

ANDI ZHOU

Canadian Citizen

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Dear Lockheed Martin Canada Team,

I can barely contain my excitement as I write this letter. My name is Andi. I am a Canadian citizen studying Aerospace engineering who just graduated Magna Cum Laude from the University of Michigan. From A-12, SR-71, F-22, and F-35 to the modern-day Defiant X that replaces the Black Hawk and the Orion space capsule that aims to take humans beyond Earth, I have been following your company's progress literally since elementary school. Thinking about working at Lockheed Martin just brings me goosebumps. After seeing multiple airshows in Toronto and Ann Arbor and countless visits to Smithsonian Air and Space Museums, your strive for quality, innovation, and, most importantly, the mindset to "dare mighty things" are what really makes me want to work here.

I believe I could be an asset to the team at Lockheed Martin International as a Propulsion Engineer Intern based on my experiences both as a an Aerostructure lead and a Testing engineer lead at the University of Michigan Rocketry Team, MASA.

Being the aerostructure lead at MASA, I led a group of 12 to design, analyze, and manufacture a 3 ft-wide, 4 ft-tall aluminum fin assemblies for a hypersonic, spacefaring rocket. Through complex aero-thermal-structural engineering analysis involving STAR CCM+ and ANSYS Fluid-Structure Interaction, we were able to lower the assembly mass by 20 lbs while maintaining a structural SF of 1.5 at Max-Q. In addition, through relentless teamwork and thorough communication, we coordinated with out of house manufacturers and was able to fabricate and piece together the entire metallic assembly in just 3 months over the summer. We were the first within the entire design team finish manufacture a flight ready component.

The following semester, I had the honor to lead a separate team of 6 to structurally test the fins and analyze its deformation compared to those obtained from ANSYS Static Structural. Our results from physical testing verified our simulation and we were able to propose new design cycles that were 70% faster than the previous model. As would be proven on the next project, the fins finished development in just 6-months compared to 3 years it has taken it before.

I have also taken courses in aircraft propulsion, and have scored A's on all of them.

Thank you so much for your time and consideration. I believe my work experiences, coupled with my passion for aerospace and affinity for engineering simulations, would make me an asset to the engineering teams at Lockheed Martin Canada.

Thank you so much again, and Ad Astra!

Sincerely

Andi Zhou