

JULIAN AWAD

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Clearances Held (Canada): NATO Secret ◊ Controlled Goods Program ◊ Enhanced Reliability

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ENGINEERING EXPERIENCE

Lockheed Martin - Hardware Engineering Intern

May 2021 - August 2021

Rotary Missions Systems - CSC Project

NATO Secret, Controlled Goods Program

- Performed detailed Solidworks FEA Analysis to validate equipment to Military Standard 901D
- Created an Excel VBA Program to generate Shock Response Spectra from an Impulse Function for Shock & Vibe Testing, which is now regularly used across the CSC Project
- Performed detailed make-vs-buy analysis on electronics enclosures, resulting in an overall 2x cost reduction and 4x time savings
- Created and presented a Whitepaper detailing the Thermal, Ingress Protection, Shock Resistance, Safety, and Maintenance considerations of mounting locations for electronics enclosures

Queen's Rocket Engineering Team - Propulsion Engineer

September 2021 - Present

Propulsion and Payload Sub-team

- Responsible for numerical modeling and simulation of a Hybrid 3.5kN rocket engine using Python, NumPy, and SciPy, to measure performance metrics such as specific impulse and fuel regression rate
- Created safety documentation and SOPs in \LaTeX for static hot-fires and launch, complete with hazard assessment, nitrous oxide safety, P&ID diagrams, and contingency planning

Department of National Defense - Engineering Intern

May 2020 - September 2020

ADM(Mat) - DSVPM 4-5

- Documented and presented key specifications on Armored Patrol Vehicles for 411 vehicles in 69 variants
- Reworked procurement documents based on technical requirements from multiple military bases
- Proofread English-to-French translations of contracts to ensure accuracy and correctness

TECHNICAL SKILLS & COURSEWORK

Programming

Python, SciPy, MATLAB, Git, \LaTeX , C, HTML & CSS

Mechanical Design

SolidWorks + Simulation, FDM 3D Printing, Autodesk Inventor

Engineering

Technical Report Writing, Engineering Drawings

Languages

English, French (Native Bilingual), Spanish (Working Proficiency)

Relevant Coursework

Thermodynamics I&II, Fluid Mechanics I&II, Heat Transfer, Control Systems, Computational Physics, Electronics & Digital Systems, Engineering Physics Lab I&II, Engineering Design & Practice I,II&III
Electromagnetism, Fourier Methods, Quantum Physics I&II

EDUCATION

Faculty of Engineering, Queen's University

Class of 2023

- Candidate for Bachelor of Engineering Physics, Mechanical Stream
- Dean's List with Honours - GPA of 3.75/4.3

Extracurricular Activities: EngLinks Tutoring, EngPhys Council - 3rd Year Representative, Brazilian Jiu-Jitsu Club Executive, Integrate Learning Center Constable