

Eithin Pero

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Engineering graduate with hands-on experience in process improvement, production environments, and system validation, with a strong focus on execution, coordination, and delivering practical solutions.

HIGHLIGHTED EXPERIENCES

Communication & Leadership

- Led recurring small-group technical review sessions as a Peer Assisted Study Sessions facilitator, translating complex course material into clear, actionable concepts to support knowledge transfer
- Co-President (Coach) of a 39-member engineering team, coordinating logistics, mentorship, and competition execution for an international design competition; awarded *Best Coach* and contributed to 13 additional delegation awards
- Co-led a site-wide lean manufacturing initiative at Collins Aerospace, working with operators, management, and manufacturing engineers to realign tool control policy with real workflows

Technical Skills

- Software: Microsoft Office, Catiav5, MATLAB; exposure to SmartTeam and SAP
- Testing & Instrumentation: Oscilloscope, impact Hammer, MTS, machine vision/DIC
- Selected by faculty advisor to lead Catiav5 redesign of a UAV outer mold line, resolving geometry deficiencies to enable downstream structural and aerodynamic analysis
- Interpreted and implemented professional engineering drawings to ensure accurate, standards-compliant part assembly for client deliverables in a production environment
- Led independent setup, validation, and application of a machine vision system, producing high-fidelity data used in a graduate thesis and technical paper in preparation

EDUCATION & CERTIFICATIONS

B.Eng, Aerospace Structures and Systems

September 2020 – December 2025

Carleton University, Ottawa, Ontario

- Graduated with distinction, GPA 3.79
- 2021 and 2025 Deans' Honour List

Certifications & Clearances

- RTX Core Champion (Lean/Six Sigma), Overhead Crane, WHMIS
- Formerly CGSA-Cleared under Canada's Controlled Goods Program, eligible for re-assessment

RELEVANT EXPERIENCE

Research Assistant

May 2025 – Present

Carleton University, Ottawa, Ontario

- Drove the end-to-end implementation and validation of a high-speed dynamic digital image correlation (DIC) system for modal testing of an aluminum wing specimen under impulse excitation
- Evaluated multiple rigid mounting configurations for a fixed-free boundary condition, identifying and implementing a T-bar clamp solution that minimized unwanted vibration
- Produced and interpreted full-field dynamic displacement data used to validate and improve analytical stick models, informing downstream modelling and test decisions

Systems Engineer

September 2024 – April 2025

Engineering Capstone Design Project, Carleton University

- Contributed to the systems-level development of an additively manufactured fixed-wing UAV for aerial mapping as part of a 17-person multidisciplinary team, coordinating design, manufacturing, and test activities to achieve a successful taxi test milestone
- Owned the design, manufacture, and integration of a custom 3D-printed main and nose landing gear systems with integrated shock absorption, resolving load-path and steering constraints to enable safe ground operations
- Owned the development and validation of a complete elevon actuation subsystem through kinematic analysis, hinge tensile testing, and wind tunnel testing, ensuring structural integrity under aerodynamic forces

Industrial Manufacturing Engineering Coop

May 2023 – August 2024

Collins Aerospace (RTX), Oakville, Ontario

- Co-led a site-wide lean manufacturing initiative to align tool management policies with real workflows and upcoming software integration, earning a lean/six sigma recognition
- Designed new tooling which were modelled and drawn in Catia V5 for assembly processes increasing the rate of production and reducing process downtime
- Implemented the Power Platform suite of tools to optimize the transfer of production tooling data, improving response time to tool maintenance and inspections
- Systematically identified tooling and production assemblies lacking Catia models, then developed those models to streamline 3D work instruction creation

ADDITIONAL EXPERIENCE

Co-President (2023-2024) | Team Captain (2022-2023)

Sept 2022 – May 2024

Troitsky Bridge Building Competition

- Served as Co-President for a 39-student, university-wide delegation, organizing team structure, mentoring sub-teams, and coordinating logistics for an international competition; awarded *Best Coach* and contributed to 13 competition wins
- Executed program-level execution during 2023-2024 season, including preparing formal funding and travel requests, coordinating with university student organizations, and interfacing with Concordia University competition hosts on rules interpretation and logistics
- Previously led a 6-member team in a two-semester international design competition, overseeing concept development, analysis, and fabrication of a popsicle-stick bridge
- Presented engineering rationale and structural analysis to a panel of academics and industry professionals, defending design trade-offs and manufacturing strategy

Peer Assisted Study Sessions Facilitator

Jan 2023 – Apr 2023, Sep 2024– Dec 2024

Carleton University – Centre for Student Academic Support

- Led recurring small-group technical review sessions, translating complex course material into clear, actionable concepts and facilitating discussion to support student understanding
- Selected for repeat appointment and completed formal training in instructional methods and professional communication

Production Operator

Summers of 2020, 2021, and 2022

Continental Conveyors, Napanee, Ontario

- Assembled precision components from engineering drawings in a production environment, working closely with other operators to meet delivery schedules and quality requirements
- Improved throughput on high-volume orders by refining assembly methods resolving production issues to minimize downtime