

Jessie C. Doucette

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Academics

Bachelor of Mechanical Engineering, Dean's List, Dalhousie University

2023-2028

- Relevant course work: Engineering Design 2, Dynamics, Mechanics of Materials, Applied Differential Equations, Electric Circuits, Thermo Fluids 1&2.

Skills

Technical:

- **CAD (Computer-Aided Design):** Experience setting up and running SolidWorks simulations to test structural rigidity. Experience creating large assemblies working with mechanical and traditional mates. Ability to create and read engineering drawings.
- **Computer Programming:** Well-versed in C, Python, and MATLAB. Experience programming with Arduino and creating circuits.

Interpersonal:

- **Quick learner:** Consistently demonstrated the ability to quickly learn new skills and systems under a strict timeline, such as operating asphalt plants and safely using new equipment.
- **Problem-solving:** Ability to think critically about problems and troubleshoot the issue within the system in a reasonable time. Such as calibrating new liquid tar pumps and resolving various Plant breakdowns.
- **Dependability:** Highly dependable and reliably consistent to complete tasks on time having consistently worked 55+ hours/week over long periods.

Professional experience

Mechanical Engineering Intern | Miller Paving Atlantic New Brunswick May 2024-September 2024

- Learned about the various systems involved in Millers operations (Asphalt plant, Rock crushers, etc.).
- troubleshoot various breakdowns with the asphalt plants by applying engineering principles saving the company multiple weeks of downtime.
- Gained experience working extended hours (55hrs+/week) under high-pressure tight deadlines to reduce plant downtime.

Automotive Detailer | Macdonald Buick GMC New Brunswick June 2023-September 2023

- Kept up with the demanding pace of cleaning 3 vehicles/hour and was able to exceed that expectation.
- Developed a great attention to detail to keep customer satisfaction.
- Trusted with training my replacement for this position before leaving for university.

Customer service and employee trainer | Petro Canada New Brunswick August 2021-June 2023

- Responsible for providing excellent customer service and trusted with locking up the store at the end of the day.
- Trusted with training and evaluating various new employees to ensure they are up to the company standard.

Personal projects

V8 Engine 3D model and simulation | SolidWorks

- Developed great SolidWorks skills gaining experience creating multiple parts and using assembly mates, mechanical mates, and the SolidWorks Toolbox to have them operate together simultaneously in a large assembly.
- Created a motion study to achieve the proper timing between valves and pistons in the engine.

1987 Mazda Rx7 LS Swap Project | Various

- Created many unique solutions to keep costs down throughout this project, hence developing great problem-solving skills.
- Used tuning software to tune the engine for power due to installing a more aggressive camshaft and tighter valve springs.
- Gained experience operating under tight deadlines to have the car ready for a show.

Involvement and personal

Aerodynamics Researcher/Designer | Dalhousie FSAE

- With 1 other Group member researched and designed Dalhousie's first functional undertray.
- Improved weight savings by redesigning the battery cooling system.
- Gained experience designing SolidWorks parts in conjunction with other members' parts to create large assemblies.

Powerlifting | Personal

- Avid Powerlifter over the past 3 years having competed at the provincial level.
- Current New Brunswick 83Kg squat record holder.