

# Alejandro Moody

## Senior Mechanical Design Engineer

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### SUMMARY

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Mechanical design professional with 10 years of experience creating industrial products from early concepts through **production support**. Skilled in CAD modeling, **engineering documentation**, tolerance analysis, materials evaluation, machining, casting, and new product development. Autodesk Inventor experience supports practical design decisions, clear design reviews, and close collaboration with manufacturing teams. Work includes applying mechanical analysis, manufacturing knowledge, **testing practices**, safety standards, and quality processes to improve product readiness. Cross functional coordination helps resolve technical issues with engineering, manufacturing, and customer groups while keeping design intent connected to production needs. SolidWorks Associate Certification and **GD&T Fundamentals Certificate** reinforce a disciplined approach to drawings and dimensional requirements. Prepared to contribute thoughtful product design, reliable documentation, and practical production support within an industrial engineering environment.

### EXPERIENCE

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#### Mechanical Design Engineer, Industrial Product Development

Confidential 📅 January 2017 - Present 📍 Evanston, IL

Lead **mechanical product design** work for industrial products, supporting concept development, CAD modeling, engineering documentation, design reviews, validation, manufacturing coordination, and production issue resolution. Partner with engineering, manufacturing, and customer groups to connect practical design decisions with quality, safety, and production needs.

- Created **Autodesk Inventor** models for industrial products, improving concept clarity during **design reviews**.
- Developed engineering documentation and drawings, giving manufacturing teams clearer production requirements.
- Applied tolerance analysis and GD&T principles, reducing ambiguity across machined and cast components.
- Evaluated materials and **manufacturing processes**, guiding practical choices for durable product designs.
- Supported validation testing and production launches, resolving **technical issues** with cross functional teams.
- Reviewed machining and casting considerations, helping designs move smoothly from concept into production.
- Collaborated with **customer groups** on technical concerns, translating field feedback into design updates.

#### Mechanical Product Engineer, Manufacturing Support

Confidential 📅 January 2013 - December 2016 📍 Evanston, IL

Supported industrial product development through CAD design, manufacturing analysis, materials review, testing coordination, and production documentation. Worked across engineering and manufacturing functions to clarify requirements, investigate issues, and prepare reliable product updates.

- Modeled component concepts in **CAD**, giving engineers practical options for product development reviews.
- Performed tolerance studies for assemblies, clarifying fit requirements before manufacturing release.
- Compared **materials** for industrial applications, supporting sound decisions on performance and manufacturability.
- Reviewed **machining** and **casting** methods, identifying design adjustments that simplified production work.
- Coordinated testing activities with engineering teams, documenting findings for **validation** decisions.
- Investigated production issues with **manufacturing** partners, helping restore consistent assembly performance.

#### Design Engineer, Mechanical Systems

Confidential 📅 January 2010 - December 2012 📍 Evanston, IL

Contributed to early career mechanical design programs involving industrial components, CAD documentation, manufacturing evaluation, safety standards, and production collaboration. Built a practical foundation in design reviews, technical problem solving, and product readiness.

- Built **CAD models** for mechanical components, supporting early concept discussions and design selection.
- Prepared design documentation for review, helping teams trace requirements through development stages.
- Studied dimensional tolerances, improving communication between design and **manufacturing** personnel.
- Assessed materials and basic mechanical considerations, supporting safer product decisions.
- Participated in **design reviews**, capturing technical feedback for focused engineering revisions.
- Supported production questions, connecting shop observations with practical design changes.

### PROJECTS

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#### Industrial Product Validation Program 📅 2024

Supported a distinct product validation effort using CAD documentation, tolerance analysis, materials review, and manufacturing input. Work connected testing evidence with practical production decisions and clearer technical communication.

#### Manufacturing Readiness Study 📅 2021

Reviewed machining, casting, dimensional requirements, and production documentation for an industrial design study. Findings helped align engineering intent with manufacturing questions before release.

LEADERSHIP & AWARDS

- Recognized by engineering peers for practical CAD modeling and clear design review preparation.
- Selected for leadership in cross functional manufacturing issue resolution and product support.
- Commended for connecting tolerance analysis with production focused design decisions.

EDUCATION

Bachelor's Degree in Mechanical Engineering

Midwest Technical University 🎓 GPA: 3.5 📅 2016 📍 Evanston, IL

*Coursework: CAD modeling, mechanical analysis, manufacturing processes, engineering materials, design for manufacturing*

CERTIFICATIONS

- SolidWorks Associate Certification 📅 2020
- GD&T Fundamentals Certificate 📅 2019

TECHNICAL SKILLS

- **CAD Software:** Autodesk Inventor, SolidWorks, CAD modeling
- **Mechanical Design:** Industrial product design, concept development, design reviews
- **Engineering Documentation:** Engineering drawings, product specifications, design records
- **Dimensional Engineering:** GD&T, tolerance analysis, fit studies
- **Manufacturing Processes:** Machining, casting, production methods
- **Materials Engineering:** Materials evaluation, material selection, performance review
- **Product Validation:** Validation testing, test planning, design verification
- **Quality Engineering:** Quality processes, inspection planning, defect review
- **Production Engineering:** Production support, manufacturing collaboration, release support
- **Safety Engineering:** Safety standards, product risk review, safe design practices
- **Design Management:** New product development, concept reviews, technical decisions
- **Stakeholder Collaboration:** Engineering teams, manufacturing teams, customer groups

SKILLS

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|---------------------------|-----------------------------|------------------------|-------------------------|
| • CAD                     | • Tolerance analysis        | • Production support   | • Safety standards      |
| • Product design          | • Engineering documentation | • Materials evaluation | • Quality processes     |
| • Mechanical analysis     | • Design reviews            | • Machining            | • Cross functional work |
| • Manufacturing processes | • Validation testing        | • Casting              |                         |

PROFESSIONAL AFFILIATIONS

- Mechanical engineering peer network participant, sharing practical ideas on design and manufacturing.
- Professional manufacturing community participant, supporting collaboration across product development disciplines.

LANGUAGES

- English (Native)
- Spanish (Intermediate)

ADDITIONAL INFORMATION

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

REFERENCES

AVAILABLE ON REQUEST