

# Nathaniel J. Karau

Menomonie, WI | Relocating to California

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## Mechanical/Manufacturing Engineer

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Hands-on experience in hardware ownership, CAD design, FEA, GD&T, and advanced manufacturing. Proven record of improving workflow efficiency (25%), reducing design errors (20%), and delivering fully validated prints ready for production. U.S. security clearance eligible.

## Key Skills

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- **CAD & Modeling:** SolidWorks (CSWA), Inventor, AutoCAD, CAM, FEA, GD&T
- **Design & Build:** Structures, mechanisms, fluid systems, DFM, tolerance stack-up
- **Manufacturing:** CNC, welding, composites, prototyping, lean processes, assembly
- **Collaboration:** Supplier coordination, shop floor integration, cross-functional teams

## Experience

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

- Coordinated design and implementation of manufacturing tools, improving workflow efficiency by 25% and supporting on-time project delivery.
- Created and maintained weekly and monthly production schedules to balance workload and prioritize orders.
- Utilized Autodesk Inventor for 3D modeling and design validation, reducing design errors by 20% and ensuring compliance with industry standards.
- Managed design revisions and change requests to align with customer requirements and production capabilities.
- Collaborated with shop floor staff and suppliers to resolve technical issues, preventing production delays

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

- Led the design, analysis, and development of a scaled Tilt Table prototype to improve ergonomics for employees, optimizing workflow and enhancing productivity.
- Conducted FEA and CAD modeling using SolidWorks, ensuring structural integrity and compliance with industry standards.
- Implemented manufacturing processes including design, machining, assembly, and testing, delivering a successful functional prototype integrated into Viracon's production facility.

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

- Supervised a team of five to improve workplace efficiency, reducing system runtime.
- Developed strong communication, critical thinking, and management skills, enhancing team productivity and project outcomes.
- Ensured safety compliance by traveling to new plants and implementing safety measures, increasing safety compliance.

## Education

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### Bachelor of Science in Manufacturing Engineering

UNIVERSITY OF WISCONSIN - STOUT | MENOMONIE, WI - Aug 2019 – May 2024

- Major: Manufacturing Engineering

## Certifications

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

## Project Highlights

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- **Finger Treadle Engine:** Designed in SolidWorks, fabricated via mill, lathe and drill press.
- **Plastic Injection Mold:** Designed in SolidWorks, fabricated via CNC, and CAM

## Professional References

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- Paul Craig: Program Director, University of Wisconsin – Stout P:715-232-1984 E: [craigp1998@uwstout.edu](mailto:craigp1998@uwstout.edu)
- Dena Moore: Team Coordinator, Midwest Manufacturing P:715-876-3395 E: [dmoore@midwestmanufacturing.com](mailto:dmoore@midwestmanufacturing.com)
- Glenn Bushendorf: Senior lecturer, University of Wisconsin – Stout P:715-232-5391 E: [bushendorfg1999@uwstout.edu](mailto:bushendorfg1999@uwstout.edu)