

SHIVOM SHARMA

✉ shars119@mcmaster.ca | ☎ (647) 515-4096
in shivomsharma | 🌐 RealShivomSharma | 🌐 shivom.dev

EDUCATION

McMaster University

Expected Apr. 2026

B.Eng. Mechatronics Engineering and Management [CO-OP]

Hamilton, ON

- **Relevant Courses:** Operating Systems, Real-Time OS, Data Structures & Algorithms, Machine Learning, Embedded Systems (C, FPGA Verilog), Software Development

EXPERIENCE

Tesla

Austin, TX

Software Engineer Intern

Jun. 2024 – Aug. 2024

- Designed an ETL pipeline using **Airflow** and **Pandas**, compressing models to **Amazon S3** and migrating data to **PostgreSQL**, improving pipeline speed by **400%**.
- Built a **Python** backend service with **Redis** caching and **GraphQL** APIs, reducing client request footprint by **50%** and latency by **80%**.
- Automated PLC data extraction using **SCADA/Ignition** and **MongoDB**, generating KPI reports that reduced bottlenecks by **35%**.
- Optimized **CI/CD** with **Docker/Kubernetes** and **GitHub Actions**, scaling deployment efficiency by **15%**.

Tesla

Austin, TX

Manufacturing Controls Dev Engineer Intern

Sep. 2023 – May 2024

- Developed a **Python/Halcon** defect detection algorithm for Cybertruck rotors, achieving **97% accuracy** at **22ms** runtime, processing 7k parts/week.
- Led cross-functional hardware/software requirements, reducing project costs by **\$10,000** through optimized component selection.
- Implemented **Git** version control and trained 15+ personnel, cutting onboarding time by **20%** and boosting line efficiency by **15%**.
- Programmed **PLC** logic for pneumatic controls, reducing cycle time by **30%**.

National Bank of Canada

Toronto, ON

Senior Desktop IT Analyst – Financial Markets

May 2022 – Sep. 2022

- Deployed IT solutions for 50+ VIP traders and developers using **VBA** scripts, reducing workstation setup time by **30%**.
- Engineered disk imaging and data migration workflows for **250+ trader workstations**, leveraging scripting tools to reduce downtime by **95%** and ensure seamless market operations.

PROJECTS

Atari Pong AI with Proximal Policy Optimization | Python, PyTorch, OpenAI Gym

- Trained a reinforcement learning agent using **MLP** and frame stacking, achieving a **+17 average score** in 500 episodes.

Pacemaker Communication Interface | Flask, C, SQLite, Simulink

- Developed a full-stack app to manage pacemaker data via **serial communication**, encrypting patient records with **SHA-256**.

Boox CLI Textbook/Manga Uploader | Go, Unix, MangaDex API

- Created a **Go** CLI tool to automate textbook/manga uploads to an e-ink tablet, leveraging **cobra-cli** and shell scripting.

STM32 Stepper Motor Controller | C, Keil, Embedded Systems

- Designed a temperature-regulated stepper motor system with **half/full-step** control.

TECHNICAL SKILLS

Languages: Python, C/C++, Go, SQL, JavaScript/HTML/CSS, Java

Frameworks: PyTorch, Flask, FastAPI, React, Node.js, GraphQL

Tools: Git, Docker/Kubernetes, AWS, Redis, Airflow, Kafka, CI/CD

Systems: Linux/Unix, Windows, PLC/SCADA, Embedded Systems (STM32, De1-SoC)