JULIAN AWAD

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January 18, 2022

Dear NAME,

My name is Julian Awad, and I am in my 3rd year of Engineering Physics, in the Mechanical Option. I would like to apply for the position of Mechanical Hardware Engineering Intern to work alongside your team at Neuralink. The idea of a seamless brain-machine interface has been a dream of mine since I was a child, and I believe we stand only to benefit as a society to increasing interaction bandwidth between ourselves and the digital world. In addition, I love working in diverse multidisciplinary groups, and the intersection between engineering, neuroscience, and biology found at Neuralink is incredibly inspiring. With my wide breadth of skills and valuable engineering experience, I believe I am the ideal candidate for the position.

I have a strong background in RD environments, and a great example of this is demonstrated through my undergraduate publication "An Investigation of Magnetic Radiation Shields for Human Space Habitats". I spearheaded this 6-week research project to design and test a superconducting magnetic radiation shield, which involved shooting beta particles onto a detector through a superconducting solenoid and measuring how many particles were deflected. This project involved many challenges, such as design and manufacturing a custom vacuum chamber with a built-in cooling system, maintaining critical temperature of the superconductor (77K), and data analysis with Python. The experience I gained through this project taught me the value of initiative, problem-solving skills, perseverance, and resourcefulness, all qualities I believe make me a great candidate for this position.

I also have a wide array of skills relevant to this position, acquired through my academic curriculum as well as independently through personal projects. These include notably Mechanical Design with SolidWorks, Additive Manufacturing, Numerical Methods and Analysis with Python, Control Systems with MATLAB + Simulink, Analog and Digital Electronics, and Quantum Mechanics.

Furthermore, I completed an internship with Lockheed Martin as a Hardware Intern where I was assigned many independent tasks. Among these, I performing a detailed FEA analysis of components and equipment to determine natural frequency and resonance aboard large frigates. Furthermore, I created a user-friendly application with Excel VBA to generate Shock Response Spectra from a given Impulse Function, which is now used across the entire CSC project at Lockheed Martin. These experiences have shown me the value of taking initiative, resourcefulness, and learning on the fly.

Based on my experience in RD and industry environments, and my wide array of relevant technical skills, I believe I can make a significant contribution to your team. I welcome the opportunity to discuss your requirements in greater detail during a phone or video interview. You can reach me at julian.awad@queensu.ca. I thank you for your consideration, and eagerly look forward to hearing from you!

Sincerely yours,

Julian Awad