

SHADMAN SOHEL

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Education

Toronto Metropolitan University (TMU)

Expected Graduation: May 2028

Bachelor of Computer Engineering | GPA: 3.81/4.33

Work Experience

Ontario Power Generation (OPG)

April 2025 - Current

Computer Engineering Intern

Toronto, Ontario

- Coordinating the development of an **AI-powered** form input assistant for governance documents as an **AI Ambassador**, leveraging internal **large language model** (ChatOPG) to streamline and automate data entry.
- Engineering an internal desktop application in Python to automate reactor safety reviews, supporting PDF uploads and **MySQL** database integration, reducing review time by **40%**.
- Performing Probabilistic Safety Assessments (PSA) by modelling **15+** fault trees and performing detailed probability calculations to quantify reactor core damage frequency.

RaiseIt

September 2024 - January 2025

Software Engineering Intern

Toronto, Ontario

- Produced 5+ backend API routes with **Express.js** and **Node.js** for a **MongoDB** database management system, enabling fast full-text search and retrieval of **400+** bills, MPPs, and motions from the Legislative Assembly of Ontario.
- Built a web app with **Next.js** and **Tailwind CSS** for MPPs, allowing **80+** users to view stats with interactive charts.

Toronto Metropolitan University

September 2024 - December 2024

Project Manager

Toronto, Ontario

- Supervised and coordinated over **60 engineering students** on term projects focused on reverse engineering and analyzing historical engineering disasters, guiding teams in research, collaboration, and presenting findings to faculty.

Projects

Morsum - Social Media App | [Download Link](#)

Spring Boot | React Native | PostgreSQL | PyTorch | AWS

- Drove **100%** of ideation and end-to-end technical implementation of a food-based social media platform using **Spring Boot** and React Native, currently with **30+** active testers.
- Built a **REST API** with user workflows, image uploads to **AWS S3** optimized with **AWS CloudFront**, cutting load time by **70%**, chats via WebSockets, and daily streak tracking using **Quartz Scheduler**, all backed by **PostgreSQL**.
- Trained an image classification model using **PyTorch** and the Food101 dataset for auto-generated food predictions, deployed on a **Flask** server within **AWS EC2**, reducing recipe upload time by **25%**.

LessEats - Full-Stack | [Source Code](#)

Java | MySQL | Apache Tomcat | Kubernetes | Google Cloud | Docker

- Developed a food ordering simulator using Java with an **Apache Tomcat** server, implementing a **microservices** architecture and REST APIs for ordering and purchasing workflows, backed by a MySQL database.
- Containerized services with **Docker** and deployed them on **Google Cloud** using **Kubernetes**, enabling asynchronous communication between services with **KubeMQ** messaging queues to ensure data consistency

Battle Bites - Multiplayer Fighter Game | [Website](#) | [Devpost](#) | [Source Code](#)

React.js | Node.js | MongoDB

- Created an online Street Fighter style browser game in **36 hours** using React.js and Node.js where real-life healthy eating triggers in game powerups and submitted to **Hack the 6ix 2025** for Best Game Hack.
- Engineered gameplay with **Socket.io** and Express.js, achieving sub **2ms** latency. Integrated MongoDB for powerup storage, **Auth0** for authentication, and **Google Gemini** to generate personalized powerups based on eating habits.

AskFYEO - Q & A Chatbot | [Website](#)

Hugging Face Transformers | TensorFlow

- Collaborated with TMU's First-Year Engineering Office to build a Q&A chatbot that retrieves answers from a frequently asked **SQLite** database using a **Hugging Face's transformer model** for semantic similarity.

Technical Skills

Languages: Java, Python, JavaScript, SQL, HTML5, CSS, C/C++

Developer Tools: Amazon Web Services (AWS), Google Cloud Platform (GCP), Git, Docker, Postman

Frameworks: Spring Boot, React.js, Next.js, Node.js, PostgreSQL, Flask