

Nisha Fields

Automotive CAD Designer

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SUMMARY

Detail-oriented CAD Designer with over 5 years of experience in automotive mechanical design, specializing in exterior mirror assemblies and vision systems. Proficient in CATIA V5 and well-versed in manufacturing processes such as plastic injection molding and die-casting. Strong analytical skills paired with a collaborative approach ensure designs meet regulatory standards and customer specifications while balancing aesthetics and functionality. Committed to delivering high-quality designs that enhance vehicle safety and performance, contributing proactively to project goals and stakeholder satisfaction.

EXPERIENCE

Automotive CAD Designer

Innovative Automotive Solutions 📅 June 2021 - Present 📍 Detroit, MI

Lead designer managing the digital development of complex 3D models for advanced exterior mirror assemblies and vision systems. Engage cross-functional teams for seamless integration across design elements, focusing on quality and compliance with automotive regulations.

- Created intricate 3D and surface models, optimizing external components for aerodynamics and safety enhancements.
- Collaborated closely with engineering teams to implement innovative camera and sensor technologies, ensuring global standard adherence.
- Conducted rigorous tolerance stack-up analyses applying GD&T principles, guaranteeing component integrity and assembly precision.
- Developed Class-A surfaces enhancing the aesthetic appeal while maintaining functional robustness of mechanical components.
- Prepared detailed technical documentation including comprehensive 2D drawings supporting manufacturing workflows.
- Facilitated review meetings presenting design concepts, aligning stakeholder visions with operational capabilities.

Mechanical Design Engineer

Advanced Engineering Corp 📅 April 2018 - May 2021 📍 Cleveland, OH

Designed and developed automotive components focusing on trim parts and lighting systems. Collaborated effectively within multifaceted teams to push design innovations while achieving manufacturability and cost management.

- Directed design iterations based on DFM assessments during product lifecycle, streamlining production efficiency.
- Worked cross-departmentally to tackle design issues promptly ensuring continuity in programming schedules.
- Utilized PLM tools to oversee design modifications and engineering change control throughout active projects.
- Conducted thorough field tests assessing actual performance against demanding regulatory benchmarks.
- Engaged stakeholders during reviews enhancing the collaborative determination of project specifications.

Junior CAD Engineer

Engineering Innovations LLC 📅 January 2016 - March 2018 📍 Atlanta, GA

Supported senior engineering staff in developing interpretive 3D models and drawings for automotive applications. Engaged in constructive collaboration improving product viability through applied research and testing.

- Assisted in drafting precise 3D models consolidating industry best practices in design principles and software.
- Researched material characteristics and processing techniques vital for sound decision-making regarding designs.
- Partnered with experienced engineers implementing feedback into functionalities that addressed regulatory guidelines.
- Participated actively in weekly sprint sessions discussing evolving challenges in workshops dedicated to solving design hurdles.
- Documented procedural methodologies and design specifications elevating knowledge retention for future use.

LEADERSHIP & AWARDS

- Received Employee of the Month award for outstanding contributions in design accuracy and team collaboration at Innovative Automotive Solutions.
- Recognized by Advanced Engineering Corp for exceptional innovation in component design, enhancing product line value.

EDUCATION

Associate of Applied Science in CAD/Design

City College of Technology 🎓 GPA: 3.6 📅 2016 📍 New York, NY

Coursework: 3D Modeling, Technical Drawing, Design Software, Mechanical Engineering

CERTIFICATIONS

- CAD Software Certification - CATIA V5 📅 2025
- GD&T Professional Certification 📅 2024

TECHNICAL SKILLS

- **CAD Software:** CATIA V5, AutoCAD, SolidWorks
- **Manufacturer Collaboration Tools:** PLM, FEA, DFM
- **Design Standards:** ASME Y14.5, FMVSS 111, ECE R46
- **Electrical Components:** Blind Spot Monitoring, Heated Glass Elements, Power-Folding Actuators
- **3D Modeling Techniques:** Surface Model Creation, Assembly Optimization, Component Design
- **Assembly Processes:** Injection Molding, Die Casting, Assembly Workflow Design
- **Documentation Tools:** GD&T, 2D Drawings, Technical Manuals
- **Testing Methods:** Field Test Analysis, Compliance Validation, Performance Testing
- **Design Review Practices:** Stakeholder Engagement, Feedback Interpretation, Cross-Departmental Reviews
- **Material Properties & Selection:** Thermal Conductivity, Tensile Strength, Durability Testing

SKILLS

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|--------------------------------|---------------------------|----------------------------------|-------------------------|
| • CATIA V5 | • 3D Modeling | • Field Tests | • Aesthetic Integration |
| • GD&T | • Technical Documentation | • Cross-functional Collaboration | • Data Management |
| • Product Lifecycle Management | • Mechanical Design | • Injection Molding | • Tolerance Stack-Up |
| • Design for Manufacturing | • Regression Testing | • Project Coordination | |

PROFESSIONAL AFFILIATIONS

- Member of the Society of Automotive Engineers, actively participating in workshops and professional development gatherings.
- Volunteer mentor for STEM programs aimed at inspiring youth interest in engineering and technology fields.

LANGUAGES

- English (Native)
- Spanish (Intermediate)

ADDITIONAL INFORMATION

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

REFERENCES

AVAILABLE ON REQUEST