grain cart model thereby saving countless man hours for transport of heavy machinery.
- Implemented I2C and CAN bus protocols to allow for communication between an existing Elmer's control module, a Raspberry Pi, and an STM32 powered PCB. Final product achieved a 100ms latency for data transfers between components.
- Made frequent presentations to stakeholders to demonstrate recent progress.
- Final project achieved a grade of A+ and won the IEEE Winnipeg Award.