

Millie Chang

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SUMMARY

Dedicated Lead Mechanical Engineer with over 9 years of experience in aerospace and defense. Specializes in EO/IR payload design and mechanical architecture creation tailored for mission-critical applications. Proven ability to guide technical teams while adhering to government regulations and standards. Leveraging expertise in cryogenic optical systems, committed to innovative methodologies that promote operational excellence. Collaborates effectively across functions to optimize performance and achieve project objectives efficiently. Thrives under pressure while managing complex projects from conception through execution, consistently delivering optimal results.

EXPERIENCE

Lead Mechanical Engineer

March 2021 - Present

Innovative Aerospace Solutions

Indianapolis, IN

Oversees a team encompassing mechanical engineering roles focused on EO/IR payload systems development. Directly contributes to missile defense capabilities through innovative mechanical designs steeped in compliance and rigor. Manages project milestones, identifies optimization opportunities, and enhances team collaboration.

- Steered advanced EO/IR payload systems design to improve operational readiness for critical missions.
- Implemented cutting-edge cryogenic optical design methods, boosting functional performance metrics significantly.
- Ensured stringent project budget management, aligning resources with strategic financial constraints.
- Fostered cross-disciplinary collaboration, resolving challenges effectively and reducing discrepancies in project requirements.
- Crafted and presented substantial funding proposals, securing support for three key initiatives advancing technological efforts.
- Maintained diligence regarding compliance with governmental contracts, aiding smooth audit processes.

Mechanical Engineer

June 2016 - February 2021

AeroDynamics Inc.

Fort Wayne, IN

Played a vital role as a mechanical expert contributing insights into payload systems. Developed practical solutions targeting size, weight, and performance specifications crucial to client needs.

- Enhanced mechanical system designs focusing on optimizing dimensions and power efficiency, championing developmental goals.
- Collaborated extensively alongside peer engineers, ensuring complete adherence to exhaustive assembly and testing protocols.
- Drove development of innovative cryocooler implementation plans, augmenting the overall efficiency by introducing best practices.
- Supported proposals submission through meticulous technical documentation, increasing clarifications and compliance success.
- Facilitated teamwork among disciplines, actively addressing integration concerns during collaborative undertakings.
- Conducted thorough design evaluations aligning end products with quality benchmarks established.

Mechanical Engineer

January 2013 - May 2016

Tech Innovations Group

Bloomington, IN

Specialized in mechanical component analysis and design within aerospace projects focusing on dependable high-performance solutions. Passed on knowledge through interactive training initiatives directed at junior engineering staff.

- Developed forward-thinking approaches for optical alignment and focus regulation mechanisms improving structural dependability.
- Upheld documentation integrity, strictly adhering to existing engineering standards throughout various process phases.
- Optimized assembly-oriented designs from manufacturing feedback leading towards reduced leads times notably.
- Bolt acted in strong project management capacities emphasizing timelines, guaranteeing accurate tracking for deliverables.
- Initiated comprehensive training protocols for junior personnel, outlining fundamental compliance techniques and considerations.
- Engaged actively in continuous improvement discussions aiming to refine internal process workflows across teams.

LEADERSHIP & AWARDS

- Excellence in Innovation Award for outstanding contributions in advanced engineering design, 2025.
- Team Leadership Award recognizing exemplary guidance and mentorship in collaborative engineering projects, 2024.

EDUCATION

Bachelor's Degree in Mechanical Engineering

2012

Purdue University GPA: 3.7

West Lafayette, IN

Coursework: Thermodynamics, Fluid Mechanics, Control Systems, Structural Analysis

CERTIFICATIONS

- Certified Professional Engineer (PE) 📅 2023
- Advanced Mechanical Design Certification 📅 2023
- Project Management Professional (PMP) 📅 2024

TECHNICAL SKILLS

- **Design Software:** Creo, SolidWorks, AutoCAD
- **Engineering Methodologies:** Finite Element Analysis, Computational Fluid Dynamics, System Optimization
- **Project Management Tools:** MS Project, JIRA, Trello
- **Documentation Standards:** ISO 9001, AS9100, Six Sigma
- **Analytical Tools:** MATLAB, LabVIEW, Python
- **Testing Equipment:** Vibration Test Systems, Thermal Vacuum Chambers, Altitude Simulators
- **Regulatory Frameworks:** NASA, DOD, FAA Standards
- **Collaboration Platforms:** Microsoft Teams, Slack, Google Workspace
- **Compliance Management:** GATE Checklist, Failure Mode Analysis, Risk Assessment
- **Communication Tools:** Microsoft Office, PowerPoint, Visio

SKILLS

- Mechanical Design
- EO/IR Payload Systems
- Cryogenic Optical Design
- Budget Management
- Technical Leadership
- Proposal Development
- Compliance Management
- Creo
- Optical Alignment
- Mechanical Architecture
- Integration Challenges
- System Efficiency
- Advanced Manufacturing
- Structured Documentation
- Quality Standards
- Cross-functional Teams

PROFESSIONAL AFFILIATIONS

- Member of the American Society of Mechanical Engineers (ASME).
- Participating member of the Society of Automotive Engineers (SAE).

LANGUAGES

- English (Native)
- Spanish (Proficient)

ADDITIONAL INFORMATION

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

REFERENCES

AVAILABLE ON REQUEST