

- Senior **mechanical engineering** student looking for a **4-month internship** starting in **September 2020**.
- 2+ years of experience in **Autonomous Cars, Drones, Hyperloop Pods, Manufacturing, and Entrepreneurship**.
- **Led and managed 30** mechanical engineering students to design a **hyperloop pod capable of 300 mph** for the SpaceX competition.
- Took **products valued at over \$100,000** through the product development cycle from initial conception, to design, build and test.

## Experience

### Hardware Reliability Engineering Intern

Cruise | JANUARY 2020 – MARCH 2020

- Categorized over 25 critical vehicle locations for vibration loading and temperature & humidity cycling.
- Used MATLAB to analyze over 1 billion vibration data points from tri-axis accelerometers to create a series of power spectral density curves for 10 autonomous vehicle sensor locations.

### Mechatronics Engineering Intern

AS Works | MAY 2019 – NOVEMBER 2019

- Developed a precise and autonomous landing system for outdoor and indoor UAV's used to charge and dock a drone between flights (0.5in of accuracy).
- Designing an autonomous long range (1 - 5 km) drone tracker that receives live flight data when out of range from standard communication options.

### Mechanical Engineering Lead & Braking Lead

Paradigm Hyperloop | JANUARY 2017 – JANUARY 2020

- Placed 8th in the World at the fourth SpaceX Hyperloop Pod Competition.
- Led and managed over 30 engineering students to design, and manufacture over 500 custom parts for the mechanical and structural systems.
- Planned and executed all mechanical testing, including a 1.9 MJ flywheel test used to simulate the top speed and energy of the pod at 500 km/h.
- Designed and proof tested a custom pneumatic braking system capable of decelerating the pod at 7.5G's, at operating pressures up to 3000 psi.
- Conducted 200+ hours of machining and assembly (CNC, lathes, mills, etc.).
- Responsible for material and part procurement for all mechanical systems.

### CEO & Founder

Swell | SEPTEMBER 2018 – FEBRUARY 2019

- Worked with surgical staff from over 20 hospitals across North America with the goal to provide early warning to doctors of surgical emergencies.
- Generated multiple wireframe concepts used in over 200 customer interviews to determine key product features.

### Machine Design Intern

Hatch | JANUARY 2018 – APRIL 2018

- Designed a high-temperature (800°C) flow restricting nozzle for galvanizing equipment that cut operating costs by 50%.
- Statistically analyzed galvanizing process line equipment to determine the accuracy and consistency of the galvanized coating layer using excel and VBA.

### Reservoir Engineering Intern

Canadian Offshore Petroleum Board | APRIL 2017 – SEPTEMBER 2017

- Created over 25 excel VBA macros to improve data management increasing efficiency by 40%.

## Education

### Bachelor of Mechanical Engineering

Memorial University of Newfoundland (MUN)  
SEPTEMBER 2016 – APRIL 2021

- Dean's List
- Average: 82.3% | GPA: 3.71/4.00
- Controls | Mechanical Component Design | Vibrations | Thermodynamics | Heat Transfer | Material Science | Solid Mechanics | Production Technology | Fluid Mechanics | Mechatronics | Statics & Dynamics | Advanced Engineering Calculus

## Skills

**Design:** SolidWorks | Solid Edge | AutoCAD - Piping and Instrumentation Diagrams (P&IDs)

**Analysis:** Finite Element Analysis | Piping Fluid Flow (relief valve sizing, energy loss, orifice flow, etc.)

**Manufacturing:** CNC | Mill | Lathe | Drill Press | 3D Printing | Laser Cutter | Water Jet

**Software/Coding:** Python | Arduino | MATLAB | Simulink | VBA | C++ | Swift

## Extracurriculars

### Vice President External

MUN Engineering Student Executive  
MAY 2018 – PRESENT

- Represent the MUN Engineering Student body on both Regional and National Levels.
- Organize and execute social and advocacy events for MUN Engineering Students.

### Student Ambassador

Memorial Entrepreneurship Centre  
OCTOBER 2017 – OCTOBER 2019

- Hosted and organized a 150 attendee entrepreneurial/tech conference.

## Interests

- Electric Vehicles | Skiing | Rock Climbing | Basketball | Ball Hockey | Camping | Mario Kart