

TAHA AZIZ

tahamaziz.com

EDUCATION

University of Waterloo

Bachelor of Applied Science in Mechatronics Engineering/Computing Option

Waterloo, ON

Jun. 2024

- Relevant Coursework: Programming for Performance, Computer Structures & Real-Time Systems

EXPERIENCE

Sentia Solutions

Software Engineer (Full-time and co-op)

Richmond Hill, ON

Jan. 2023 – Dec. 2024

- Led the design and implementation of a scalable, automated IT device log management system for numerous providers, ensuring high reliability across 50+ diverse customer environments using Azure Data Factory, Azure Databricks, PySpark, REST APIs, and statistical methods such as Z-score analysis
- Applied root cause analysis and debugging techniques to resolve performance bottlenecks and data errors, reducing processing times by 40% through fixes such as salting and dead letter queues

Sheertex

Manufacturing Engineer (Co-op)

Montreal, QC

May 2022 – Jul. 2022

- Led the development of a machine vision system using OpenCV and Keyence cameras for automating QA for textile manufacturing, improving defect detection accuracy to 96.7% precision and reducing QA time by 75%
- Integrated cameras, PLC, and the IPC using Ethernet and Modbus TCP, for real-time defect classification
- CAD-designed using SolidWorks and 3D-printed jig and brackets used to mount and align camera and lights

Teledyne DALSA

Sensor Engineer (Co-op)

Waterloo, ON

Aug. 2021 – Dec. 2021

- Inspected space satellite image sensors in an ISO 4 cleanroom, using microscopes with various lighting techniques to detect defects, and oscilloscopes and multimeters to test electrical performance. Developed MATLAB and LabView programs to accelerate testing and data acquisition
- Conducted root cause analysis for sensor defects, using logistic regression to identify correlations between sensor performance and defect types, leading to a 25% reduction in defect rates through design improvements

St. Joseph's Healthcare

Full Stack Developer (Co-op)

Hamilton, ON

Jan. 2021 – Apr. 2021

- Implemented interactive dashboards using SQL, JavaScript, and React for patient data monitoring
- Engineered a data cleaning pipeline using Python and pandas addressing inaccurate patient data entry

University of Waterloo

Software Developer (Co-op)

Waterloo, ON

May. 2020 – Aug. 2020

- Developed autonomous vehicle control algorithms for cruise control and braking with C++ and Python
- Deployed vehicle simulations on Azure Linux VMs with Docker, enabling over 10 simultaneous processes

Waterloo Rocketry Design Team

Team Member

Waterloo, ON

Sep. 2019 – Jun. 2024

- Designed and implemented a custom PCB in KiCad for the rocket's recovery system, integrating dual altimeters, CO2 ejectors, and pyro-cutters to ensure safe parachute deployment
- Implemented and tested CAN bus communication for telemetry data collection under noisy conditions
- Developed a parachute reefing deployment mechanism, optimized through extensive wind tunnel testing

SKILLS

SolidWorks, KiCad, LabView, 3D Printing, MATLAB, PLC, C++, Python, Azure, Data analysis