MATTHEW LEW

Education

Toronto Metropolitan University

Sep. 2021 – May 2026

Honours Bachelor of Science (HBSc), 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

Artificial Intelligence & Computer Programming Assistant

Toronto, ON

- Designing and building an AI-driven chatbot to guide students in academic program navigation.
- Developing and testing NLP-driven features using Python and data science libraries.

Toronto Metropolitan University - CRESSET Lab

Sep 2025 – Present

Researcher - IoT Software Security

Toronto, ON

- Investigating applications of LLMs and Agentic AI in secure IoT software development.
- Prototyping pipelines that convert requirements into UML diagrams, and UML diagrams into source code.

Mitsubishi Heavy Industries RJ Aviation - MHI RJ

May 2023 – Aug. 2024

Data and Application Services 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 virtual meetings, leveraging debugging skills and log analysis to deliver effective technical solutions.
 - \circ 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

Personal Portfolio Website | Next.js, TypeScript, Tailwind CSS

matthewlew.dev 2025 - Present

- Designed, developed, and deployed a responsive personal portfolio showcasing skills, projects, and experience, hosted on Vercel with a custom domain.
- Built interactive UI components (skill-sorting game, 3D cube, project carousel, experience timeline) and integrated a Resend API contact form optimized for accessibility and mobile performance.

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.