David Krupp

david.krupp318@gmail.com | +1 (912) 318-8060 | Athens, GA
https://davidkrupp.com | https://www.linkedin.com/in/dk318/ | https://github.com/david-a-krupp

SUMMARY STATEMENT

Mechanical engineer with hands-on experience with both design and manufacturing mechanical/electrical systems for satellites, novel research, and academic writing and publishing. Skilled in CAD, systems integration, and thermal/fluid system analysis with a focus on turning complex ideas into functional, flight-ready hardware. Comfortable working across disciplines and solving problems where design, analysis, and hardware meet.

EDUCATION

Master of Science in Engineering – *Emphasis in Thermofluidic Systems*, May 2026
University of Georgia, Athens, GA, GPA 3.42

Bachelor of Science in Mechanical Engineering, May 2025
University of Georgia, Athens, GA, GPA 3.5

EXPERIENCE

Research and Development Team Lead, August 2023 – Present
Small Satellite Research Lab/University of Georgia, Athens, GA
Supervisor: Sydney Whilden (sydney.whilden25@uga.edu)

- Operated as the primary contact between the Small Satellite Research Lab, Center for Geospatial Research, and the Regenerative Bioscience Center in designing NeuroCube, our NASA-backed space biology experiment.
- Designed and modeled the experimental platform and the 6U CubeSat platform that will carry and control the setup in Low Earth Orbit, validated with Ansys structural/thermal finite element analysis and FMEA.
- Drafted the mission Concept of Operations (CONOPS), and supporting hardware/subsystems including: ADCS parameters, EPS power cycling requirements, and Comms uplink/downlink schedule.

Fleet Analytics Intern, May 2024 – August 2024
General Electric Vernova, Atlanta, GA
Supervisor: Lucy Gao (lucy.gao@ge.com)

- Created Python programming responsible for GE gas-powered turbines' performance and safe operation.
- Updated outdated code/software that triggers alarms in response to unusual combustion chamber behaviors, i.e., significant pressure, temperature, or thrust fluctuations.
- Automated turbine monitoring processes using Python to improve reliability and reduce cycle time; integrated safety protocols and data analysis to increase product yield and reduce downtime.

Innovation, Engineering, and Flight Co-Op, January 2022 – May 2023
Gulfstream Aerospace, Savannah, GA
Supervisor: Robert Taylor (robert.taylor@gulfstream.com)

- Operated as an Instrumentation Flight Test Engineer, designed precision tooling and assembly hardware using CATIA v5 for FAA certification tests, collaborating with machinists and production teams to ensure manufacturability, and quality.
- Designed the Federal Aviation Administration certified pneumatic-based hardware used for flyover noise testing data collection.

CERTIFICATIONS/ACHIEVEMENTS

Best Research Award – *Optimizing Neural Radiance Fields for Solar Informed Volume Rendering*, April 2025 CURO Symposium
Engineer-in-Training (EIT) Certification — Earned by passing the Fundamentals of Engineering Exam, State of Georgia, January 2025
Eagle Scout Award — Highest rank/honor given from the Boy Scouts of America, August 2017