

Luca Mawyin

(647) 562-9774 | lucamawyin@gmail.com | GitHub | LinkedIn | lucamawyin.com

Education

- McMaster University** | *B.A.Sc Computer Science* Sept 2024 – Present
- Relevant Courses: Data Structures & Algorithms, Computer Architecture, Web Design, Software Development
 - Current Courses: Databases, Concurrent Systems, Automata & Computability, Algorithms & Software Design
- 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

- LuTeX** | *TypeScript, React, Python, Flask, LaTeX, Cloudflare, AWS* May 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 Cloudflare 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.
- Derivative Calculator** | *Haskell* Dec 2024
- Developed a functional, Haskell-based math engine that parses math expressions into ASTs for evaluation, differentiation, and simplification.
 - Implemented recursive algorithms to evaluate functions at user-defined inputs, compute function derivatives, and optimize expressions through algebraic simplification.
 - Validated system correctness using QuickCheck property-based testing to automatically verify math transformations and edge cases.

Technical Skills

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

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

Languages: English, French