

Elijah Orozco

📞 (215) 555-1234 ✉️ elijah.orozco@example.com

🌐 linkedin.com/in/elijah-orozco 📍 Philadelphia, PA 19103



SUMMARY

Detail-oriented engineer with a Bachelor's degree in Mechanical Engineering and practical experience in foundry processes, focusing on manufacturing systems and defect analysis. Proven ability to read and interpret casting blueprints effectively, facilitating efficient design of pattern rigging and molds through spatial analysis. Strong collaborative skills allow for seamless communication across all levels, enhancing teamwork and project outcomes. Committed to implementing corrective actions that yield measurable improvements, reinforcing adherence to quality standards and operational excellence. Eager to contribute innovative solutions while supporting manufacturing efficiency initiatives in a dynamic environment.

EXPERIENCE

Foundry Process Engineer

June 2025 - Present

Innovative Castings

Allentown, PA

Oversee technical reviews and documentation of process parameters at Innovative Castings, contributing significantly to product quality assurance and operational efficiency. Engage cross-functionally to optimize pattern rigging design and ensure adherence to industry standards, maximizing productivity.

- Spearhead technical reviews and documentation of process parameters ensuring adherence to quality standards, resulting in a 15% reduction in product defects.
- Design and implement pattern rigging solutions, formulating detailed shop travelers that enhance operational efficiency.
- Collaborate with cross-functional teams to evaluate and update manufacturing systems, contributing to a more streamlined production process.
- Conduct solidification simulations to optimize casting processes, leading to improved material utilization.
- Maintain and enhance procedural documentation and work instructions, fostering compliance with industry standards.
- Assist in defect analysis and corrective action implementation, effectively reducing rework rates by 10%.

Junior Process Engineer

August 2023 - May 2025

Dynamic Manufacturing Solutions

Harrisburg, PA

Supported quality management efforts and assisted in designing efficient product routing as a Junior Process Engineer, developing models that improved visualization for production accuracy.

- Supported the design and modification of product routing, ensuring efficient workflow across the manufacturing floor.
- Engaged in the implementation of the Quality Management System, facilitating enhanced tracking of process parameters.
- Developed solid models for various products, improving visualization for production teams.
- Aided in the research and procurement of new manufacturing technologies, contributing to a 20% increase in output efficiency.
- Collaborated with facilities to troubleshoot and resolve casting-related issues, minimizing downtime.
- Assisted in quoting raw castings and machining services, ensuring accurate pricing and service timelines.

LEADERSHIP & AWARDS

- Certified SolidWorks Associate (CSWA) Certification achieved for proficiency in SolidWorks design software.
- Lean Six Sigma Yellow Belt earned, highlighting commitment to quality improvement and process efficiency.

EDUCATION

Bachelor's Degree in Mechanical Engineering

2023

University of Pennsylvania GPA: 3.5

Philadelphia, PA

Coursework: Dynamics, Materials Science, Thermodynamics, Manufacturing Processes

CERTIFICATIONS

- Certified SolidWorks Associate (CSWA) 📅 2023
- Lean Six Sigma Yellow Belt 📅 2023

TECHNICAL SKILLS

- **CAD Software:** SolidWorks, AutoCAD, CATIA
- **Simulation Tools:** ANSYS, COMSOL Multiphysics, MAGMASOFT

- **Quality Control Tools:** Six Sigma, Statistical Process Control, Control Charts
- **Documentation Standards:** ISO 9001, AS9100, API Spec Q1
- **Manufacturing Methods:** Additive Manufacturing, Subtractive Manufacturing, Machining
- **Industry Standards:** ASTM, ISO, ANSI
- **Data Analysis Tools:** Microsoft Excel, Minitab, Python
- **Project Management Tools:** Trello, Microsoft Project, Asana
- **Communication Platforms:** Slack, Microsoft Teams, Zoom
- **Presentation Software:** Microsoft PowerPoint, Google Slides, Prezi

SKILLS

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|-------------------------------|---------------------------|------------------------------|-------------------------------|
| • Foundry Process Engineering | • Pattern Rigging Design | • Process Optimization | • Blueprint Reading |
| • SolidWorks | • Technical Documentation | • Solidification Simulations | • Machining Processes |
| • Quality Management Systems | • Casting Technologies | • Problem-Solving Techniques | • Interpersonal Communication |
| • Defect Analysis | • Manufacturing Systems | • Collaboration Skills | • Organizational Skills |

PROFESSIONAL AFFILIATIONS

- Member of the American Society of Mechanical Engineers (ASME), engaged in continuing education and networking.
- Participated in local engineering community events, fostering collaboration and knowledge sharing among peers.

LANGUAGES

- English (Native)
- Spanish (Proficient)

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST