Drake Gossett

US Citizen | drake.gossett@outlook.com | linkedin.com/in/drake-gossett | Orlando FL

Education

University of Central Florida Aug 2024 – May 2028
Honors Bachelor of Mechanical Engineering *Orlando, FL*

Professional Experience

Student Researched and Developed Solid Rocket Motors Project BEAM Aug 2023 – Present
SEDS Rocket Club @UCF *Orlando, FL*

- Team member for emerging Solid rocket propellant manufacturing team with SEDS UCF.
- Responsible for adhering to rigorous safety protocols and **risk mitigation** strategies for propellant handling to ensure team preparedness for all contingency operations.
- Contributing to the characterization of solid propellant through the preparation of grains and instrumentation of a test motor for burn rate **data acquisition**.

Thermal Analysis Team Sept 2024 – May 2025
SEDS Rocket Club @UCF *Orlando, FL*

- Conducted thermal failure assessment of rocket tip and body using RasAero, **SolidWorks**, and **Ansys**.
- Identified and addressed potential challenges in design and functionality through a **FMEA** chart.
- Conducted **Ansys** Fluent Simulations to ensure the accuracy of hand calculations

Propulsion and Energy Research Laboratory (PERL) Aug 2025 – Present
MXOD Structures Team Member *Orlando, FL*

- Performed **detailed inspections** of machined parts to ensure **dimensional accuracy** and prevent **tolerance stack ups**.
- **Optimized material selection** for critical **airframe structures** subjected to **extreme-heat** and **high-stress** flight environments.

Lockheed Martin Missiles & Fire Control Aug 2025 – Present
CWEP Systems Engineer *Orlando, FL*

- Support engineering teams in the Innovation Center by troubleshooting hardware issues and providing technical assistance for rapid prototyping projects.
- Utilize **Creo** for CAD adjustments and manage the end-to-end 3D printing process using **Prusa** and **Formlabs** systems to produce high-fidelity engineering models.

Projects

Custom Monocular Digital Night Vision | *3D Printing, Soldering, Multimeter* Feb 2025 – May 2025

- Built a digital night vision monocular, with a ABS 3D-printed housing to protect from thermal warping.
- Repurposed off the shelf components. Soldered camera and display modules to connect together and accept 5V
- Modified housing for streamlined assembly and 3D printing, refining prototypes to optimize tolerancing.

Supersonic Level 1 Rocket | *OpenRocket, 3D Printing, Fiberglass Layup* Dec 2024 – Feb 2025

- Designed and constructed a supersonic rocket, achieving Mach 1.5 and over 6,000 feet with an H550 ST motor.
- Performed a **fiberglass layup** to reinforce structural integrity, ensuring durability under high-speed conditions.
- Optimized aerodynamics with a weighted custom 3D-printed nose cone, to enhance performance and stability.
- Conducted pre-flight safety checks to ensure reliable launch and recovery operations.

SeaPerch Robotics Tournament | *Soldering, Robotics, Leadership* Jan 2022 – Apr 2022

- **Lead coordinator** for assembly and testing of a SeaPerch underwater robot.
- Oversaw the cutting of pvc, the attachment of motors, soldering, and waterproofing necessary to build the robot.
- Competed in a high school tournament and emerged victorious out of the 6+ other teams.

Technical/Nontechnical Skills

Design (CAD): SolidWorks, Onshape, Fusion 360

Analysis (CFD, and Simulation): Ansys Mechanical (Structural, Thermal), Ansys Fluent, MATLAB.

Programming and Research: C, Python, MATLAB, Arduino, Microsoft Office, LaTeX, 3D printing.