

Justin Welsh Tam

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🎓 Education

Georgia Institute of Technology , <i>Masters of Computer Science</i>	09/2024 – present
University of Ottawa , <i>BASc Electrical Engineering and Honours BSc in Physics</i>	09/2017 – 04/2024
<ul style="list-style-type: none">- 9.06/10 CGPA- Summa Cum Laude	

💼 Professional Experience

Web Development - Full Stack , <i>Internship, Lendus</i> ✎	09/2023 – 02/2024
<ul style="list-style-type: none">- Responsible for web-application design, implementation, research, and testing in both the front and backend.- Implemented key features core to the application such as the availability database, item creation flow, search engine, and more.	
Software Developer , <i>Co-op Student, Department of National Defence</i> ✎	06/2023 – 08/2023
<ul style="list-style-type: none">- Improved upon an existing discrete event simulation tool, FEAST, to aid in ammunitions management using Python.- Created extensive technical documents regarding FEAST (publication pending).	
Web Development - Quality Assurance , <i>Co-op Student, Jumping Elephants</i> ✎	01/2021 – 04/2021
<ul style="list-style-type: none">- Designed and wrote automated test scripts for regression and performance testing using the testing platform Subject 7, and Python.- Worked independently on a strategy to conduct performance testing using Subject 7, and developing any necessary automation to aid the performance tests.	
Computer Science Research Assistant , <i>NSERC Student Award, Dalhousie University</i>	05/2019 – 08/2019
<ul style="list-style-type: none">- Researched papers on neural network techniques and applications.- Worked on group projects involving a ROS based RC car to gather data for a neural network-based stereo vision system.- Independently developed a machine-learning based PD controller for a 2-wheel robot to follow a race track, involving Python, Aseba, and a Raspberry Pi.	

📁 Projects

Quantum Key Distribution (QKD) Simulation , <i>Python, Physics Honours Project</i> ✎	09/2022 – 04/2023
<ul style="list-style-type: none">- Simulated a quantum key exchange between two parties, examining the success rate between two separate choices of basis.	
6-axis Robotic Arm , <i>MATLAB, computer vision, and technical design</i> ✎	09/2020 – 12/2020
<ul style="list-style-type: none">- Theoretical modeling of individual axis (motor).- Calculating the required angle of each motor for a given position in 3-dimensional space.- Developed a vision-based shape detector to move standard shapes (square, circle, etc.) to specified positions using MATLAB.	
2-Wheel Robot with Computer Vision , <i>Python, TensorFlow, OpenCV2, a Thymio-2 Robot, Aseba, and a Raspberry Pi</i> ✎	06/2019 – 08/2019
<ul style="list-style-type: none">- Developed a 2-wheel robot that could perform various computer vision tasks using a toy robot and a Raspberry Pi.- Replaced the line following algorithm with a convolutional neural network trained on data collected by the original algorithm, using TensorFlow.	

🧠 Proficient With

Python, C++, TypeScript, SQL, MATLAB, HTML/CSS, React, Tailwind, Microsoft Office, Bash, Git/Github