

JOSEPH COIFMAN

Hamilton, ON | coifmanj@mcmaster.ca | LinkedIn | GitHub | Portfolio

Highlight of Qualifications

- McMaster University Engineering Co-op student pursuing Computer Engineering, seeking a 4-month co-op position beginning May 2027.
- Experience developing software and full-stack applications using Python, web frameworks, relational databases, Git, and cloud platforms.
- Hands-on experience integrating software with Raspberry Pi, Arduino, robotic arms, servo motors, GPS modules, heart-rate sensors, and infrared sensing hardware.
- Executive member of the McMaster IEEE Computer Society as Director of Microcontrollers with technical research and consulting experience.

Education

Bachelor of Engineering Co-op (BEng) – Computer Engineering

McMaster University

2025 – 2030

Hamilton, ON

- **GPA:** 3.7/4.0

Relevant Coursework: Engineering Design & Prototyping, Programming & Software Development, Embedded Systems & Mechatronics, Calculus, Linear Algebra, Physics, Sustainability, Artificial Intelligence

Technical & Research Experience

Summer Intern

Talkerstein Consulting Group

May 2026 – Sept. 2026

Toronto, ON

- Collaborated with founders and stakeholders to refine platform requirements, implementation strategies, user-facing workflows, and opportunities for future internal projects.
- Translated operational requirements into technical workflows and development plans for internal project management and automation systems.
- Developed initial system structures and intake-form concepts to improve the collection, organization, and use of prospective client information.

Research Assistant

Dr. Matiar Howlader's Lab, McMaster University

Jan. 2026 – Present

Hamilton, ON

- Conducted a structured review of non-invasive wearable biosensors for physiological monitoring and athletic performance analysis.
- Developed a cross-paper synthesis and frequency analysis across approximately 16 studies to identify biomarkers, technologies, research gaps, and methodological trends.
- Evaluated heart-rate, GPS, inertial, and infrared sensing technologies for measuring sprint performance, recovery, and athlete-monitoring metrics.
- Processed wearable-device FIT data into analysis-ready CSV files and documented sensor validity, hardware limitations, and experimental constraints.

Extracurricular Activities

Microcontroller (Arduino/) Team Lead and Microprocessor (Raspberry Pi) Team Lead

McMaster IEEE Computer Society Chapter

2026 – 2027

Hamilton, ON

- Selected as an executive member to lead both the Microcontroller and Microprocessor teams, overseeing technical projects and member development.
- Responsible for leading embedded systems initiatives involving Arduino and Raspberry Pi platforms, focusing on hardware-software integration, hands-on workshops, and technical mentorship.

Co-Founder & Co-President

Stephen Lewis Secondary School Engineering Club

June 2024 – June 2025

Vaughan, ON

- Co-founded and led a student engineering club focused on technical projects, engineering exploration, and collaborative problem-solving.

Swim Instructor & Lifeguard

Mayfair Clubs

May 2025 – Aug. 2026

Toronto, ON

- Designed and delivered swimming and lifesaving instruction for participants of varying ages and skill levels, adapting communication and teaching methods to individual learning needs.
- Evaluated participant progress, communicated recommendations to families, and maintained patron safety through active monitoring, sound judgment, and enforcement of facility procedures.

Technical Projects

Raspberry Pi Smart Home & File Server

2026

Skills & Technologies: Python, Flask, Raspberry Pi, Arduino, Node-RED, Linux

- Integrated Python, Flask, Raspberry Pi, and Linux to develop a browser-based system combining real-time device monitoring, file management, and remote hardware control while applying systems thinking to coordinate multiple software and hardware components.
- Connected an Arduino through serial communication to control LEDs and servo motors, using structured troubleshooting, iterative testing, and problem-solving to diagnose communication and device-control issues.
- Implemented CPU, memory, disk, uptime, network, upload, storage, and file management functionality using Node-RED and environment-based configuration to improve organization, maintainability, reliability, and documentation.

Athletic Performance Sensor System

2026

Skills & Technologies: Python, Arduino, GPS, Heart-Rate Sensors, IR Sensors

- Designed and prototyped an athlete-monitoring system integrating GPS, heart-rate, and infrared sensing technologies, applying analytical thinking to translate performance goals into measurable engineering requirements.
- Tested GPS modules, heart-rate devices, and infrared break-beam sensors, using systematic troubleshooting, adaptability, and iterative experimentation to evaluate detection range, signal reliability, timing accuracy, and limitations.
- Processed timestamped physiological and performance data with Python and CSV workflows, comparing sensor outputs and documenting findings to support future system refinement.

Fantasy Football Analytics Platform

2026

Skills & Technologies: Python, FastAPI, PostgreSQL, Data Analytics, API Integration

- Developed a full-stack fantasy football decision-support platform integrating Python, FastAPI, PostgreSQL, external data sources, and custom analytics workflows into a centralized system.
- Designed roster-aware recommendation algorithms incorporating projections, custom scoring, positional scarcity, roster needs, and overload penalties, applying analytical reasoning and decision-making to draft recommendations.
- Structured workflows for rankings, projections, ADP, injuries, waivers, and strength-of-schedule data while iteratively testing logic, identifying weaknesses, and adapting the platform to usability requirements.

Post of Joy Full-Stack Website

2026

Skills & Technologies: Python, Flask, HTML, CSS, JavaScript, Firestore, Google Cloud Run

- Collaborated with a non-profit organization to translate stakeholder feedback, branding requirements, and user needs into a responsive production website, demonstrating communication and requirements-gathering skills.
- Integrated Firestore for persistent user-generated content and deployed the application through Google Cloud Run, coordinating front-end, back-end, database, and cloud infrastructure while troubleshooting integration issues.
- Configured a custom domain, DNS, environment settings, and cloud services while incorporating stakeholder feedback, demonstrating adaptability, attention to detail, iterative design, and effective communication.

Technical Skills

Programming: Python, C++, Java, C#, MATLAB, JavaScript, HTML, CSS, SQL

Frameworks & Development: Flask, FastAPI, Git, GitHub, REST APIs, Object-Oriented Programming

Cloud & Databases: Google Cloud Run, Firestore, PostgreSQL, Supabase, Vercel, Railway

Hardware & Embedded Systems: Arduino, Raspberry Pi, Q-Arm, servo motors, GPS modules, ultrasonic sensors, infrared sensors, serial communication, circuit prototyping, soldering

Engineering Tools: Autodesk Inventor, Autodesk Revit, MATLAB, Tinkercad, Node-RED, Microsoft Excel

Languages: English (Native), Spanish (Proficient)

Certifications

Cisco: Introduction to Cybersecurity (Jun. 2026)

MathWorks: Deep Learning Onramp, Machine Learning Onramp, Simulink Onramp, MATLAB Onramp (May–Jun. 2026)

AWS: Cloud Practitioner Essentials, Fundamentals of Machine Learning & Artificial Intelligence, AWS Foundations: Getting Started with AWS Cloud Essentials (Apr. 2026)

Additional: Digital4Sustainability Learning Path – UNSSC (Dec. 2025)