Lucia Melero Casas

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EDUCATION

Texas A&M University: Bachelor of Science in Computer Science. GPA: 3.87 *May 2026*
Relevant Coursework: Program Design and Concepts, Data Structures and Algorithms, Discrete Structures in Computing, Programming Languages, Linear Algebra, Differential Equations, Enterprise Basics, Design Process.
Honors and Awards: Engineering Dean's List 2022-2023, Deloitte HACU Scholar, Foundation for IT Education Scholar.

RELEVANT EXPERIENCE

Undergraduate Teaching Assistant - CSCE 222 *February 2024 - Current*
Texas A&M University Department of Computer Science

- Delivers academic support through two weekly office hours, offering clarification and assistance on discrete mathematics and computational algorithms, contributing to a positive learning environment.
- Executes precise and timely grading of assignments for 240+ students. Collaborates with course instructor in designing and implementing LaTeX-based rubrics and answer keys.

Undergraduate Research Assistant *October 2022 - May 2023*
Texas A&M University Sketch Recognition Lab

- Developed sensor-equipped smart glove aimed at improving smartphone interaction for 13 test individuals with impaired vision to improve typing efficiency for users facing visual challenges.
- Applied machine learning expertise to design models accurately translating 85% of hand gestures into text input. Played a key role in advanced data processing, employing techniques to clean, analyze, and interpret data gathered by integrated sensors.

Four-time Participant and 4th Place *October 2022 - October 2023*
Aggies Invent: Nuclear Security & Medical Devices - Texas A&M University

- Engaged in engineering design challenges presented by industry professionals, conducting comprehensive research on intrinsic physics and materials to address complex problems.
- Optimized current market solutions for nuclear blast testing and surgical tissue separation, successfully translating innovative concepts into functional prototypes.

Hydrophone Team Member *August 2022 - May 2023*
Women in Engineering AUV Electrical and Programming Team- Texas A&M University

- Spearheaded programming of hydrophone system on a Linux-based platform, accurately modeling bandpass filter and analog-to-digital converter for hydrophone using NI Multisim.
- Contributed significantly to data processing for hydrophone sensors, ensuring 92% accuracy and efficiency in signal interpretation. Additionally, collaborated on hardware aspect by integrating Arduino components, further enhancing functionality of hydrophone system.

Programming Sub-lead - 2022 FTC 6A UIL State Championship *August 2021 - July 2022*
Robotics Team - The Woodlands High School

- Increased efficiency of autonomous positioning system by strategic placement of sensor encoders and optimization of weight distribution of the robot. Leveraged Java OpenCV for precise control and navigation.
- Led five outreach projects aimed at engaging elementary school students in the field of robotics, resulting in recruitment of over 20 new members to ensure team continuity and growth.
- Maintained a comprehensive portfolio documenting progress of the robot, with 100+ daily entries, ensuring transparency and facilitating effective decision-making throughout development process.

RELEVANT SKILLS

Languages: Java (OpenCV), Python (numpy, pandas, matplotlib), C#, C++, Haskell, Linux (Ubuntu), MATLAB, LaTeX.
Tools: SolidWorks, NI MultiSim, Arduino, Microsoft Environment, 3D Printing, Laser Cutting.
Additional Skills: Spanish (native) and French (fluent), Project Leadership, Mentoring, Conflict Resolution.