Matthew Gaskins, E.I.T.

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Education & Certifications

University of Houston | Cullen College of Engineering | Houston, Texas **December 2020**
Bachelor of Science in Mechanical Engineering | Cum Laude

- Minor in Mathematics
- GPA: 3.55

National Council of Examiners for Engineering and Surveying **March 2021**

- Engineer in Training (EIT)

Experience

Marathon Petroleum Company | Illinois Refining Division | Robinson, Illinois **June 2020 – August 2020**
Rotating Equipment Reliability Engineering Intern

- Developed Excel spreadsheets that:
  - Auto populates with compressor data obtained from refinery instrumentation to avoid unexpected shutdowns by using low/high alarm points to notify when compressors are not running correctly
  - Plot graphs containing data recorded in PI Process Book to illustrate compressors running status
  - Contain all compressor valves, unloaders, and ram covers replacement parts to expedite in-field repairs and reduce lost opportunity costs
- Assisted operators with compressor valve replacements and compressor inspections

Marathon Petroleum Company | Illinois Refining Division | Robinson, Illinois **May 2019 – August 2019**
Construction Reliability Engineering Intern

- Worked with The Functional Check-Out team that acts as a final gate that all projects must complete before project sign offs
  - Completed walk-downs of projects with various members of the area team as a final check to ensure all documentation and construction performed was correct
- Performed quality assurance to verify all documentation was up to date and organized correctly in database
- Completed walk-downs with team leads throughout the refinery to identify working safety hazards

Marathon Petroleum Company | Galveston Bay Refinery | Texas City, Texas **January 2019 – May 2019**
Area Project Engineering Intern

- Created project decision support packages that outlined the scope of work to create a ∓10% cost estimate
- Compiled construction packages that detailed a step by step process for routine and turnaround construction
- Designed a Coker Sparger Ring system to reduce inspection frequency, lost opportunity cost, and create a higher Internal Rate of Return
- Managed contracting companies to allow for multiple projects to progress timely and more efficiently
- Performed cost analysis through comparing different decision routes to create an optimal solution while staying under budget

LZ Technology - SGT/KBRwyle | Johnson Space Center | N.A.S.A | League City, Texas **June 2018 – December 2018**
Mechanical Project Engineering Intern

- Design and manufacture high fidelity flight-like hardware used by astronauts in the Orion and Starliner training capsules
- Perform FEA on all mounting hardware to ensure a satisfactory safety factor is obtained using CREO Simulate
- Calculate burst pressure on all breathing umbilical hoses used in the Orion training capsule to verify proper hose sizing

University of Houston | Cullen College of Engineering | Houston, Texas **May 2017 – May 2020**
Lead Undergraduate Engineering Teaching Assistant

- Mentored students to develop critical thinking and problem-solving skills to be successful in their major
- Assisted students in office hours to learn basic coding skills and data manipulation using MATLAB
- Led team meetings to discuss the objectives that will be covered for that week and to receive feedback on how to improve our office hours efficiency

Discount Tire Company | Brenham, Texas **October 2014 – July 2017**
Apprentice Tire Technician

- Completed daily maintenance to a vehicles wheels while operating heavy machinery safely and efficiently
- Assessed customers needs and make recommendations to any services or products they might need based off my expert opinion
- Led and supervised a team of tire technicians by maintaining high pace workflow, and maintaining a hourly rate of cars being serviced
- Demonstrated problem solving skills by quickly solving any issues identified by technicians that impede workflow while satisfying customers concerns for their vehicles

Cypress Fairbanks Independent School District | Falcon Transportation | Cypress, Texas **March 2012 – June 2014**
Diesel Mechanic Intern

- Diagnosed vehicle malfunctions and perform any necessary repairs regardless of mechanical or electrical issue
- Performed preventative and scheduled maintenance to maintain buses throughout the school year
- Rebuilt diesel and gasoline engines to repair any major defects that might've appeared
- Completed routine inspections on all district vehicles to satisfy Texas safety and emissions restrictions
- Handled specialized tools and heavy machinery such as cutting torches, welders, or pneumatic equipment

Projects

Capstone Design – CAD Designer | Hydraulic Swivel Test Fixture | Kalsi Engineering **January 2020 – December 2020**

- Cooperated with a team composed of senior mechanical engineers to design a fixture that will simulate in-field conditions and test Kalsi Engineering's commercial hydraulic swivel
- Performed as a Team Lead for the group by maintaining due dates for reports and delegated responsibilities to team members based off their strengths each displayed
- Performed calculations obtained throughout the BSME degree plan to size different parts and choose material for the testing fixture, and verify design options
- Drafted a 3D model of the test fixture using SolidWorks, and then used SolidWorks Simulate to perform static and dynamic FEA to verify material choices and design
- Collaborated with certified engineers and engineering professors to have them validate all static and transient FEA performed on test fixture design model

Machine Design | Gear Reduction Ramp – CAD Designer **Spring 2020**

- Worked with a team composed of senior mechanical engineering students to fabricate and test the device which drags a determined load up a ramp within a certain time
- Calculated necessary gear reduction required to reduce motor RPMs that would establish correct timing criteria of dragging load up the ramp set by professors
- Drafted a 3D mockup of the device using SolidWorks to meet all criteria set by the professor and perform basic FEA to determine high stress areas, and use SolidWorks Simulate to validate stresses among assembly to ensure the device wouldn't fail

Skills

- Programming: MATLAB, Python, Arduino
- Computer-Aided Design: Solidworks, SolidWorks FEA, CREO, AutoCAD Mechanical