

Ethan Walsh

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EDUCATION

McMaster University

Hamilton, ON

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

Sep. 2022 - Apr. 2026

- Awards: Anna Marie Hibbard Scholarship (Highest combined average in first year), McMaster Provost's Medal, and McMaster Dean's List
- Relevant Coursework: Data Structures & Algorithms, Object Oriented Programming, Software Design I

TECHNICAL SKILLS

Languages: Java, Python, C, JavaScript / TypeScript, HTML / CSS, MATLAB

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

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

EXPERIENCE

Project Lead

Oct. 2023 - Present

McMaster Artificial Intelligence Society

Hamilton, ON

- Led a team of 6 students in the McMaster Artificial Intelligence Society in the creation of a piano learning tool, meant to bridge the gap between current digital solutions/apps and in-person lessons.
- Coordinated meetings and work between team members and monitoring progress on a weekly basis.
- Authored a project research paper and design documentation to be demonstrated at Canada's undergraduate artificial intelligence conference, CUCAI.

Software Engineering Intern

May 2023 - Aug 2023

Fermi Solutions

Port Elgin, ON

- Developed a full-stack web application with React, TypeScript, Node.JS, MongoDB, and FastAPI to streamline the management of temporary storage in large-scale nuclear facilities for roughly 500 users.
- Digitized the process of applying for and moving temporary storage areas, reducing the overall process time by at least 50%.
- Designed the REST API with FastAPI and Python, as well as created the database with MongoDB to handle data transfer and storage of information.

Program Developer

Feb. 2022 - Jun. 2022

Nuclear Innovation Institute

Port Elgin, ON

- Spearheaded the creation of an online Python learning platform using Trinket.io and Python to be used by four thousand students (grade 9) in the Bluewater District School Board.
- Generated programming challenges to increase student engagement that can be used by teachers with no code knowledge.
- Created the division of the Nuclear Innovation Institute website to house the program using HTML and Wix.

Computer Science Teaching Assistant

Sep. 2021 - Jan. 2022

Saugeen District Senior School

Port Elgin, ON

- Improved student learning by teaching programming with games in Python and Pygame, along with modular program shells.
- Presented concepts and games in lecture to students, providing open-ended challenges for students to take on.
- Held one-on-one assistance sessions to improve student performance and ensure assignment completion.

PROJECTS

pianAI | Python, OpenCV, React.JS, FastAPI, TailwindCSS

- Leveraged OpenCV and artificial intelligence, along with Python and MIDI/Audio data processing to provide feedback to users on hand positioning and technique.
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Praxi | Python, Django, TailwindCSS, HTML

- Created 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.
- Also incorporated artificial intelligence via the ChatGPT API to allow for users to practice and train.
- Created as a part of a group of 4 students for DeltaHacks 10, McMaster University's annual hackathon.