ADYN MILES

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EDUCATION

University of Toronto September 2017 - May 2022 (Expected)
B.A.Sc in Engineering Science Specializing in Aerospace Engineering GPA: 3.82/4.00

SKILLS AND RELEVANT COURSES

Skills
Languages - Python, C++, MATLAB, C, VBA
Tools - Solidworks CAD, LaTeX, PyTorch, GNURadio
Fluent in English, intermediate French knowledge
Basic Machining
PIC Microcontroller, Arduino, Raspberry Pi

Relevant Courses
Space Systems Design
Spacecraft Dynamics
Structural Mechanics
Control Systems
Combustion Processes

EXPERIENCE

University of Toronto Institute for Aerospace Studies Thesis September 2021 - April 2022
Hybrid Continuous Magnetic and Impulsive Control for Earth-Observing Satellites

- Authoring an undergraduate thesis about optimal hybrid control systems for Earth-observing satellites.
- Developing spacecraft dynamics models and control algorithms in MATLAB.

Canadian Space Agency May 2021 - August 2021
Satellite Operations and Infrastructure Intern

- Developed a simulator for NEOSSat in C++ to accurately simulate satellite processes on the ground, which is critical for diagnosing issues, attempting solutions, and developing better flight software.
- Ported the simulator architecture from 32-bit to 64-bit.
- Added critical payload functionality to the main program using a Real Time Operating System.

University of Toronto Aerospace Team May 2018 - Present
Payload Systems Lead and Systems Engineer for Hyperspectral Imaging Nanosatellite Launch

- Leading 3 technical teams and 20 members in mechanical, optical, electrical, and firmware development.
- Planned, designed, and performed 10+ major systems-level tests to verify satellite performance capabilities, including vibrational and thermal vacuum chamber testing.
- Communicated with external researchers and industry professionals, securing tens of thousands of dollars in sponsorships and technical support in the process.
- Produced payload assemblies and mechanical interfacing documents in SolidWorks CAD.
- Developing software base for automated ground station communications in GNURadio and Python.

Bombardier Aerospace August 2020 - April 2021
Stability and Control Intern

- Developed tools in VBA used by 5-10 employees to streamline drag evaluations on production aircraft.
- Simulating aircraft stability and performance in MATLAB under uncontrolled high thrust conditions to develop procedures for unexpected flight conditions and to meet aviation industry requirements.

University of Toronto - Digital Pathology Multimedia Lab May 2019 - Present
Research Assistant

- Authoring a scientific journal entry investigating the transferability and scalability of data-driven models for focus quality assessment applications to facilitate clinical workflows, for submission to Nature Journal.
- Added multiple usability features to a MATLAB image focus quality heatmap tool and developed a Python implementation. This tool is now currently in use at Huron Digital Pathology.