SAMUEL VALENTINE

Mechanical Engineering

samuel.valentine@mail.mcgill.ca
(514) 968-5754
Montreal, QC
https://www.linkedin.com/in/samuel-valentine-52b10a194/

EDUCATION

Bachelor of Engineering
Mechanical Engineering (Major)
Software Engineering (Minor)

McGill University

09/2019 - 05/2024
Montreal, QC

SKILLS

Mechanical

- CAD design: SolidWorks
- FEA Analysis: Abaqus / NX
- Manufacturing: CNC Milling / Lathing, 3D printing
- Matlab, Spice, LabView

Software

- Python: Numpy, Pandas, TF
- Java: UML, JUnit, Spring
- VCS: Git, Github, Mercurial
- Agile: Scrums, Sprints, Milestones
- Frontend: JavaFX, HTML, CSS, JS

Social

- Strong Communication
- Thorough Documentation
- Attention to detail
- Independance

Recreational

- Music: Piano (Graduated RC)
- Running: 5 - 42km races

EXPERIENCE

Airbus - Capstone Project

Design of a O2 Bracket to Withstand Regulator Release Event

09/2023 - 05/2024 Montreal, Qc

- Established each design iteration using CAD (SolidWorks).
- Performed extensive load and stress analysis using bolt group analysis and FEA (Abaqus).
- Manufactured using 3D printing prototypes and then sheet metal.
- Followed PDR and CDR project management cycle while meeting with Airbus at least once per week.

McGill Formula Electric

Design of a Driverless Braking System

09/2023 - 05/2024 Montreal, Qc

- Created mechanical CAD (SolidWorks) models for all iterations of concepts and designs.
- Stress analysis using FEA (NX) and corresponding material selection.
- Electrical system design including microcontroller and linear actuator.
- Manufacturing using prototyping, machining, electrical system development, assembly, and testing.

Enbridge Pipelines

Engineering and Maintenance

05/2022 - 08/2023 Montreal, Qc

- Developed P&ID's, isometric diagrams, and electrical diagrams for a Varsol pump system.
- Performed "Pigging" (inserting smart and/or cleaning tools into the pipeline), metal work, replacing valves, Air-Vacc, lock out / tag out systems, emergency response drills.
- Asset verification in Power BI using Maximo.

Bombardier Aviation

Loads and Dynamics

01/2021 - 08/2021 Montreal, Qc

- Automated and improved existing conceptual load design tools in Python using Tensorflow, PyTorch, Pandas, and Numpy.
- Developed physical interpretations for load prediction results.
- Formally presented PowerPoints and documented all work throughout each project while using Mercurial version control.

McGill Rocket Team

Aerostructures and Avionics

09/2019 - 08/2021 Montreal, Qc

- Developed a JavaFX user interface for tracking specifications of the rocket from the groundstation.
- Won the design award for MRT's hackathon 2020 event.