

# CRISTINA CUESTA BRET

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## EDUCATION

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### University of Florida, Gainesville

*Bachelor of Science in Mechanical Engineering*

*Certificate in Artificial Intelligence Fundamentals and Applications*

**Aug. 2021 – May 2026**

*Major GPA: 3.61*

## SKILLS

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

**Technical Skills:** CAD, manufacturing operations, mill, lathe, mechanical design, programming, technical writing

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

**Essential Skills:** Analytical thinking, creativity in design, efficiency under pressure, collaborative mindset

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

## WORK EXPERIENCE

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### Dynamics and Controls Design Laboratory Teacher Assistant

*University of Florida*

**Gainesville, FL, USA**

*Aug. 2025 – Sept. 2025*

- Taught 5 weekly lab sessions where students conducted dynamics and controls experiments using a Furuta Pendulum.
- Provided constructive feedback on transfer functions, bang-bang, PID and full state feedback controls based on the pendulum.

### Mechanical Engineering Summer Intern

*GMV Aerospace and Defence SAU*

**Madrid, Spain**

*Jul. 2025 – Aug. 2025*

- Collaborated with 2 engineers on the CAD and assembly of electronic systems for defense and aerospace applications.
- Independently carried forward manufacturing production during the team's vacation period, ensuring uninterrupted output and preventing project delays.
- Operated 3D resin printers to validate and refine prototypes through iterative assessments.
- Executed material selection analyses based on mechanical performance and application constraints on 2 projects.
- Supported structural, vibration, and shock analyses on 2 mechanical components to ensure reliability under operational loads.

### Mechanics of Materials Laboratory Teacher Assistant

*University of Florida*

**Gainesville, FL, USA**

*Jan. 2025 – May. 2025*

- Assessed 60+ student lab reports and provided detailed and constructive feedback to strengthen experimental analysis, technical writing, and understanding of mechanics of materials concepts.
- Led 4 weekly lab sessions, mentoring students through hands-on experiments involving pressure, strain gauges, tensile testing machinery, and LabVIEW, while advancing their technical writing skills for engineering reports.

### Elements of Electrical Engineering Teacher Assistant

*University of Florida*

**Gainesville, FL, USA**

*Aug. 2023 – Dec. 2024*

- Evaluated 45+ student assignments and guided students during weekly office hours to reinforce core electrical engineering concepts and circuit building.

### Undergraduate Research Intern

*Universidad de Lleida*

**Lleida, Spain**

*May 2023 – Jul. 2023*

- 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%.

## PROJECTS

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### Solar Gators – Design Team

*Chassis and Cockpit Engineer*

**Gainesville, FL, USA**

*Jan. 2023 – Aug. 2025*

- 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.

**Clubs:** SHPE (Society of Hispanic Professional Engineers) member | UF Club Tennis secretary and social media chair.