Simon Lin

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EDUCATION

Toronto Metropolitan University — Toronto, ON
Bachelor of Science - Computer Science Co-op Program — *September 2021 - May 2026*

Coursework: Software Engineering, Data Structures & Algorithms, Distributed Systems, Databases
Technical Skills: Python, C, C#, Java, JavaScript, SQL, Bash, HTML, CSS

EXPERIENCE

QA Automation Specialist Intern — Sept. 2023 – Aug. 2024
SOTI — *Mississauga, ON*
- Developed automated test plans and over 410 unit tests in Selenium and C# adhering to software requirements and technical specifications for the MobiControl product line.
- Discovered and resolved over 300 critical defects and performance issues across product UI and dashboards.
- Lowered SQL database retrieval time by 27% by optimizing legacy queries to clean, transform and aggregate data.
- Executed performance and regressional testing within Agile CI/CD pipeline, reducing post-release defects by 72%.

Python Instructor — July 2021 – Aug. 2021
The STEAM Project — *Richmond Hill, ON*
- Taught 35+ camp students from grades 7-8 a creative curriculum based on Python programming fundamentals.
- Devised educational Data Structures & Algorithmically-based lesson plans on a weekly basis.
- Fostered critical thinking among students through daily coding challenges and projects.

PROJECTS

NBAction | *Demo Video* — Sep. 2024 – Dec. 2024
Real-time Basketball Action Classifier
- Developed a basketball action classifier app using Python + OpenCV + YOLOv8 to analyze live NBA games.
- Optimized a live video processing pipeline using dynamic frame sampling to reduce overall latency by 68%.
- Performed model fine-tuning to achieve an overall detection rate of 88% across all object classes.
- Authored an IEEE-style academic paper detailing my methodology and research results, pending peer review.

Shoppers Drug Mart Point of Sale System — June 2024 – Aug. 2024
Database Management System
- Developed an end-to-end DBMS simulating the retail needs of Shoppers Drug Mart, managing core functions like inventory control, customer management, and transaction record keeping.
- Implemented an intuitive user interface using Python + Tkinter, improving accessibility for managing data.
- Established a normalized database schema that minimized data redundancy and optimized storage efficiency, allowing for streamlined data retrieval and reporting processes.

ATM Banking Simulation — Jan. 2022 – April. 2022
Software Engineering Capstone
- Collaborated with a team of developers to build a banking simulation as part of a Software Engineering project.
- Designed and created detailed use case, class, activity, and scenario diagrams to ensure system functionality and perform thorough risk analysis.
- Developed a robust C# codebase of over 1000 lines, implementing all functional requirements and deploying an ATM system that operates seamlessly across Linux-based operating systems.

ADDITIONAL SKILLS

Frameworks: OpenCV, TensorFlow, .NET, PyTorch, Selenium, NumPy, MySQL, MongoDB
Developer Tools: Git, Jira, Jenkins, Azure, VS Code, Visual Studio, Vim, Microsoft Office