

MATTHEW LEW

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Education

Toronto Metropolitan University

Sep. 2021 – May 2026

Honours Bachelor of Science (HSc), Computer Science (Co-Op), Minor in Cybersecurity

- **CGPA:** 3.86; **Dean's List:** 2021–2025
- **Relevant Coursework:** Algorithms, Operating Systems, Database Systems, Artificial Intelligence, Software Engineering, Cybersecurity

Skills

Programming Languages: Python, Java, C/C++, TypeScript, JavaScript, Rust, Haskell, Bash

Web Development: HTML, CSS, React, Node.js, Next.js, Tailwind CSS

Data & Databases: SQL, PostgreSQL, MySQL, SQLite, Pandas

Tools & Platforms: Git, Docker, Jenkins, AWS, Azure DevOps, Linux, Agile

Soft Skills: Communication, Teamwork, Initiative, Problem Solving

Experience

Toronto Metropolitan University

Sep 2025 – Present

AI Software Developer

Toronto, ON

- Developing an AI chatbot for academic program navigation using Retrieval-Augmented Generation (RAG).
- Implementing data ingestion and retrieval pipelines with Dockerized PostgreSQL, Python, and LLaMA.

Toronto Metropolitan University – CRESSET Lab

Sep 2025 – Present

Researcher - IoT Software Security

Toronto, ON

- Prototyping an LLM-driven pipeline that converts natural-language software specifications into UML models, and UML models into source code.
- Researching applications of agentic AI in automating secure IoT software design and development.

Mitsubishi Heavy Industries RJ Aviation – MHI RJ

May 2023 – Aug. 2024

Software Developer

Mississauga, ON

- Navigator IETP | *Python, Java, MySQL, Jenkins, Maven, Tomcat*
 - Primary Developer maintaining a customer-facing Java application (web and standalone).
 - Resolved customer issues via email and live meetings using debugging and log analysis.
 - Implemented server and database migration from third-party to internal services, increasing application profit by 40%.
- Automated Operator Data Pipeline | *Python, SQL* Loader, Pandas, OracleSQL, Cron*
 - Proposed, designed, and implemented automation for manual data loading, eliminating human error and saving 5+ hours weekly.
 - Developed Python scripts and SQL* Loader control files to fetch/load data and generate daily email reports via Cron-job scheduling.

Projects

CauseCompass | *Next.js, TypeScript, Gemini AI API, Prisma, Supabase, Git*

Oct. 2025

- Built an AI-powered web app that rates companies' ethicality across human rights, sustainability, and inclusivity causes, using Google's Gemini LLM for grounded, real-time summaries.
- Collaborated in a 36-hour hackathon to design, deploy, and demo a working prototype on [Devpost](#).

AI Resume Tailor Web App | *Next.js, Tailwind CSS, OpenAI API, Prisma, SQLite, Git*

Jun. 2025

- Developed an AI-powered web app that generates tailored LaTeX resumes and cover letters by analyzing user resumes and job descriptions using OpenAI's GPT model.
- Implemented parsing for LaTeX and PDF uploads into structured JSON stored in a local SQLite database.

Adult Income Machine Learning Classifier | *Python, Pandas, NumPy, scikit-learn, Git*

Apr. 2025

- Built a machine learning pipeline to classify adult income levels using UCI census data.
- Evaluated five models (Logistic Regression, Random Forest, Naive Bayes, SVM, k-NN) and visualized performance metrics with Matplotlib.