

Ohm Patel

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Objective

Pursuing a graduate degree in aerospace engineering at the University of Toronto starting September 2024. Searching for an exciting 4-month summer internship before my graduate studies begin.

Education

University of Toronto	Toronto, Canada
Master of Engineering – Aerospace Engineering	September 2024 – April 2026
Queen’s University	Kingston, Canada
Bachelor of Applied Science – Mechanical Engineering	April 2023

Work Experience

Howmet Aerospace	Georgetown, Canada
Quality Engineering Intern	June 2023 – October 2023

- Utilized Excel to analyze non-conformance and defect data to develop and implement quality assurance processes to ensure product compliance with AS9100D and ISO 90012015 aerospace standards.
- Created and/or improved 100+ work instructions and product criteria for the investment casting manufacturing processes and implemented them into Siemens Teamcenter.
- Performed root cause analysis investigations to identify the source of defects and recommended preventative measures by collaborating with the production floor.

Parks Canada	Peterborough, Canada
Project Engineering Intern	May 2021 – August 2022

- Supported the project managers to facilitate the successful completion of \$3M-\$20M marine infrastructure projects through design verification, project documentation, budget management, site inspections, and equipment testing.
- Overhauled 20+ aging dam components using SolidWorks to improve reliability and modernize outdated designs.
- Evaluated technical design drawings and reports to ensure compliance with required specifications and mitigated supply issues by 3+ weeks by producing redesigns in SolidWorks and AutoCAD.
- Coordinated with the consultants and contractors to improve construction procedures, identify future risks, and implement mitigation strategies to ensure continuous progress.

Enerflex	Abu Dhabi, UAE
Mechanical Engineering Intern	June 2020 – September 2020

- Collaborated with the senior engineers on customer equipment sizing and acquired technical training on Ariel compressors, Waukesha natural gas engines, and Solar gas turbines.
- Assisted in the development and revision of P&IDs and PFDs for the compressor systems.
- Reviewed design documents, contracts, and payment plans to support the project management team, ensuring that all deliverables were completed on time and within budget.

Extracurricular

Queen’s University Formula Design Team	Kingston, Canada
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- Designed and manufactured a lightweight, high-performance race car chassis and the electrical harness for the vehicle in accordance with SAE regulations.
- Optimized the stiffness-to-weight ratio of the chassis by utilizing Ansys FEA and physical torsion test rigs, resulting in a 68% stiffness increase with a 3% increase in weight compared to the preceding chassis.
- Designed, prototyped, and manufactured 10+ components for the vehicle using SolidWorks and subtractive manufacturing processes (CNC mill, lathes, and shop tools).
- Designed electrical components such as PCBs using Altium Designer to ensure functionality for driver HUD, sensors, and other non-mechanical systems for the vehicle.

Technical Skills

Design & Analysis: SolidWorks, Ansys Mechanical, CATIA, AutoCAD, OpenFOAM, GD&T

Programming & Electrical: Python, MATLAB, Simulink C, Arduino, Altium Designer

Hardware & Manufacturing: CNC Machining, 3D Printing, Multimeter, Oscilloscope, Soldering

Other: Microsoft Office Suite (Word, Excel, PowerPoint), Linux