Mohammed Suwan

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Education

University of Toronto - Toronto, Canada **Sept 2023 – May 2028**

- Bachelor of Applied Science in Electrical & Computer Engineering + PEY Co-op
- Minors in Engineering Business & Artificial Intelligence
- GPA: 3.61/4.0 | Dean's Honors List Scholar

Relevant Courses

Object Oriented Programming | Software Engineering | Software Design & Communication

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Technical Skills

- Experienced in: **C++, C, Java, SQL, Git, Verilog, RISC-V Assembly,** and **Python**
- Hands-on experience in **Soldering** and Power Tools

Professional Skills

- **Innovation, Management,** and **Communication**
- Fluent in **English** and **Arabic**

Internships and Experiences

Orange Digital Center - Amman, Jordan **July 2025 – August 2025**

Data Engineering Intern

- Utilized advanced data mining tools (Orange, KNIME) to explore complex datasets, identifying key patterns and extracting meaningful features that supported predictive modeling.
- Developed and optimized Python-based ETL pipelines, transforming raw data into structured formats and leveraging dataframes for efficient manipulation and analysis.
- Applied various classification and regression models to structured datasets, learning how to preprocess data, engineer features, and evaluate performance.

Projects

GPSafety **Jan 2025 - April 2025**

- Developed a C++-based GIS application prioritizing real-time access to safe navigation across Toronto.
- Implemented A* and multi-destination Dijkstra's algorithms to compute the shortest and safest path.
- Integrated parallel programming and multithreading to boost runtime performance and reduce UI latency.
- Communicated with an external developer to gain API access for live Toronto crime data, anchoring the application around immediate safety awareness.
- Achieved search times under 100 ms, Toronto map load time of 4.22 seconds, and a System Usability Scale (SUS) score of 76, reflecting strong user experience and performance efficiency.

Satellite-to-Map GAN conversion **May 2025 - Aug 2025**

- Trained a Pix2Pix conditional GAN with a U-Net generator and PatchGAN discriminator to convert satellite images into Google Maps-style visualizations using Python and PyTorch libraries.
- Collaborated with a 4-member team using GitHub for version control and a Gantt chart to coordinate milestones.
- Preprocessed and augmented 2,000+ image pairs to improve model robustness and reduce spatial bias.
- Achieved an L1 loss of 6.47% and a Structural Similarity Index of 0.69, demonstrating effective reconstruction.

Community Involvements

ECE Club

Mentorship Director

- Lead the Mentorship Program by interviewing and selecting upper-year mentors, overseeing their involvement, and establishing supportive relationships to ease first and second-year students' transition into university.
- Organize and deliver academic and community-building events, such as *Magellan 101, ECE295/297 Student Experience Sessions,* and technical workshops, to enrich students' experiences.