

Mahad Hassan

mahadhassan.hello@gmail.com | mahadhssn.com | (289) 952-3792 | Burlington, ON | [GitHub](#) | [LinkedIn](#)

EDUCATION

McMaster University

Honours Software Engineering Co-op, B.Eng (3.9 GPA)

May 2027

Hamilton, ON, CA

- Achievements: Entrance scholarship for exceptional performance | 2nd Place at MacEngComp 24' | Finalist at MacEngComp 23'
- Courses: Data Structures & Algorithms | OOP (Java) | Development Basics (C, Git, Bash) | Math in Python | Linear Algebra
- Leadership: Events VP at MacPSA | VP of Operations at Voices at Mac | Attendee Relations Exec DeltaHacks

TECHNICAL SKILLS

Languages: Python, Java, C/C++, JavaScript, TypeScript, SQL, MATLAB, Bash, Verilog, Latex, Markdown, YAML, UML

Web Dev: HTML, CSS, React.js, React Native, Tailwind CSS, Node.js, Django

Technologies & Tools: Visual Studio Code, PyCharm, Jupyter, GitHub, Firebase, Maven, Vim, NoSQL, GIT, Anaconda, Putty, AWS

Libraries: TensorFlow, Matplotlib, NumPy, Pygame, Pandas

Other Skills: AutoCAD, MS Office, Quanser, Social Media Marketing, Computer Assembly, Management, Data Analysis

EXPERIENCE

Software Engineer Intern

TD Enterprise Protect

May 2025 – August 2025

Toronto, CA

- Fraud Engineering

Software Developer

McMaster iBioMed Society

January 2025 – Present

Remote

- Developing a **mobile app** with **React Native** and **Firebase** to centralize **mental, physical, and financial support** for patients
- Implementing **encrypted features**, including a patient **chat function** and a secure medical resume section
- Designing an **accessible**, user-focused interface to **ensure privacy** and enhance patient interaction

Cybersecurity Engineering Intern

Ras Laffan Power Company

July 2023 – August 2023

Ras Laffan Industrial City, Qatar

- Designed and implemented **DCS logics** and **graphics**, improving system efficiency by **15%**
- **Updated Anti-Virus definitions**, increasing threat detection rates by **20%**, and completed **switch configurations** via **Putty**
- Completed engineering configurations for **controllers, I/Os, HMIs, and Historians** using Developer Studio
- Gained practical experience with **OT/ICS protocols** such as OPA UA, Modbus, and Profibus

PROJECTS

Cybersecurity System | Python (OpenCV, Flask, Cryptography), SQL, Git

2nd Place @ MacEngComp 24'

- Designed a security system combining **facial recognition**, a **password manager**, and **file encryption** to enhance data protection
- Leveraged Python and SQL to develop a robust and functional solution with strong security measures.
- Developed a fully operational prototype within a rigorous **7-hour coding sprint**, securing **2nd place among 30+ teams**

C-View | C, Bash, Git

- Developed a versatile **C-based utility** to enhance images with filters like **grayscale, reflection, rotation, edge detection, and blur**
- Optimized for performance with a **Bash** script for automated testing, **reducing testing times** by nearly **70%**
- Designed for low-resource environments, processing images up to **30% faster** than comparable tools

Digit Recognizer AI | Python (TensorFlow, Matplotlib)

- Built an **8-layer CNN** with **99.3% accuracy** on MNIST, trained on **60,000** images, and tested on **10,000**
- Used **Matplotlib** to visualize model predictions with confidence levels for each digit

Tic-Tac-Toe AI | Python (PyGame)

- Compiled an **unbeatable Tic-Tac-Toe AI** by implementing the **Minimax Function** using **Object-Oriented Programming**
- Shaped the user interface using **PyGame**, allowing the user to pick between **PVP, PVE (AI mode)** and to be **X or O**

Portfolio | JavaScript (React, Node, Tailwind CSS)

- Developed a **full-stack** portfolio website with **React** and **Tailwind CSS** for the frontend showcasing skills and personal info
- Implemented a **Node.js backend** to handle server-side functionality and support dynamic content features