

Magaster Doda

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OBJECTIVE

Mechanical engineering master's graduate seeking to apply and expand my skills in SOLIDWORKS, MATLAB, Python, and design by contributing to innovative, real-world solutions in a collaborative environment.

EDUCATION

Master of Science in Mechanical Engineering	College Station, Tx
Texas A&M University GPA: 3.6	August 2024 – May 2025
Bachelor of Science in Mechanical Engineering (minor in Computer Science)	College Station, Tx
Texas A&M University GPA: 3.7	August 2020 – May 2024

EXPERIENCE

Peterbilt Motors (Class 8 Truck Manufacturer)	Denton, Tx
<i>Applications Engineering Intern</i>	May 2024–August 2024
<ul style="list-style-type: none">▪ Supported and maintained technical documentation, including specifications, design and assembly▪ Collaborated with dealers/customers to deliver vehicle specifications that met or exceeded optimization goals▪ Developed vehicle weight estimates for use in SmartSpec and EASOP▪ Interfaced with internal teams to assist customers/dealers throughout specification process ensuring accuracy and satisfaction	

PROJECTS

Impact Test Rig Design: Spring 2024 Texas A&M Engineering Project Showcase – OGRE Skin Test Rig (3 rd place overall)
▪ Designed, prototyped and fabricated mechanical test rig for evaluating force impacts in collaboration with six-member capstone team
▪ Applied robust mechanical design principles, prototyping techniques and tools such as SolidWorks to engineer a rig capable of delivering controlled impacts up to 2000 N and measured force responses across various protective materials
▪ Conducted requirement analysis, iterative testing, and performance analysis to meet sponsor specifications within a \$5000 budget and tight timeline
▪ Presented technical rationale, design evolution and final results to project sponsor and faculty judges
Design and Implementation of a Controller for a 6 DOF Robot Arm:
▪ Designed feedback-linearized control system with Cartesian space decoupling allowing for more precise control and analysis
▪ Tuned controller parameters to achieve a critically damped system to avoid overshoot
▪ Designed and simulated trajectory paths for end-effector movement in Cartesian space
▪ Validated controller performance through live demonstrations on the physical robotic arm
Engine Assembly Design and Analysis:
▪ Designed piston assembly using SolidWorks, incorporating stress, deflection, and thermodynamic analysis
▪ Validated design integrity and optimized performance using SolidWorks Simulation
▪ Demonstrated proficiency in CAD modeling, FEA, and mechanical system analysis
Mars Rover and Landing Craft Analysis:
▪ Developed Python-based simulations to model rover landing dynamics and terrain navigation on Martian surfaces
▪ Applied numerical methods and mechanical system modeling to assess stability, mobility and environmental adaptability
▪ Demonstrated strong analytical skills and proficiency in computational mechanics

SKILLS & TOOLS

- SOLIDWORKS, MATLAB, GD&T, Python, MathWorks Simulink, NI Multisim, NI LabVIEW, C++, CAD, Microsoft Office Suite
- Thermodynamics, Fluid Mechanics, Heat Transfer, Material Science, Composite Materials, Combustion Science, Generative Design, Human Sensing Technologies, Failure Analysis, Data Analysis

HONORS/AWARDS

- Spring 2024 Texas A&M Engineering Project Showcase – 3rd Place Overall (OGRE Skin Test rig)
- McFadden Scholarship Recipient

ACTIVITIES AND INTERESTS

- Mountain Biking, Hiking, Running, Camping, Strength Training, Automotive/Motorsports, Shoe Collecting, Music Appreciation