

Benyamin Hajder

linkedin.com/in/benyaminhajder | benyaminhajder@gmail.com | US Citizen | Orlando, FL 32825

EDUCATION

University of Central Florida | GPA: 3.75 | Class of Spring 2025

Bachelor of Science with Honors in Aerospace Engineering

Master of Science in Aerospace Engineering – Thermofluids

Orlando, FL

August 2021-Present

August 2023-Present

SKILLS

Software: SolidWorks, Ansys, AutoCAD, OpenRocket, Microsoft Office Suite

Programming: Python, C, MATLAB

Certifications: SolidWorks CSWA, Autodesk Inventor, NAR High Powered Rocketry Level 1

Leadership: IREC Manufacturing Lead, HPR Project Lead Associate, Project Prometheus Test Team Lead

PROFESSIONAL EXPERIENCE

Siemens Energy

Mechanical Engineering Intern

May 2024–Present

- Assisted with managing gas turbine fleet programs for improving performance, reliability, and cost savings.
- Focused on mitigation of validation and service field issues to ensure global end-user customer satisfaction.
- Led task force on turbine ring segment outage data tabulation to identify trends and develop proactive measures.
- Performed ANSYS temperature contour analysis of turbine blade and vane 3D models to obtain durability data on surface thermal barrier coating.

Center for Advanced Turbomachinery and Energy Research (CATER)

Undergraduate Researcher

January 2022–January 2024

- Collaborated with graduate researchers on projects related to shockwaves, gas dynamics, and combustion.
- Operated laser-based diagnostics and laser absorption spectroscopy for studying combustion byproducts as a part of rocket plume emissions research.
- Developed shock data simulations using Python with the purpose of analyzing discrepancies between experimental data and chemical models. Assisted in drafting official technical report on findings.
- Conducted SolidWorks FEA analysis on mechanical components to determine factor of safety and capability to withstand extreme conditions within the shock tube (up to 100 bar).
- Worked with the US Navy to characterize performance of temperature diagnostic probes. Modified existing test section to incorporate thermocouple and perform experiments under various P/T conditions.
- **Leadership:** IREC Manufacturing Lead, HPR Project Lead Associate, Project Prometheus Test Team Lead

PROJECT EXPERIENCE

Knights Experimental Rocketry (KXR)

IREC Spaceport America Cup – Aerostructures Manufacturing Lead

August 2023–May 2024

- Developed SRAD single-stage hybrid rocket to carry an experimental payload to an apogee of 30,000 feet.
- Responsible for managing manufacturing sub-team, delegating workload, meeting deadlines, and collaborating with structures/dynamics/recovery subsystems to support implementation of rocket airframe components.
- Created Manufacturing Process Procedures and Trade Studies for composite fabrication methods, material selection, and mold design with consideration for cost, scheduling, risk, and technical performance.
- Presented Manufacturing CDR for employees from Blue Origin, Northrop Grumman, Vaya Space, and NASA.
- Extensive experience with carbon fiber layup, 3D printing, prototype drawings/models, systems engineering.

L1 High Powered Rocketry Certification – HPR Project Lead Associate

January 2023–March 2023

- Constructed rocket using 3D printed nose cone and laser-cut plywood fins attached to a cardboard tube airframe.
- Launched on an H-class motor and recovered safely to successfully receive HPR L1 certification under NAR.
- As HPR Associate, coordinate events/launch days, manage inventory, and 3D printing components.

Students for the Exploration and Development of Space (SEDS)

Project Prometheus - Test Team Lead

September 2021–November 2022

- Designed 3D SolidWorks model of test stand to secure liquid bipropellant engine during static fire.
- Delegated workload and communicated with other sub-teams for large-scale task designation and scheduling.