

Nathaniel J. Karau

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Menomonie, WI | Relocating to CA

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LinkedIn: [Nathaniel Karau](#) | LinkedIn | Engineering Portfolio: [Nathaniel Karau Portfolio](#)

Summary

Manufacturing Engineer with hands-on experience improving production efficiency, reducing design errors, and supporting manufacturing operations through CAD, process optimization, and cross-functional collaboration. Driven to contribute to advanced aerospace and defense programs, with a strong interest in next-generation aircraft, national security missions, and emerging space technologies. Skilled in SolidWorks, Inventor, GD&T, and manufacturing process development. Eligible for U.S. Security Clearance.

Key Skills

- Manufacturing & Operations: Lean manufacturing, Six Sigma (coursework), root cause analysis, DFM/DFA, FAI, work instructions, process flow optimization
- CAD & Engineering Tools: SolidWorks (CSWA), Autodesk Inventor, AutoCAD, FEA, GD&T, tolerance stack-ups, CAM
- Production & Fabrication: CNC, welding, composites, prototyping, tooling, assembly, shop floor integration
- Collaboration: Cross-functional teamwork, supplier coordination, technical communication, shop support

Experience

Engineering Project Manager - Wieser Form Fabrication | May 2024 - Present

- Increased workflow efficiency by 25% by developing and implementing lean manufacturing process improvements and production tooling to optimize build flow and reduce waste.
- Reduced design errors by 25% through 3D modeling, GD&T; application, and design verification using Autodesk Inventor to ensure manufacturability and compliance with standards.
- Improved on-time project delivery and reduced delays by 15% by coordinating with shop floor teams and suppliers to resolve production and technical issues.
- Created and maintained production schedules and resource plans to support balanced workload, labor utilization, and prioritized customer fulfillment.

Senior Engineering Design Experience (Capstone) - Viracon | Aug 2023 -May 2024

- Designed and built a tilt-table prototype to improve ergonomic handling of large glass panels, improving operator safety and manufacturing efficiency.
- Conducted FEA and CAD modeling using SolidWorks to validate structural performance and manufacturability.
- Executed full build cycle: design, machining, assembly, testing, documentation, and integration into active production.
- Applied Six Sigma and root-cause analysis techniques learned through coursework to guide design validation and continuous improvement.

Engineering Manager Experience - Midwest Manufacturing | May 2021 – Aug 2021

- Supervised a team of five, increasing workflow efficiency and improving system run-time through process improvements.
- Implemented safety compliance measures across multiple sites, improving safety adherence and plant readiness.
- Strengthened leadership, communication, and project management skills through daily coordination with shop supervisors and production teams.

Education

Bachelor of Science in Manufacturing Engineering | University of Wisconsin-Stout | May 2024

- Coursework: Lean Manufacturing, Six Sigma, Quality Engineering, Materials & Processes, Process Control, Automation

Certifications

- Certified SOLIDWORKS Associate (CSWA), Dassault Systèmes – 2020