

# Ethan Walsh

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## EDUCATION

### McMaster University

Hamilton, ON

B. Eng in Software Engineering with Co-op - GPA 4.0

Apr. 2026

- Awards: Anna Marie Hibbard scholarship (Highest first year average), McMaster Provost's Medal
- Relevant Coursework: Data Structures & Algorithms, Object Oriented Programming, Software Design I
- Extracurriculars: McMaster Artificial Intelligence Society

## TECHNICAL SKILLS

**Languages:** Java, Python, C, C++, SQL, JavaScript, TypeScript, HTML, CSS, MATLAB

**Frameworks\Libraries:** React.js, Node.js, Next.js, MongoDB, TailwindCSS, FastAPI, OpenCV

**Tools:** Unix, Docker, Firebase, Figma, Git/GitHub, Latex

## EXPERIENCE

### Bruce Power

Apr. 2024 - Aug. 2024

Data Analytics Intern

Tiverton, ON

- Automated processes for analyzing the maintenance backlog at a nuclear power plant, providing important information on fifty thousand work orders to management and accelerating work completion timelines.
- Architected the development of a work calendar application to track ongoing maintenance work in the nuclear facility, allowing for clearer tracking.
- Increased reporting efficiency and modified business insight reports to offer a more recent, accurate, and insightful dataset.

### Fermi Solutions

May 2023 - Aug 2023

Software Engineering Intern

Port Elgin, ON

- Streamlined application and approval timeline by 50% by developing a custom web application for digital management of temporary storage in large-scale nuclear facilities (roughly 500 users).
- Engineered a custom API to serve information regarding storage areas, providing key insights to a power plant undergoing major refurbishments.
- Created intranet system to act as a central hub for tracking engineering project progress and delivering company news and events, as well as storing reports and procedures.

### Nuclear Innovation Institute

Feb. 2022 - Jun. 2022

Program Developer

Port Elgin, ON

- Spearheaded the creation of an online Python learning platform to be used by roughly 4000 high school students in the local board of education.
- Produced coding challenges to increase student engagement, to be used by teachers with no code knowledge.
- Implemented the division of the Nuclear Innovation Institute website to house the program using HTML and Wix.

## EXTRACURRICULARS

### McMaster Artificial Intelligence Society

Oct. 2023 - Present

Project Lead

Hamilton, ON

- Served as a project lead for a team of six within the McMaster AI Society in the creation of a piano learning tool meant to bridge the gap between current digital solutions/apps and in-person lessons.
- Coordinated team meetings, work designations, and timelines, as well as taking on support roles to ensure success.
- Authored a project research paper and design documentation to be demonstrated at Canada's undergraduate artificial intelligence conference, CUCAI.

## PROJECTS

**pianAI** | Python, OpenCV, MediaPipe, Streamlit

- Leveraged OpenCV and artificial intelligence to provide feedback to users on hand positioning and musical technique.
- Interpreted incoming MIDI and audio signals to provide correctness statistics and data on musical notes played.

**Praxi** | Python, Django, TailwindCSS, HTML

- Developed a language learning application to improve comprehension by hosting live chat rooms for different languages, allowing users to talk in real-time with fluent speakers.
- Incorporated artificial intelligence via the ChatGPT API to allow for users to practice and train.