

Fiona Mackenzie

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EDUCATION

Western University, London Ontario

September 2021 – May 2025

Bachelor of Science in Mechanical and Materials Engineering, Fourth Year Student, Graduation

Date: May 2025

Relevant Coursework: Fluid Mechanics, Thermodynamics, Heat Transfer, Materials, Machine design, Engineering Mathematics, Reverse Engineering.

EXPERIENCE

Linde Canada Inc., Mississauga Ontario

May - August 2022

Mechanical Engineering Summer Student Co-op, Customer Service Department

- Reviewed and updated cryogenic equipment asset information in the Enterprise Asset Management system (EAM).
- Reviewed and verified Canadian Registration Numbers (CRN) for pressure retaining components listed on Linde standard drawings; obtaining copies of applicable statutory declarations from vendors as required.
- Identified gaps/opportunities between the existing Linde standard maintenance program for cryogenic systems and industry best practice.
- All tank information organized using Microsoft Excel.

Urban Life Solutions, Mount Albert

May - August 2024

- Landscaping, property planning and design.
 - Environmental and safety implications.
 - Operating motorized tools (Trimmer, Blower, Mowers, etc.).
 - Driving box pickup truck to various sites in the GTA.
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SKILLS

SolidWorks – Design and Simulations

Ansys Fluent (Fluid Simulation Software) – domain design, meshing and simulation

MATLAB Software – Numerical Analysis

Microsoft Excel – Data Organization and Analysis

PROJECTS

Research Project – Green Hydrogen for Transportation **2022**

Topics: The future of transportation, Green Hydrogen, and hydrogen vehicles (Hydrogen fuel cells)

Leaning Tower of Pisa – Advanced CAE Computational Heat and Fluid Flow **2024**

Analysing air flow around the Tower of Pisa, using Ansys Fluent simulations.

Setting up geometry of domain, determining mesh properties and size, performing simulations.

Torsional Stiffness Improvements on 4x Rowing Hulls – Fluidesign **2025**

Increasing torsional and lateral stiffness, by altering dimensions and materials used on boats.

Vibration testing, SolidWorks design and simulations, material three-point bend tests.

CERTIFICATES

- SolidWorks Additive Manufacturing Associate – 2024
 - SolidWorks Surfacing Professional – 2024
 - SolidWorks Simulation Associate – 2024
 - SolidWorks CAD Design Associate (CSWA) – 2022
 - CPR Certificate – 2023
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