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SAMUEL VALENTINE
https://samuelvalentine.netlify.app

EDUCATION

Bachelor of Engineering *McGill University, Montreal, Canada*	Major: Mechanical Engineering Minor: Software Engineering	**09/2019 – 05/2024**

EXPERIENCE

ENBRIDGE PIPELINES **05/2022 – 08/2022**
- Designed P&ID's, isometric diagrams, and electrical diagrams for a pump system
- Emergency-response plans, lockout / tagout systems

BOMBARDIER AVIATION – LOADS AND DYNAMICS
Created tools for predicting loads on aircraft wings and fuselage using numerical methods and machine learning: **01/2021 – 08/2021**
- Automating and improving existing conceptual load design tools in Python
- Developing physical interpretations for load prediction results
- Formally presenting and documenting all work throughout each project while using Mercurial version control

MCGILL ROCKET TEAM (MRT) **09/2019 – 08/2021**
- Completed a JavaFX UI designed for tracking specifications of the rocket from the ground-station
- Won the design award for the team's Hackathon 2020 event

STRATHMORE LANDSCAPING – TEAM LEADER
- Built positive relationships with clients, even in challenging circumstances **12/2017 – 08/2020**
- Experience driving large Isuzu dump trucks, pickup trucks, and other vehicles
- Trained new employees

PROJECTS

Badminton Racket – Conceptual Design Project **09/2022 – 12/2022**
- Fully designed a "Snap-On" badminton racket designed to minimize string changing time.
- Made use of product planning techniques such as a "house of quality" and "Pugh's decision matrix".

Structural Bracket – FEA Analysis and Structural Design **01/2022 – 05/2022**
- A research and simulation project based in Abaqus to design a structural bracket while minimizing weight.

Bike Pedal Assembly - Manufacturing Project **09/2021 – 12/2021**
- Designed a bicycle pedal assembly in SolidWorks, transformed to GCode using Mastercam, and then manufactured using 3D Printing, CNC milling and CNC turning.

Bicycle Assembly – Design for Manufacturing **09/2019 – 12/2019**
- A CAD project designing a full bicycle prototype, using standards from McMaster-Carr.

SKILLS

ENGINEERING	**CAD:** SolidWorks, Solid Edge, Mastercam	**FEA:** Abaqus
MACHINING	Mastercam, G-Code, CNC Milling, CNC Lathing, 3D Printing	WHMIS, Class 5 License, Landscaping Equipment
PROGRAMMING LANGUAGES	**Python:** TensorFlow, Pandas, Seaborn, Numpy, Sphinx **Java:** Software Development (specifics on demand)	Other: Matlab, Simulink, SPICE, LabView
LANGUAGES	**English** – Fluent	**French –** Conversational