SHIRLEY QIN

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Skills

Languages: Python, C++, C, JavaScript, TypeScript, SQL, Verilog, RISC-V Assembly
Frameworks & Libraries: React, Node.js, Flask, Docker, Kubernetes, Apache Hadoop

AI/ML Tools: TensorFlow, PyTorch, scikit-learn, LangGraph
Data Tools: PostgreSQL, Neo4j, Supabase, ArcGIS, MongoDB, Splunk
Cloud & DevOps: Git, Azure DevOps, GCP, CloudLab

Education

Master of Engineering, Computer Engineering, University of Toronto **(Toronto, 2024-2026)**
Availability: Sept 1 – Dec 20, 2025 (Full-time, remote or hybrid)
Bachelor of Applied Science and Engineering, Computer Engineering, University of Toronto **(Toronto, 2018-2023)**
Minor in Artificial Intelligence and Engineering Business
Admission Scholarship, Edward S Rogers Sr. Scholarship

Employment

AI Engineer Intern **AI/ML Software Development Team, Cisco Systems (May 2024 – Present)**
- Working on converting raw syslog data into structured incident reports using AI-driven techniques and scalable tooling.
- Designed and implemented LangGraph-based agent workflows to validate and enrich incident reports with contextual insights using Retrieval-Augmented Generation (RAG) over large internal knowledge bases, rapidly iterated on LLM prompts and schema validation logic

Software Engineering Co-op **Global Engineering Analytics, MML, Magna International (Jan 2024 - Aug 2024)**
- Designed and deployed a full-stack REST application using ReactJS, Python, and JavaScript to track material and vehicle component tests.
- Integrated SQL servers and Microsoft Azure Blob Storage for secure data handling, reducing job creation and tracking time by 48%.
- Implemented security measures, including JWT token-based authentication and secure API communication.
- Collaborated in Agile sprints, utilizing Azure DevOps to meet project milestones and enhance team efficiency.

Software System Integration Intern **Infrastructure and Coordination Unit, City of Toronto (Oct 2021 - July 2022)**
- Developed algorithms to consolidate and annotate PPP conflict notes, producing updated City of Toronto base maps.
- Automated MapInfo cataloging using the ArcGIS REST API, streamlining updates for MRCWG maps and improving process efficiency by 74%.
- Managed coordination resolution reviews and data updates, including unassigned listings, utility coordination results, and process SOPs.

Teaching Assistant **CSC207H1 - Software Design (Java), University of Toronto (Sep 2024 - Dec 2024)**
CSC148H1 - Introduction to Computer Science (Python), University of Toronto (Jan 2025 - Apr 2025)
ECE243 - Computer Organization (RISC-V Assembly, C), University of Toronto (Jan 2025 - Apr 2025)

Projects

AdVize - LLM-Based Evaluation Tool for Advertisements
- Designed an automated system leveraging GPT-4o and fine-tuned LLaMA models to evaluate ad-pushing algorithms with persona-based simulated raters.
- Built functional MVPs in under 2 weeks using Docker, prompt engineering, and simulated persona testing
- Achieved 91.8% alignment between simulated and human feedback, demonstrating robust zero-shot performance in query generation and ad evaluation.

Extending CGgraph - Enabling Distributed CPU-GPU Graph Processing for Large-Scale Graphs
- Enhanced CGgraph with hybrid CPU-GPU reordering (CUDA) and OpenMP-based subgraph extraction. Achieved up to 15% performance improvement on large-scale graph datasets and evaluated scalability using GCP and CloudLab resources.

SUMO Robot - University of Toronto Robotics Association(UTRA)
- Designed and optimized the robot's mechanical structure using AutoFusion360, 3D printed the prototype, programmed the microcontroller with Arduino, and developed and soldered electrical circuits on PCB.