

Zhiyi Foo

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Education

University of Wisconsin-Madison

BS Mechanical Engineering

May 2021

Work Experiences

Illumina

Mechanical Engineer II

Hayward, CA

November 2023 - Present

- Led critical failure analysis of customer-facing electro-mechanical assembly experiencing motion stall. Conducted comprehensive root cause analysis using FMEA and DOE techniques. Implemented 2 key process modifications and manufacturing tests to achieve 30% increase in supplier yield, saving \$200K annually.
- Redesigned instrument keyboard tray to resolve inconsistent functionality, addressing a key customer complaint. Conducted DOE and testing to improve reliability, while also reducing assembly time by 15% and lowering error rates, enhancing both customer experience and manufacturing efficiency.
- Led failure analysis at the paint supplier's site to address post-painting warping of reaction injection molded panels, resolving assembly and cosmetic issues by implementing new processes, improving yield by 25%.
- Led redesign of instrument packaging foam, coordinating with packaging engineers to perform vibration testing and material selection. Simplified design, cut cycle time by 40%, and reduced overall costs while maintaining reliability.
- Led initiative to reduce costs by testing and implementing alternative mechanical components. Conducted rigorous compatibility and lifecycle tests and realized \$300K annual savings while maintaining product quality.

View, Inc.

Mechanical Engineer

Milpitas, CA

January 2022 - November 2023

- Led next-gen Smart Window Controller development, overseeing project from concept to mass production within 1 year. Engineered a IP65-rated aluminum enclosure; applied DFM principles to optimize design for mass production, resulting in reduction in manufacturing cost by 60% and assembly time by 40% while achieving 25% better thermal performance.
- Led mechanical redesign of Smart Window Control Panel, optimizing sheet metal construction for manufacturability and cost-efficiency. Engineered compact solution that reduced power consumption by 30% and installation time by 50%, contributing to 70% cost reduction per square foot which enabled wider market adoption.
- Designed a new precision manufacturing fixture for automated potting material dispensing to address production scalability needs. Enabled production of 2000 units/month and reduced manual labor by 70% and material waste by 25%.
- Redesigned injection molded housings for manual Window Controller, achieving a 15% reduction in production costs through manufacturability analysis and CAD modeling for optimized production.

Dürr Universal

Mechanical Designer

Stoughton, WI

May 2021 - December 2021

- Led gas turbine air filtration system's waste water pipe layout design; achieved 30% space savings and reduced material costs by 15% through innovative arrangement while prioritizing cooling optimization and filtration to preserve efficiency.
- Designed 6 new components for gas turbine noise silencers, air filter and management systems by collaborating effectively with plant staff on proposals, drawings, bill of materials, construction, and assembly.
- Operated SAP and Engineering Control Center data management software to effectively manage and control engineering documents, resulting in a 10% faster processing of work order change requests.

Attwood Corporation

Engineering Intern

Lowell, MI

September 2020 - December 2020

- Designed and developed mechanical parts that improved the new flagship trolling motor design's durability by 15%.
- Designed, fabricated, and assembled test fixtures and prototypes with machining tools, 3D printing for design validation.
- Wrote and maintained DFMEA, DVP&R, test specifications for new marine accessory to improve test coverage by 10%.

Technical Skills & Languages

Software: SolidWorks, PTC Creo, NX, Python, MATLAB, Simulink, LabView, MS Office, Teamcenter, Asana, Jira

Technical: CNC Machining, 3D Printing, Rapid Prototyping, GD&T, FEA, DFM, FMEA, DoE, PLM, Project Management