**Andrew L. Poland**

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Dear Hiring Manager,

Regarding the Aerospace Engineer position available with GTL in Tullahoma, Tennessee. Please accept this letter as an expression of my interest. Ever since I was little, flight has always fascinated me. Aerospace is my passion and I would like to join the GTL team to pursue that passion.

I am a recent graduate from the University of Nevada, Las Vegas with a master’s degree in mechanical engineering with an aerospace focus. My master’s thesis involved modeling a wind turbine using ANSYS-Fluent and comparing it to experimental data.

My thesis work was purely computational and involved generating a Matlab code to create wind turbine blade geometry using the blade element and momentum theory followed by testing the geometry using CFD. The CFD results were compared to experimental data and related closely. The creation of the blade required knowledge of NACA airfoils, knowledge of the panel method software X-foil, knowledge of airfoil performance data, mesh generation, mesh independent studies, and knowledge of RANS solving methods ranging from Spalart Allmaras to the k-omega SST models.

From my graduate and undergraduate education, I have knowledge of key engineering principles of mechanical engineering such as vibrations, mechanics of materials, mechanical engineering design, dynamics, statics, CFD, FEA, and others.

I have a lot of experience teaching various engineering labs with subjects ranging from CAD to Engineering Measurements and Controls. I also tutored subjects ranging from mechanical vibrations to aerodynamics and physics. Teaching and tutoring multiple subjects required understanding a variety of engineering subjects and knowledge in the use of SOLIDWORKS, LabVIEW, Microsoft Office, Matlab, digital multimeters, and oscilloscopes.

As an engineering intern for IMI Precision Engineering, I designed several tools according to company standards using SOLIDWORKS. Designing the tools required critical thinking of wear to reduce maintenance down time, safety to prevent any worker injuries, ease of use to save time on the assembly line, and various other cost saving measures. I created work instructions for a new product as well as helped set up the assembly line. I also performed new product testing where I created and ran tests to solve product vibration issues.

Thank you for your consideration. I look forward to meeting or speaking with you.

Sincerely,

Andrew L. Poland