

IAIN MACDONALD

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EXPERIENCE

Overview: Software developer and project lead with hands on experience in AI driven projects across diverse fields, including image recognition and text analysis. Proficient in building and optimizing backend systems in Python and Java, along with frontend development in React.js. Skilled in problem solving and enhancing efficiency through code reviews, sprints, and meeting deadlines.

McMaster AI Society | Project Lead | Sept 2024 - Present | [Github](#)

- Led a team of 6 to develop an AI-based art recommendation tool. Optimized image recognition techniques within a convolutional neural network using a **dataset of over 4,000 images** for various mediums, including paint, pencil crayons, and markers.
- Successfully oversaw front and back-end progress, boosting project efficiency through targeted task assignments and weekly meetings, leading to all deadlines being completed at least **1 week ahead of schedule**.

Google Developer Student Clubs | Software Developer | Sept 2024 - Present | [Github](#)

- Contributed to developing an AI Ocular Disease Identifier for eye scans, designed for potential use in medical diagnostics.
- Collaborated within a team of 10 to implement machine learning and enhance backend functionality.
- Coordinated through sprints to meet tight deadlines, consistently completing tasks **days ahead of schedule**.

Tutor.AI | Software Consultant | Mar 2024 - Aug 2024

- Reviewed and optimized backend code for a startup's AI tutor student matching system, speeding up development by **2 weeks**.
- Analyzed program flow, algorithms, and vectorization techniques providing recommendations to boost efficiency and matching accuracy.
- Collaborated closely with project leads in weekly meetings and daily check ins.

McMaster AI Society | Software Developer | Oct 2023 - Mar 2024 | [Github](#)

- Developed a Python based document Q&A tool leveraging Large Language Models, Vector Databases, and Similarity Search APIs.
- Collaborated with a team of 7 to enhance user interaction and improve performance, achieving up to an **80% response accuracy**.
- Presented at the Canadian Undergraduate Conference on AI, which led to a collaboration with the Tutor.AI startup.

Digital Fire | IT Co-op Placement | Feb 2022 - Jun 2022

- Configured and upgraded laptops and computers, improving efficiency for hardware and software integration.
- Developed a custom inventory system, cutting storage update times from **~3 minutes to ~45 seconds**, boosting office productivity.

PROJECTS

JustTheInstructions (Chrome Extension AI Model) | May 2024 - July 2024 | [Github](#)

- Developed an AI Chrome extension to filter out unnecessary text from recipe and DIY websites in Python, JavaScript, HTML, and JSON.
- This project involved training an AI model using public data and learning Google's extension framework to build a user-friendly tool, resulting in quick and efficient content filtering.

ACHIEVEMENTS

- Dec 2023: Google Hackathon Winner [DevPost](#) - Achieved **1st place out of 110** participants in the McMaster Google Developer Student Club's Hackathon. In the Accessibility category, we developed a website that transforms text ideas into full slideshow presentations.
- Jun 2023: High School Academic Excellence (Graduated top 8% of my graduating class with a 98.7% average).
- Nov 2021: Hatch Game Jam Winner - Secured **2nd place out of 60** participants in a month long coding challenge.
- Oct 2020: Hatch Digital Coded Art Competition Winner - Won **1st place out of 50** participants creating randomly generated images (NFTs).

SKILLS AND INTERESTS

- Backend/General Development: Python (4 years), Java (2 years), C (1 year)
- Web Development: React (1 year), HTML/CSS (1 year), JavaScript within Google Appscript (1 year),
- Functional/Creative Programming: Elm (1 year), Processing Python (4 years), P5.js/JavaScript (4 years)
- Libraries: TensorFlow, Python Imaging Library, Pandas, NumPy, Matplotlib
- Badminton, Basketball, Table Tennis, Piano, and Investing

EDUCATION

2023 - 2028 | McMaster University

Bachelor of Applied Sciences - Computer Science Co-op | **3.9 overall GPA**

Relevant Classes - Data Structures and Algorithms, Intro to Software Development, Computer Architecture