HANNAH SCHULTZ

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SUMMARY

Propulsion engineer with 4 years designing and testing liquid rocket engine components and feed systems. Applies thermodynamics, heat transfer and fluid mechanics to injector and chamber design, models propulsion systems in MATLAB and Simulink, and turns hot-fire data into design changes.

SKILLS

- Propulsion Systems
- Thermodynamics
- Heat Transfer
- Fluid Mechanics
- MATLAB
- Simulink
- Python
- CAD
- Instrumentation
- Data Analysis

CERTIFICATES

Engineer in Training (EIT)

California Board for Professional Engineers, Land Surveyors, and Geologists
2022

EXPERIENCE

Propulsion Engineer

Harborline Rocket Works • Long Beach, CA • 07/2024 - Present

Launch startup developing a small orbital rocket.

- Design regeneratively cooled chamber and injector parts in CAD for a **5,000** lbf engine.
- Run heat transfer and fluid mechanics analysis that kept wall temperatures 15% under limits on 22 hot-fires.
- Build MATLAB and Simulink models of propellant feed systems that predicted tank pressures within 4%.
- Write Python data analysis scripts that cut post-test review from 2 days to 4 hours.

Associate Propulsion Engineer

Inland Empire Thrust Labs • San Bernardino, CA

06/2022 - 06/2024

Rocket engine component test facility.

- Specified instrumentation for 3 test stands, including 150 pressure, temperature and flow channels.
- Conducted 60 cold-flow tests on valves and injectors and built the test results database.
- Calculated engine cycle thermodynamics for 2 trade studies presented at PDR.
- Authored 25 cold-flow test procedures for valves and injectors, with abort limits for every run.

Propulsion Intern

Wabash Rocketry Systems • West Lafayette, IN

05/2021 - 08/2021

Summer internship in a hybrid rocket motor test group.

- Reduced pressure and thrust data from 30 hybrid motor hot-fires in MATLAB.
- Modeled a 3D-printed injector test fixture in CAD that the lab adopted for later test series.
- Calibrated 40 pressure transducers and thermocouples before each test campaign.

EDUCATION

Bachelor of Science

Purdue University • West Lafayette, IN • 05/2022

Aeronautical and Astronautical Engineering