



EDUCATION

Bachelor of Science in Mechanical Engineering - With a minor in Mathematics
Master of Science in Mechanical Engineering
The University of Texas at El Paso (UTEP)

Graduation Date: 05/14/2023
Anticipated Date: 05/2025
Cumulative GPA: 3.6/4.00

Honors & Affiliations:

College of Engineering Dean's List
UTEP Pi Tau Sigma Honor Society, Member
Aerospace Center, Undergraduate Research Assistant
3D Modeling of Space Systems and Concepts, Member

Fall19, Spring21, Fall21, Spring22, Fall2022, Spring24
08/2022-Present
09/2021-12/2023
07/2021-12/2023

EXPERIENCE

Hiller Measurements Innovative Solutions - Proteus ATE – Internship

11/2023-09/2024

- Pioneered the design of a high-performance, manufacturable rack door, incorporating an Ergotron arm for seamless technician access, significantly enhancing operational efficiency.
- Engineered a wire addressing system, strategically separating Ground, Power, I/O, and Network cables to mitigate electromagnetic interference, ensuring optimal system performance.
- Elevated the functionality of the Proteus ATE application by refining a 3D page viewer as well as developing the cable addressing logic, demonstrating adaptability and problem-solving skills in coding.
- Demonstrated ability to research and develop software solutions despite limited coding background.
- Successfully led teams to achieve goals as a Scrum Master, balancing leadership responsibilities with academic & personal commitments.
- Standardized documentation protocols using MT, ensuring consistent naming conventions across all microservices, which streamlined internal processes and improved team alignment.
- Conducted in-depth research on critical testing instruments, compiling comprehensive data on attributes such as thermal capacity, measurements, and power requirements, which allowed for reliable instrument database inputs.
- Spearheaded vendor communications in El Paso, forging and maintaining key relationships with industry leaders such as Keysight, Rohde & Schwarz, and Marway, enhancing partnership efficacy.

Space Exploration Technology Research Center – Research Group Projects

Graduate Research

09/2021-12/2023

- Designed and manufactured a CNC-compatible robotic arm with 3 degrees of freedom for integration onto a U2 satellite and implemented research to create G-codes for its components using CAM features in NX12 and Fusion 360 CAM.
- Led the design and manufacturing efforts for a satellite deployment door, contributing to advancements in space technology and ensuring mission success.
- Worked on the digitization of physical components and artifacts, overseeing their production using various manufacturing techniques, including traditional methods such as lathe or mill, and innovative approaches.
- Led the design and manufacturing of a high-pressure interface device capable of withstanding 3000 psi, enabling precise control of airflow for one-plane space testing.
- Engineered and constructed a specialized sled that replicates space conditions on an air-bearing table, demonstrating expertise in both design and manufacturing within the aerospace field.
- Assisted and mentored two new interns while collaborating with cross-functional teams to ensure successful project completion.

BAJA Society of Automotive Engineers (SAE)

Steering and Brakes team leader

02/2022-02/2023

- Managed and oversaw 10 individuals in the Steering and Brakes sub-team of the club, teaching them essentials ranging from knowledge on cars to creating FEAs, CAD, CAM, and machining using CNC and other conventional methods.
- Collaborated with other team leaders to increase team performance and project feasibility.

PROJECTS

Manufacturing Engineering Lab, Mechanical Spider

08/2022-12/2022

- Team lead. Designed a functioning mechanical spider that controls eight different legs with only one actuator. Managed a group of 12 people by assisting and allocating different tasks needed to complete the project. We fully manufactured the spider out of Aluminum plates.
- Conducted comprehensive research into the materials, components, associated costs, and construction methodologies required for the spider.

SKILLS

- Microsoft Office Certified by Certipoint: Word 2016, Excel 2016, Outlook 2016, and PowerPoint 2016.
- Extensive experience with Autodesk Fusion 360, Autodesk Tinkercad, Autodesk Tinkercad Circuits, Blender, NX 12.0, Bambu Studio, Ultimaker Cura 4.13.0, Crealty Slicer, Python, GitHub, HTML, CSS, Arduino IDE 1.8.19, MATLAB R2020R, NI LabVIEW 2022, Simulink, Unity, Unreal Engine 5.0.1, Photoshop, Inkscape, and DaVinci Resolve.
- Metal tool knowledge of a metal machine shop. Blueprint/Drawing Reading
- Welding experience and teamwork.
- Bilingual: English and Spanish.