

Calvin Salsali

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EDUCATION

McMaster University | Hamilton, Ont

Sept 2022 - May 2027

Bachelor of Software Engineering and McMaster Award of Excellence recipient (\$3000)

Courses: Object-Oriented-Programming, Computer Architecture, Data Structures and Algorithms, Discrete Mathematics

EXPERIENCE

Software Engineer (Co-op) | Intuit

May 2025 - August 2025

- **Built migration logic in Java** to transform legacy XML/JSON structures into modern formats, handling complex data bindings, validation rules, and slip generation for **high-traffic** tax forms while ensuring **100% data integrity**.
- **Led end-to-end automation of TurboTax Online content modernization**, developing a system that migrated **140+** legacy tax flows from deprecated systems to modern architecture, reducing manual migration effort from **months to days**.
- Optimized service performance by **20–40%** through modernized architecture and **batched API calls**, enabling **1-day deployment cycles** vs. 7-day legacy process.
- **Architected AI-powered test generation in Python** using OpenAI's o3-mini model to automatically create **1,000+** lines of Java unit tests per tax flow, achieving **90%+ test coverage** and eliminating weeks of manual QA.
- Leveraged **AWS (S3, CloudFront), Jenkins CI/CD**, and service integrations for real-time deployments across environments.

Software Engineer (Co-op) | Scotiabank

January 2025 - April 2025

- Built **React.js** Foreign Exchange Rates UI with real-time data flows, dynamic filtering, multi-currency displays, and **Adobe Analytics** integration.
- Built backend **APIs** and **microservices** using **Node.js/Express** and **Spring Boot/Java** to support the frontend: business date services, bank rate lookups, and e-Transfer payment processing (options, registration, group actions)
- Implemented **Apache Kafka** consumers and migrated message handling to **Spring Cloud Stream** with acknowledgments/retries, **processing 1,500+ daily** banking notifications with **average processing time under 2s**.

Software Engineer (Co-op) | PointClickCare

September 2024 - December 2024

- Migrated **Mds3** functionality to a modern content management service by developing a **Java-based** feedback system for **IPC** evaluations, boosting **AI** model recommendation accuracy by **70%**.
- Engineered a **React/TypeScript** module for pain evaluations, enhancing patient care workflows in **2,800+** U.S. hospitals.
- Implemented **SQL** queries in **PostgreSQL** to add clinical suggestions and automated tests using **Selenium** and **Cypress**, reducing bug rates by **30%** and ensuring performance across multiple healthcare platforms.

Software Engineer (Co-op) | GBL.io

May 2024 - August 2024

- Developed **Vue.js** geolocation modals to restrict access to casino games for users outside Ontario, and refactored geolocation rule logic using **mGeoJS**, improving **accuracy by 30%** and **increasing system reliability for 2,000+ users**.
- Created a **JavaScript** translation script for multilingual login and registration, while optimizing **PostgreSQL** databases for secure **KYC** data management, reducing query times by **20%** to enhance player watchlist performance.

PROJECTS

TSLA.AI | Python, PyTorch, Cohere, Pandas, Tweepy, NewsAPI, Twilio

- Developed **GPT-based LLM** in **PyTorch** from **scratch**, pre-trained on **100k+** Tesla news/tweets and fine-tuned sentiment with **Cohere** and optimized with gradient clipping, dropout, weight decay, achieving **43.44% validation accuracy**.
- Deployed automated pipeline, real-time data scraping, sentiment inference, and SMS alerts generating **12.35% portfolio profit**.

Autonomous Vehicle Simulation | MEC Programming Hackathon Winner - Python, OpenCV, NumPy, React, Javascript

- Developed an energy-efficient route optimization application in **p5.js** utilizing **A*** algorithm, significantly enhancing path planning efficiency achieving **30%** improvement in pathfinding by optimizing heuristic functions and data structures.

SKILLS & TECHNICAL TOOLS

Technical Languages: Python, HTML, CSS, Javascript, Matlab, SQL, Java, C, Bash/Shell Scripting, Verilog

Frameworks/Tools: Node.js, Express, React, MySQL, Apache Kafka, OpenCV, NumPy, Selenium, Jenkins, Azure, Jupyter, AWS