

Luca Mawyin

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Education

- McMaster University** | B.A.Sc Computer Science Sept 2024 – Present
- Relevant Courses: Data Structures & Algorithms, Computer Architecture, Concurrent Systems, Databases
 - Current Courses: Computer Graphics, Operating Systems, Principles of Programming Languages
- Humber College** | Computer Engineering Technology Sept 2023 – Dec 2023
- Relevant Courses: Electrical & Digital Circuits, Computer Hardware & Operating Systems

Experience

- Sales & Management** | Carla's Cookie Box Feb 2021 – Present
- Overseeing the expansion of reach of company audience through media advertisement, and the production of goods.
 - Displayed understanding of web design and development principles through troubleshooting of backend company website operations.
 - Exhibit outstanding customer service by identifying needs of customers, creating a welcome environment, and ensuring needs are met.

Projects

- Slop Watch Sports** | TypeScript, React, Python, Flask, Pandas, Scikit-learn, Vercel, Raspberry Pi Aug 2026
- Designed a **machine learning system** using scikit-learn and historical sports data to predict the likelihood of upcoming games being low-quality "slop"
 - Built a data pipeline using Pandas to process multi-season game data, engineer features, and **automatically retrain models** and **update predictions** with newly collected data.
 - Deployed a **self hosted Flask REST API** using a Raspberry Pi running Linux to serve model predictions and manage sports data.
- LuTeX** | TypeScript, React, Vercel, Python, Flask, LaTeX, AWS Jun 2026
- Engineered a **custom language interpreter** using regex-based parsing to convert a custom, intuitively-designed language into LaTeX documents.
 - Designed an interactive React interface with a real-time console for displaying user request statuses, and debugging messages during document generation.
 - Deployed a **distributed cloud architecture** with the React frontend hosted on Vercel and the Flask REST API hosted on AWS, using a GitHub Actions CI/CD pipeline to automate deployment.
- Sign Language Translator** | Python, OpenCV, MediaPipe, Ultralytics, YOLO May 2026
- Developed a real-time ASL translator using Python, OpenCV, and YOLO to **detect hand gestures** from webcam input and convert recognized signs into text-to-speech output.
 - Built an **automated data collection** pipeline using MediaPipe hand tracking to dynamically generate annotations and labels on 5,800 images.
 - Trained a custom YOLOv26m model to classify 26 ASL alphabet gestures, implementing temporal gesture stabilization, and word segmentation to improve prediction reliability.
- Client Article Publishing Platform** | TypeScript, Next.js, SQL, Cloudflare Apr 2026
- Created a custom-designed client portfolio platform allowing clients to manage personal information, upload resumes, modify UI components, and publish articles.
 - Engineered a dynamic **content editing system** with draft management, article publishing, and real-time UI updating to allow website customization without requiring developer intervention.
 - Architected a Cloudflare-native backend using D1 for relational data storage, R2 for image and resume storage, and a **custom 2FA system** using Resend API for secure account access and recovery.

Technical Skills

Programming Languages: Python, Java, C/C++, HTML/CSS, JavaScript, TypeScript, Haskell, PHP, Go, SQL, LaTeX

Libraries & Tools: Linux, Git, GitHub Actions (CI/CD), Vercel, AWS (EC2), Cloudflare (Workers, Pages, D1, R2), Raspberry Pi, Figma, SQLite, MySQL, Node.js, React, Next.js, Tailwind CSS, REST APIs, Flask, MediaPipe, OpenCV, Ultralytics, CVAT, YOLO, Arduino, MATLAB

Languages: English, French