Ian Burress

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EXPERIENCE

Platform Engineer - Rotational March 2025 - Present

Caterpillar | Lafayette, IN

- Assisted in NPI changes to Bill of Materials (BoM) for new parts on production engines in support of warranty items.
- Validation of current components via customer mule engine through roading validation of concepts to support unique use cases that otherwise would only be able to simulate via computer.

Product Support Engineer - Rotational December 2024 - March 2025

Caterpillar | Lafayette, IN

- Conducted warranty investigations and failure analysis in the Large Power Systems Division (LPSD) for marine, locomotive, oil and gas, and electric power industries.
- Assisted dealers and customers in root cause analysis of in-field failures, tracing issues back to the failed component.
- Facilitated various New Product Introduction (NPI) projects from inception at the warranty level through handoff to the platform engineering team.

Application and Installation Engineer - Rotational August 2024 - December 2024

Caterpillar | Houston, TX

- .Executed critical validation fieldwork, including 6 in field audits with multiple days of prior equipment troubleshooting
- Served as the corporate liaison between global dealers and customers, facilitating effective communication, resolving technical inquiries, and ensuring alignment with Caterpillar's product support strategies.
- Mentored over 350 students across 11 different collegiate design teams across 3 universities and acted as a liaison for the company.

Manufacturing Technology & Solutions Intern May 2023 - August 2023

Caterpillar | Chillicothe, IL

- Earned Six Sigma Green Belt leading the DMAIC process to manage safety related improvement projects.
- Developed an installation plan, for magnetic sensing of cabling for crane technologies, saving $250,000 if implemented.

Integrated Components & Solutions Intern May 2022 - August 2022

Caterpillar | Peoria, IL

- Facilitated adoption of assisted reality into manufacturing environment. Activities included proof of concepts of Teamviewer product line for work instructions, quality gates, gathered feedback to understand time usage and data inputs.
- Oversaw production, assisted fabrication troubleshooting with operators, provided feedback for enhanced end quality.

Manufacturing Quality Intern May 2021 - August 2021

Stellantis | Dundee, MI

- Initiated 2 CPIs, conducted plant-wide audits, and evaluated 15 stations for defects using World Class Manufacturing strategies and databases such as EBOM and MQAS.
- Produced 5+ Kaizens that enhanced quality and saved over $50,000 annually in production and warranty costs.

Interior Design Intern June 2020 - August 2020

Fiat Chrysler Automobiles | Auburn Hills, MI

- Hosted Q&A using knowledge of Autodesk, Photoshop, and various CAD softwares to build visualizations, collaborated cross functionally with 20+ other employees to ensure feasibility of an infotainment system design concept.
- Awarded most innovative concept, FCA to research idea for implementation and patent for future vehicles.

Manufacturing Intern May 2019 - August 2019

Harley Davidson Motor Company | York, PA

- Collaborated to diagnose engine issues utilizing knowledge of assembly, maintenance, and performance.
- Designed new parts, tools, and layouts through New Source Introduction to 2 facilities creating 5 different models.

EDUCATION

Texas A&M University | Master of Science in Mechanical Engineering

- M.S. Thesis Title: *"The Design of a Mobile Electron Beam Treatment Station For Contaminated Soils"*

Graduate Research Assistant August 2022 - May 2024

Texas A&M University |College Station, TX

- Worked under Dr. David Staack and with the Department of Energy to complete a thesis design of a mobile radiation treatment facility for contaminated soil treatment
- Hosted weekly design reviews with research advisor to review project and strategize potential avenues of improvement
- Used Solidworks to gather data such as feasibility, mobile facility weight, and FEA simulations.

Michigan State University | Bachelor of Science in Mechanical Engineering

- *NCAA Wrestler*; Michigan State;*Senior Business Director*, Solar Car Racing Team; *Research Assistant,* College of Engineering

Undergraduate Research Assistant November 2020 - May 2022

Michigan State University |East Lansing, MI

- Worked under Dr. Elisa Toulson Measured and recorded laminar flame characteristics of sequential two stage combustion.
- Processed and evaluated images captured from experimental apparatus through a high speed camera using a Schlierens Light source.
- Used Matlab to gather data such as radius, area, and circularity to find the speed of laminar flame expansion.

SKILLS

CAD: Siemens NX, Autodesk, SolidWorks, Creo, Teamcenter

Analysis: Thermal Desktop, Ansys , LS-DYNA, STAR-CCM+

Languages: Python, MATLAB, Microsoft Excel VBA

AWARDS

Personal: Texas A&M - Campus Sustainability Champion, B1G - Academic Success in Athletics,

Team: Texas A&M Solar Car Racing Team - Team Perseverance Award, Texas A&M - 2025 National Comercial,

Guest Speaker Appearance: 2023 The Solar Car Challenge Workshop, 2024 International Topical Meeting on Nuclear Applications of Accelerators, 2025 Innovators Education Foundation Solar Car Racing Conference