JULIAN AWAD

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Clearances Held: 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

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

My coursework is focused on mechanical engineering core such as **Thermodynamics**, **Fluid Mechanics**, **Automatic Control**, and **Heat Transfer**, with a strong background in theoretical physics and mathematics in courses such as **Relativity**, **Quantum Mechanics**, **Fourier Methods**, and **Computational Physics**. In addition, I am well-versed in other areas of engineering with courses such as **Electronics and Digital Systems** and **Economics**.

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