

# CRISTINA CUESTA BRET

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## EDUCATION

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### Bachelor of Science in Mechanical Engineering

University of Florida, Gainesville

Certificate in Artificial Intelligence Fundamentals and Applications

Overall & Major GPA: 3.53 & 3.61

Aug. 2021 - May 2026

## WORK EXPERIENCE

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### GMV Aerospace and Defence SAU

Mechanical Engineering Summer Intern

Jul. 2025 – Aug. 2025

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.
- Took initiative to manage manufacturing production independently during team vacation period, ensuring uninterrupted output and preventing project delays.
- Operated and maintained 3D resin printers to validate and refine prototypes through iterative assessments.
- Executed material selection analyses for 2 projects, balancing mechanical performance and application constraints.
- Supported structural, vibration, and shock analyses on 2 mechanical components to ensure reliability under operational loads.

### Teaching Assistant

University of Florida

Aug. 2023 – Present

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.
- Courses supported:
- **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)**. Guided students in circuit building, and reinforced fundamental electrical engineering concept; evaluated 45+ assignments.

### Undergraduate Research Intern

Universitat de Lleida

May 2023 – Jul. 2023

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.
- Performed fluid and thermal dissipation analyses for components with and without fins with a team of 4 engineers.
- 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

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### Chassis and Cockpit Engineer

Solar Gators

Jan. 2023 – Present

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 regulations.
- Designed the steering wheel for the new solar car, implemented screen and paddle shifters for regenerative braking.

### Secretary and Social Media Manager

University of Florida Club Tennis

May. 2022 – Present

Gainesville, FL

- Directed the design, and distribution of +100 team uniforms, managing logistics with vendors and the executive board to meet deadlines.
- Managed social media accounts with +2,500 followers, increasing engagement and impressions by 80%.

## SKILLS

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**Certifications:** SolidWorks, CNC Machining Training Program, Cambridge Proficiency in English (CPE)

**Software Skills:** SolidWorks, MATLAB, Python, Microsoft Office, Granta, PDM, MS Excel

**Technical Skills:** 3D CAD software, manufacturing operations, FEA, programming, technical writing, engineering drawings, materials

**Languages:** Spanish (Native), English (Fluent)