Simon Lin

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Education

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

Technical Skills

Programming Languages: Python, C#, SQL, Java, JavaScript
Developer Tools: Git, Jira, Jenkins, Azure, VS Code, Visual Studio, Vim, Microsoft Office
Libraries and Frameworks: OpenCV, .NET, Selenium, NumPy, Bootstrap, jQuery

Work 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** in 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 E2E testing of large feature release versions for requirement verification and performed demos of stories across teams and management to ensure consistency and standardization across product lines.
- Discovered and **reported over 100+ bugs, defects and potential improvements** across user interfaces, mobile applications, hardware and databases.

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

- Created and taught 20+ 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 and engagement among students through daily coding practices, projects and providing 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.
- Optimized the real-time **video processing pipeline** with **dynamic frame sampling** and **RTX GPU-accelerated inferencing** to allocate CUDA core usage to **reduce overall video latency by 68%.**
- Built an intuitive overlay with 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

linsimon.com - Portfolio Website | *Bootstrap5, HTML, CSS, JavaScript, Google Cloud Platform, Typescript*

- Designed and developed a personal online portfolio website to showcase my open-source side projects.
- Implemented modern front-end web-development practices including responsiveness for varying screen resolutions.
- Implemented proper **SEO-friendly** guidelines, including semantic tags and relevant meta tags.

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.