

Ohm Patel

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EDUCATION

University of Toronto

Master of Engineering in Aerospace Engineering

Toronto, Canada

September 2024 – May 2026

Queen's University

Bachelor of Applied Science in Mechanical Engineering

Kingston, Canada

September 2018 – May 2023

WORK EXPERIENCE

Red Rabbit Robotics

Hardware Engineering Intern

Vancouver, Canada

May 2025 – August 2025

- Developed and integrated the hardware systems for humanoid robots, ensuring they were reliable and manufacturable.
- Designed 7-DOF robotic arms in Fusion 360 in accordance with ASME GD&T standards, and oversaw CNC and sheet-metal fabrication with overseas suppliers.
- Prototyped 3D printed test rigs to validate robotic arm designs, test servo-motor performance, and calibrate LiDAR and depth cameras.
- Assisted the software team by creating Python scripts to generate accurate URDF models that can be visualized in RViz.

Howmet Aerospace

Quality Engineering Intern

Georgetown, Canada

June 2023 – October 2023

- Analyzed defect data to develop and implement quality assurance processes to ensure product compliance with AS9100D aerospace standards.
- Created and 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

Project Engineering Intern

Peterborough, Canada

May 2021 – August 2022

- Supported the project managers to facilitate the successful completion of 3M–10M 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- Overhauled 20+ aging dam components using SolidWorks to improve reliability and modernize outdated designs.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.
- Coordinated with consultants and contractors to improve construction procedures, identify future risks, and implement mitigation strategies to ensure continuous progress.

Enerflex

Mechanical Engineering Intern

Abu Dhabi, UAE

June 2020 – September 2020

- Collaborated with senior engineers on equipment sizing for upstream oil & gas applications through calculations, material selection, and evaluation of technical design documents.
- 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 all deliverables were completed on time and within budget.

EXTRACURRICULAR ACTIVITIES

Queen's University Formula Design Team

September 2018 – May 2023

- Led a group of students to design, and manufacture a lightweight, high-performance race car chassis.
- Produced 3D CAD models using SolidWorks, performed FEA using Ansys Mechanical for static and dynamic loads, and performed physical testing on torsion test rigs to validate simulation models.
- Designed PCBs using Altium Designer to ensure functionality for driver HUD, sensors, and other non-mechanical systems for the vehicle.

TECHNICAL SKILLS

Design & Analysis: SolidWorks, Fusion 360, Ansys (Mechanical, Fluent), Altair Hyperworks, Altium Designer

Programming: Python, MATLAB, Simulink

Manufacturing & Hardware: 3D Printing, CNC Machining, Soldering, Arduino

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