





Levi Gregorash

Master of Engineering, Aerospace – CGPA: 4.33/4.33

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SUMMARY OF QUALIFICATIONS

Aerospace Engineer with experience in data acquisition, automation, and systems integration. Proficient in MATLAB and Python with hands-on experience in developing custom test systems, automating scripts, and creating graphical interfaces. Skilled in debugging software and hardware, wiring and transmitting for data acquisition, and training and technical documentation. Demonstrated ability to manage testing equipment, analyze data, and communicate results effectively.

EMPLOYMENT

GRADUATE RESEARCHER | APPLIED AERODYNAMICS LABORATORY OF FLIGHT

2 Years | 2022-2024 | Toronto, Canada

- Designed and developed a solar-electric aircraft for ultra-long endurance missions, achieving multi-day continuous flights in accordance with Transport Canada.
- Optimized control systems through advanced tuning techniques and implemented real-time wind estimation strategies to enhance flight stability and efficiency.
- Developed and integrated path-planning algorithms using model predictive controllers to ensure optimal mission performance and energy management.

GRADUATE TEACHING ASSISTANT | TORONTO METROPOLITAN UNIVERSITY

2 Years | 2022-2024 | Toronto, Canada

- Delivered instruction for laboratories, tutorials, and review sessions, and assessed reports and exams for Introduction to Space Systems Design and Flight Performance courses.

RESEARCHER | FACILITY FOR RESEARCH ON AEROSPACE MATERIALS AND ENGINEERED STRUCTURES

3 Years | 2019-2022 | Toronto, Canada

- Research and development of an industrial robot arm for 5-axis continuous carbon fiber 3D printing. Designed and maintained the modular PLC through changing project scopes.
- Automated closed loop in situ defect detection in 3D printed parts using laser scanners.

PUBLICATIONS

CONFERENCE PRESENTATION | CANADIAN AERONAUTICS AND SPACE INSTITUTE

2023 | Toronto, Canada

- Model predictive controllers for real-time flight strategies of lightweight UAV in wind.

JOURNAL PAPER | ADDITIVE MANUFACTURING, VOLUME 54, JUNE 2022, 1027333

2022 | Toronto, Canada

- Evaluation of Electromagnetic Shielding Properties of High-Performance Carbon-Fiber Composites Fabricated by Robotic 3D Printing.

UNDERGRADUATE THESIS | INDEPENDENT RESEARCH

2022 | Toronto, Canada

- Implemented and tuned extended Kalman filters in the navigation system of free-flyers performing inspections of space structures through simulated measurement noise.

PROJECTS

RYERSON HYPERLOOP TEAM | GUIDANCE, NAVIGATION, AND CONTROL TEAM

2 Years | 2017-2019 | Toronto, Canada

- Spearheaded architecture design, component selection, and mass and power budgets.

WEATHER BALLOON PAYLOAD | PERSONAL PROJECT

2017 | Minnedosa, Canada

- Developed and programmed a Raspberry Pi-based data acquisition system to record barometric pressure, altitude, temperature, and video during the 30 km altitude mission.

SKILLSET

TECHNICAL SKILLS

Proficient:

MATLAB, Fortran, CATIA V5
Python, G-code, MS Office
Fusion 360, SOLIDWORKS
Arduino, Raspberry Pi, C++

Experienced:

LabVIEW, STK, AutoCAD
Simulink, RobotStudio, ROS
Ansys Mechanical, Fluent

LEADERSHIP

Aerospace Department

Former Council Associate
Chair at Ryerson University

Aerospace Course Union

Professional event planning
and student representation

LANGUAGES

English

Native Language

Spanish

Working Proficiency

Portuguese

Working Proficiency

EDUCATION

Master's of Engineering, Aerospace

TORONTO METROPOLITAN
UNIVERSITY

2022-2024 | Toronto, Canada

Bachelor's of Engineering, Aerospace

RYERSON UNIVERSITY

2017-2022 | Toronto, Canada

Rotary International Exchange

YEAR LONG YOUTH EXCHANGE

2015-2016 | São Paulo, Brazil

CORE COURSES

Avionics and Navigation

Spacecraft Dynamics and
Control

Computational Fluid
Dynamics & Heat Transfer

Testing and Evaluation of
Composites

Random Processes

Intro to Space Robotics

Orbital Dynamics

Flight Dynamics and
Aircraft Control