Jacob Ridge, EIT

Mechanical Engineer

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Experience

Associate Design Engineer II – Fluor Corp, Greenville, SC **Mar 2024 - Present**

- Associate Design Engineer II for approximately a $200M engineering contract to provide Facility/Balance of Plant Preliminary and Detailed Design on a $7 to $12 Billion dollar project supporting the Department of Energy's (DOE) Critical Decision Plan to re-purpose a large facility at the Savannah River Site.
- Perform stress analysis on piping systems in AutoPIPE, ensuring calculations meet government codes and customer specifications. Train new employees in AutoPIPE and on current stress analysis procedures.

Mechanical Engineering Tech – Creform Corp, Greer, SC **Aug 2023 – Mar 2024**

- Proficiency in using SolidWorks for designing AGVs (Automated Guided Vehicles) to meet customer specifications, updating and modifying part drawings, sourcing and ordering parts, and assembling AGV units.
- Contracted to install AGV units in customer's manufacturing plants. Lay out course paths, use Keyence software to update sensor views, and troubleshoot bugs and mechanical issues while in the field.

Engineering Intern - Dynamic Air Quality Solutions, Princeton, NJ **May 2022 - Aug 2022**

- Responsible for developing and designing improvements towards the process of manufacturing carbon air filters using SOLIDWORKS and six sigma techniques. These improvements include designing fixtures to decrease part variations and assembly time.
- Designed flow boards for the carbon lab, reducing the time to set up individual experiments.

Education

BS Mechanical Engineering - Clemson University, GPA 3.02 **Aug 2020 - Dec 2022**

Course Work

Global Manufacturing | Mechanics of Materials | Thermodynamics | Basic Electrical Engineering
Foundations of Mechanical Systems | Fluid Mechanics | Differential Equations | Fundamentals of Machine Design

Projects

- Engineering Graphics and Machine Design - Reverse engineering of a padlock, involving measurement of every piece and 3D modeling to build a working version in SOLIDWORK.
- Foundations of Mechanical Systems - Designed, 3D modeled, and created several prototypes of an automatic crop watering system consisting of slider-cranks powered by an Arduino.
- Mechanical Engineering Design – Analyzed, synthesized, and evaluated the design of a surgical smoke evacuation system with economical, mechanical, and development constraints.
- Internship in Engineering Design – Sponsored by Siemens SI EP NA, used general engineering knowledge to propose a solution to help lower the CO_2 emissions during Siemens' powder coating process.

Welding (GTAW) – Greenville Technical College **Jan 2020 – May 2020**

- Hands-on experience welding carbon steel plates using the GTAW process.
- Educated on the proper way to read and use welding symbols on technical drawings.

Technical Skills

AutoPIPE | Navisworks | SolidWorks | MATLAB | Autodesk Inventor | 3D Printing | Machine Tools
GTAW (TIG) Welding | MS Office: Word, Excel, PowerPoint | HTML/CSS | Googling

Certificates & Licenses

Certified SolidWorks Associate (CSWA) - Dassault Systèmes (March 2023)
Engineer-in-Training (August 2024)