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I am a mechanical engineer with an aerospace focus, motivated by the challenge of designing flight systems that must perform reliably under real-world constraints. My strongest interests are in aerodynamics and propulsion, especially where they intersect with practical design, system integration, and performance-driven engineering decisions.

At Oregon State University, I developed this interest through hands-on work in aerospace design and research. On the High Altitude Liquid Engine (HALE) Rocket Team, I contributed to active attitude control concepts that combined aerodynamic analysis, servo-actuated mechanisms, and C++-based control logic to guide decisions involving flap sizing, actuator requirements, and overall system feasibility. That work strengthened my ability to connect analysis with implementation and deepened my interest in flight hardware shaped by aerodynamic performance.

My honors thesis further expanded that systems perspective by focusing on the hardware needed for a fixed-wing autonomous UAV to land safely in polar regions without human aid. The project centered on defining a practical onboard sensor suite capable of evaluating landing surfaces, distinguishing snow from ice, and detecting hazards such as crevasses. Solving that problem required careful tradeoffs between sensing capability, environmental robustness, weight, power, and operational simplicity—an approach that closely reflects how I think about aerospace design as a whole.

What drives me most is engineering that links strong technical fundamentals to real performance. I am drawn to problems where aerodynamic behavior, propulsion considerations, and system-level tradeoffs shape the success of the final design. I value solutions that are efficient, testable, and grounded in both analytical rigor and practical reality.

I am especially interested in opportunities involving aerodynamics, propulsion, flight vehicle design, and related analysis, where I can contribute to building systems that are not only technically sound, but capable, efficient, and trusted in demanding environments.