

Jack Huston

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View my Online Portfolio at www.Jack-Huston.com

SUMMARY

Early-career aerospace engineer with hypergolic propulsion, thruster test campaigns, and full-vehicle contamination modeling experience. Skilled in propulsion system modeling, test data analysis, and data-driven troubleshooting for deep-space and lunar vehicle propulsion. Known for taking ownership of complex problems and delivering solutions that improve hardware performance, mission reliability, and testing efficiency.

EDUCATION

University of Colorado Boulder – Boulder, CO

Master of Science, Aerospace Engineering (Professional MS Program, Remote/Asynchronous)
Expected May 2027

Bachelor of Science, Aerospace Engineering, Minor in Computer Science, Graduated May 2023
3.97/4.00 GPA, *Summa Cum Laude*, Rank 5/218

PROFESSIONAL EXPERIENCE

Lockheed Martin Space – Propulsion Engineer

Littleton, CO | May 2022 – Present

- Led root cause investigation, test campaign, and resolution for a high-profile national security spacecraft contamination issue and led contamination analysis for a LO₂/LH₂ cryogenic refueling vehicle. Developed analytical flow models to inform hardware mitigation and subsystem design decisions across >100 engines, valves, and thrusters.
- Automated processing of >1 million hot-fire burns in MATLAB, reducing analysis from weeks to 10 minutes and enabling near real-time anomaly detection, hardware troubleshooting, and configuration adjustments.
- Developed qualification hot-fire, proof, vibration, thermal cycle, and life test plan of a hydrazine thruster, analyzed performance data, identified anomalies, and provided data-driven recommendations.
- Developed a full cryogenic vehicle parametric model to automate analyses and adapt to rapid iteration of main engine feed lines, propellant cooling loops, gas generators, and ACS thruster designs.
- Maintained specifications and drawings for ACS thrusters and propulsion filters ensuring compliance with mission performance and reliability requirements.

University of Colorado – Teaching Fellow

Boulder, CO | Aug. 2021 – May 2023

- Led laboratory instruction and office hours for Thermodynamics, Aerodynamics, Dynamics, and Electronics courses, reinforcing engineering fundamentals for 100+ students per semester.

PROJECT EXPERIENCE

Senior Project – ASTROBi Foundation | Aug. 2022 – May 2023

- Earned Technical Leadership Award (given to less than 1% of the graduating class) for exceptional design ownership and technical knowledge.
- Led end-to-end design, build, test, and iteration of a charged ice particle sensing instrument, integrating mechanical, electrical, and software subsystems.
- Performed detailed mechanical design, GD&T, CAD modeling, material selection, and fabrication drawings in SolidWorks, developed a high-sensitivity PCB in Altium, and wrote C++ acquisition software achieving 2M samples/sec via SPI with dual ADCs.

CU Boulder Sounding Rocket Lab | Jan. 2020 – Aug. 2022

- Designed, integrated, and tested flight-critical sensors and engine subsystems for a kerosene and liquid methane rocket engine, creating test fixtures, engine components, sensors, and tooling in SolidWorks with fabrication drawings for manufacturing.
- Owned the full concept – design – fabrication – test – iteration lifecycle of a high-fidelity capacitive fuel measurement system to validate propellant flow rates in real time during engine testing.
- Integrated and verified test stand electrical systems, ensuring sensor accuracy and engine functionality.