



Job Description: Mechanical Engineer / Machine Designer

Company Overview

Sapience Automation, a reputable provider of turnkey solutions for industrial automation, specializes in serving diverse industries such as automotive, medical, aviation, building products, general industrial, domestic appliances, and food. Headquartered in Charleston, South Carolina, Sapience is committed to fostering long-term customer relationships by consistently delivering excellence through its skilled workforce, standardized processes, and passion for innovation. The company values transparency, continuous learning, and a strong sense of responsibility and accountability. With a successful track record of executing numerous global projects, Sapience attributes its achievements to its exceptional team, adherence to industry standards, and unwavering commitment to excellence. Competitive compensation packages are offered to qualified candidates.

Role: Mechanical Engineer / Machine Designer

Role and Responsibilities

As a Mechanical Engineer / Machine Designer, you'll play a crucial role in designing and optimizing automation systems. Your work will directly impact the efficiency, safety, and reliability of machinery. Here are the key responsibilities:

1. Designing Automation Equipment:

- Create innovative designs for machines, robotic end-of-arm tools, fixtures, and other equipment used in automation systems.
- Consider factors like functionality, manufacturability, and cost-effectiveness.

2. Mechanical Layout Documentation:

- Develop detailed mechanical layouts for the automation system.
- Document your designs thoroughly, ensuring clarity for implementation.

3. Prototype Testing:

- Test and validate prototype designs to ensure they meet performance requirements.
- Iterate and improve based on feedback and testing results.



4. **Drawing Packages:**

- Prepare comprehensive drawing packages for system installations.
- Collaborate with installation teams to ensure smooth implementation.

5. **Vendor Collaboration:**

- Work closely with fabrication vendors to create manufacturing drawing packages.
- Ensure that fabrication processes align with design specifications.

6. **Remote Support and Troubleshooting:**

- Provide remote support to Sapience team members during system troubleshooting.
- Diagnose and resolve mechanical issues efficiently.

7. **On-Site Assistance:**

- Occasionally travel to customer sites to assist with installation design and project support.
- Collaborate with clients to address specific needs.

Qualifications and Education Requirements

To excel in this role, you'll need the following qualifications:

• **Solidworks Proficiency:**

- Demonstrated expertise in using Solidworks for 3D modeling and design.

• **Hands-On Practical Skills:**

- Be prepared to pass a hands-on design practical during the interview process.

• **Fabrication Knowledge:**

- Understand fabrication processes and materials.

• **GD&T (Geometric Dimensioning and Tolerancing) Knowledge:**

- Familiarity with GD&T standards (ASME Y14.5).

• **Design for Manufacturing:**

- Consider cost implications during the design process.

• **Supplier Interaction:**

- Experience working with tooling suppliers.



- **Communication and Teamwork:**
 - Possess a can-do attitude and strong communication skills.
 - Collaborate effectively within a team environment.
- **Travel Flexibility:**
 - Be willing to travel occasionally (less than 10%) for field measurement and layout purposes.
- **Eligibility for Employment in the United States:**
 - Must be eligible to work in the U.S. without sponsorship.
- **Additional Skills (a plus):**
 - Ability to evaluate payload requirements, concrete anchor points, and perform FEA (finite element analysis).
 - Prior automation design experience and an existing design portfolio.
 - Knowledge of ISO safety standards related to machinery and guarding.
- **Experience and Education:**
 - Minimum of 3 years of design engineering experience.
 - An engineering or STEM degree is a plus.
 - Professional Engineer (PE) certification is also advantageous.

Additional Notes

- **Benefits:**
 - Enjoy a strong benefits program as part of your employment package.
- **Workload and Overtime:**
 - Due to the nature of robot integration, there may be busy periods.
 - The role is exempt but eligible for overtime.

Feel free to reach out if you need further assistance or have any other requests!

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