CRISTINA CUESTA BRET

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Early-career Mechanical Engineer with hands-on experience in mechanical design and SolidWorks. Passionate about renewable energy, motorsports, innovating in mechanical design, and applying cutting-edge solutions to enhance project efficiency and user experience.

EDUCATION

Bachelor of Science in Mechanical Engineering *Overall & Major GPA:3.53 & 3.61*
Certificate in Artificial Intelligence Fundamentals and Applications
University of Florida, Gainesville Aug. 2021 - May 2026

WORK EXPERIENCE

GMV Aerospace and Defence SAU *Jul. 2025 – Aug. 2025*
Mechanical Engineering Summer Intern Madrid, Spain

- Collaborated with senior engineers on the CAD and assembly of electronic hardware systems for defense and aerospace applications.
- Independently executed a full design project, collaborating with the production team to adapt to evolving constraints and deliver a manufacturable solution.
- Operated and maintained 3D resin printers to validate and refine prototypes through iterative assessments.
- Supported structural, vibration, and shock analyses on 2 mechanical components to ensure reliability under operational loads.
- Executed material selection analyses for 2 projects, balancing mechanical performance and application constraints.

Teaching Assistant *Aug. 2023 – Present*
University of Florida Gainesville, FL

- Assisted in multiple courses, providing lab instruction, and assignment grading and feedback, serving as a key resource for technical guidance and professional development.
- Mentored and supported 100+ undergraduate students through experiments, circuit building, and data analysis while improving their technical report writing and engineering communication.
- ***Dynamics and Controls Systems Design Laboratory*** *(Fall 2025)*. Supervised 5 weekly labs using a Furuta Pendulum; provided feedback on transfer functions, bang-bang, PID, and full-state feedback control as well as LabVIEW coding.
- ***Mechanics of Materials Laboratory*** *(Spring 2025)*. Led 4 weekly labs, mentoring students on tensile testing, strain gauges, pressure experiments, and LabVIEW coding; assessed 60+ lab reports with detailed feedback.
- ***Elements of Electrical Engineering*** *(Fall 2023 – Fall 2024)*. Reinforced fundamental electrical engineering concepts and circuit building.

Undergraduate Research Intern *May 2023 – Jul. 2023*
Universidad de Lleida Lleida, Spain

- Developed a sophisticated 700-line solar management Python algorithm aimed at optimizing the allocation of Direct Normal Irradiance (DNI) resources and providing accurate power output forecast based on dynamic demands and boundary conditions.
- Streamlined Python code to support various receiver sizes and electrical configurations of photovoltaic (PV) cells, improving the tool's versatility and performance by 20%.

INVOLVEMENT

Chassis and Cockpit Engineer *Jan. 2023 – Present*
Solar Gators Gainesville, FL

- Executed multiple hands-on manufacturing tasks, including carbon fiber and resin wet layups, to support vehicle production.
- Designed and manufactured an actuator release body latch system and canopy hinge using SolidWorks contributing to the structural and functional integrity of the car while following FSGP and ASC regulations.
- Designed the steering wheel for the new solar car, implemented LCD and paddle shifters for regenerative braking.

President, Secretary and Social Media Manager *May. 2022 – Present*
University of Florida Club Tennis Gainesville, FL

- **First female** to lead a club tennis team with +150 members
- Manage home and away tournaments with +30 teams
- Directed the design of team uniforms and increased sales by 60%. Managed social media accounts with +2,500 followers, increasing engagement and impressions by 80%.

SKILLS

Certifications: SolidWorks, CNC Machining Training Program, Cambridge Proficiency in English (CPE)
Software Skills: SolidWorks, MATLAB, Python, Microsoft Office, Granta, PDM, Abaqus, MS Excel
Technical Skills: 3D CAD software, manufacturing engineering, FEA, programming, technical writing, engineering drawings, materials
Honors: Herbert Werheim College of Engineering **Dean's List**, **Deputy Lead** in Senior Mechanical Design Capstone, Honors Thesis
Clubs: Solar Gators, SHPE (Society of Hispanic Professional Engineers), UF Club Tennis
Languages: Spanish (Native), English (Fluent)