Kyler Marciel

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EDUCATION:

University of Central Florida **Expected Graduation Summer 2026**
B.S. in Aerospace Engineering GPA: 3.6 / 4.0 *Dean's List*

SKILLS:

- SolidWorks, Creo
- MS Office
- GD&T
- 3D Printing
- Composites
- Documentation
- MATLAB
- Leadership

WORK EXPERIENCE:

Lockheed Martin Missiles and Fire Control | College Work Experience Program
Mechanical Design CWEP **August 2024 – Present**

- Collaborating with multidisciplinary engineers to update and maintain legacy design documents.
- Creating and incorporating revisions to existing drawings and parts ensuring accurate information preservation.
- Utilizing PTC Windchill and Creo to recreate and redesign existing CATIA parts and drawings.

RELEVANT EXPERIENCE:

Knights Experimental Rocketry Inc. | (KXR)
President **May 2024 – June 2024**

- Implemented a club wide Environmental Health and Safety training in partnership with the University.
- Adjusted scope of the club to create achievable goals through prioritizing the development of members.
- Led the creation of a foundational cultural rework by focusing on quality over quantity.

Aero-Structures Manager | FAR 10k **July 2023 – May 2024**

- Spearheaded a team of over 40 multidisciplinary students through the design of a precision composite airframe.
- Optimized aerodynamics for a flight to 10,000 ft through the transonic region.
- Created a mechanical and aerodynamic force calculator allowing rapid design iteration.

Aero-Structures Manager **|** FAR DPF **January 2023 – July 2023**

- Cultivated 15 engineering students' development and passion, with a focus on culture and engagement.
- Designed a 10 ft tall carbon fiber composite rocket airframe with an aerodynamic boat tail for 0.7 Mach flight.
- Led the manufacturing of the airframe, including composite wet-laying, laser cutting, and 3D printing of molds.

Fluid Systems | FAR DPF **August 2022 – January 2023**

- Prototyped and developed a quick disconnect mechanism, using commercial parts and 3D printing.
- Delivered bolt calculations, and layout of valves within the Fluid Systems team.

PROJECTS:

OSIRIS **| Regeneratively Cooled Bi-Propellant Engine |** Personal Design Project **November 2024 – Present**

- Designing a small scale regeneratively cooled bi-propellant engine.
- Focusing on creating a reusable and low-cost design for engine characterization.
- Documenting design and requirements with the intent to create open-source literature.

BASILISK **| Liquid Bi-Propellant Rocket |** FAR 10k **August 2023 – May 2024**

- Designed an airframe to reach 10,000 ft apogee and handle speeds up to 0.8 Mach.
- Utilized composite techniques to manufacture precision carbon fiber prepreg airframe tubes.
- Integrated a 10 ft tall bi-propellant propulsion system and payload into an 18 ft tall airframe.

VALKYRIE **| Liquid Bi-Propellant Rocket |** FAR DPF **August 2022 - July 2023**

- State of Florida's, UCFs, and KXR's **first** collegiate student-built bi-propellant rocket to launch.
- Successfully competed and launched to a qualifying flight of 4,884 ft exceeding speeds of 0.4 Mach.
- Recovered the rocket, won more than $4,000, and made history for the University of Central Florida.

Level 1 High Powered Rocketry Certification | NAR **October 2022 - November 2022**

- Designed, manufactured, and launched a high-power rocket using SolidWorks, Open Rocket, and laser cutting.
- Successfully launched and recovered, certified through the National Association of Rocketry.

RC Aircraft | Personal Design Project **December 2021 - May 2022**

- Integrated electronics and motors within a compact 3D printed airframe, ensuring seamless functionality.
- Designed a small RC airplane in FreeCAD, applied self-taught knowledge of lift and flight controls.