Simon Lin

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Education

Toronto Metropolitan University — Toronto, ON
Bachelor of Science - Computer Science Co-op Program — *Sep. 2021 – present (est. 2026)*

Professional Experience

Quality Assurance Specialist Intern | ***C#, SQL, Azure DevOps, Git, Jira*** Sept. 2023 – Aug. 2024
SOTI — *Mississauga, ON*

- Designed and developed **automated test plans** and **500+** test cases with **Selenium** and **C#** based on software requirements and technical specifications for all SOTIs flagship MobiControl product.
- Created over **400+ complex SQL** queries to **clean, aggregate,** and **transform raw user data** for reporting.
- Performed various types of testing as part of the **Agile** software development process, **CI/CD** and release cycle.
- Conducted **End-to-End testing** of large feature release versions for requirement verification and performed demos of stories across teams and management to ensure consistency and standardization across multiple product lines.
- Discovered and **reported over 100+ bugs, defects** and **potential improvements** across user interfaces, mobile applications, hardware and databases.

Programming Instructor | ***Python, Data Structures*** July 2021 – Aug 2021
The STEAM Project — *Richmond Hill, ON*

- Created and taught over 35+ K-12 students a creative curriculum based on Python programming fundamentals.
- Devised fun and educational **Data Structures & Algorithmically-based lesson plans** on a weekly basis.
- Fostered critical thinking among my students through daily coding challenges, projects and personalized feedback.

Projects

NBAction - AI Basketball Action Classifier with Deep-Learning | *Python, OpenCV, NumPy YOLOv8, Roboflow*

- Developed a real-time basketball action classifier by **self-training a deep-learning model** using **YOLOv8** to analyze actions such as shooting, blocking, and scoring with **92% detection rate** across each class.
- Authored and submitted an academic paper, including project discoveries, methodology, qualitative and qualitative data to the **Institute of Electrical and Electronics Engineers** (IEEE) for future work and further review.
- Developed a **Deep Neural Network video processing pipeline** with **dynamic frame sampling** and **RTX GPU-accelerated inferencing** to reduce overall **video latency** by **68%.**
- Built an interface in Python to display detected actions, bounding boxes, and confidence scores in real-time, enhancing accessibility for users.

Shoppers Drug Mart Database Management System | *SQL, Python, Tkinter, Bash*

- Developed an end-to-end DBMS tailored to the retail and pharmacy needs of Shoppers Drug Mart, managing core functions like inventory control, customer management, and transaction tracking.
- Designed and **implement entity-relationship diagrams** to provide a blueprint for database structuring.
- Established normalized database schemas that **minimized data redundancy** and **optimized storage** efficiency, allowing for streamlined data retrieval and reporting processes

ATM Banking Simulation Project | *C#, .NET, Visual Studio*

- Led a group of 3 Frontend and 3 Backend student developers across Software Dev. Lifecycle as part of SWE Final
- Developed **use case, class, activity and scenario diagrams** for system functionality and risk-analysis.
- Wrote, tested, documented and debugged **1000+ line C# codebase** to implement functional requirements and deploy a functional ATM System to run natively on all operating systems.

Technical Skills

Programming Languages: Python, C, C#, Java, JavaScript, SQL, Bash
Developer Tools: Git, Jira, Jenkins, Azure, VS Code, Visual Studio, Vim, Microsoft Office
Libraries and Frameworks: OpenCV, TensorFlow, .NET, PyTorch, Selenium, NumPy, MySQL, MongoDB
Concepts: Software Engineering, Frontend, Backend, Fullstack, Distributed Systems, Data Science, Databases, Agile