

ZaydKirk

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SUMMARY

Mechanical Design Engineer with five years of experience developing products from **requirements capture** and **concept generation** through CAD design, prototyping, testing, and manufacturing release. Siemens NX supports detailed models, assemblies, drawings, and production ready documentation for plastic, metal, and **sheet metal** components. Thermal design work applies heat transfer, thermodynamics, and fluid flow principles to cooling applications and infrastructure products. Cross functional collaboration connects engineering, manufacturing, testing, and supplier teams around practical design decisions. Technical reports, specifications, presentations, and design records support clear reviews and controlled execution. Product launches have strengthened experience with design for manufacturability, analytical problem solving, and production issue resolution. This background can support dependable mechanical solutions for connectivity, **power distribution**, and cooling systems.

EXPERIENCE

Mechanical Design Engineer

August 2023 - Present

Vector Infrastructure Engineering

Chicago, IL

Own mechanical design activities for infrastructure products, supporting Siemens NX modeling, prototype coordination, thermal evaluation, manufacturing release, and production issue resolution. Partner with engineering and manufacturing teams on design decisions that improve product feasibility and delivery quality.

- Developed **Siemens NX** assemblies for infrastructure products, improving design consistency across released components.
- Coordinated prototypes and testing through manufacturing release, shortening review cycles for new designs.
- Applied **injection molding** and stamping knowledge to improve plastic and sheet metal manufacturability.
- Evaluated **heat transfer** and **fluid flow** considerations for cooling applications, guiding thermal design decisions.
- Prepared **technical reports**, specifications, and **presentations** that supported engineering review decisions.
- Resolved production concerns with manufacturing partners, improving released designs and reducing repeat issues.

Junior Mechanical Engineer

July 2021 - July 2023

Midwest Product Engineering

Evanston, IL

Supported commercial mechanical product development through **3D CAD** modeling, assembly documentation, prototype validation, manufacturing reviews, and launch preparation. Worked with cross functional teams to convert design requirements into practical product improvements and controlled engineering records.

- Created 3D models, assemblies, and drawings for commercial **mechanical product development** programs.
- Supported prototype builds and validation activities, preparing designs for successful product launch preparation.
- Reviewed manufacturing requirements and recommended design adjustments for production feasibility and reliability.
- Maintained engineering decisions and design records throughout development, improving project traceability.
- Evaluated product improvements with cross functional teams, turning feedback into practical mechanical changes.
- Applied **analytical problem solving** to resolve mechanical design challenges during development reviews.

PROJECTS

Cooling Assembly Development 📅 2024

A focused cooling assembly effort connected thermal design principles with practical mechanical decisions. Siemens NX concepts, fluid flow review, and prototype feedback shaped a manufacturable solution for infrastructure applications.

Manufacturing Release Improvement 📅 2023

This initiative grew from recurring production questions. Design records, sheet metal reviews, and supplier feedback created clearer release information and smoother handoff from engineering into manufacturing.

LEADERSHIP & AWARDS

- Recognized by engineering peers for dependable support during prototype reviews and manufacturing release activities.
- Received team recognition for clear technical documentation and practical solutions to production design concerns.
- Selected for Siemens NX CAD Professional Training based on continued growth in mechanical product development.

EDUCATION

Bachelor's Degree in Mechanical Engineering

2021

Purdue University GPA: 3.5

West Lafayette, IN

Coursework: Thermodynamics, Heat Transfer, Fluid Mechanics, Mechanical Design

CERTIFICATIONS

- Siemens NX CAD Professional Training 📅 2024
- Design for Manufacturing and Assembly Training 📅 2023

TECHNICAL SKILLS

- **CAD Software:** Siemens NX, 3D CAD, CAD assemblies
- **Mechanical Design:** Product concepts, detailed design, mechanical assemblies
- **Thermal Engineering:** Heat transfer, thermodynamics, thermal performance
- **Fluid Analysis:** Fluid flow, cooling systems, thermal evaluation
- **Manufacturing Processes:** Injection molding, stamping, sheet metal
- **Materials Design:** Plastic parts, metal parts, material selection
- **Product Development:** Requirements capture, concept generation, product launch
- **Prototype Validation:** Prototyping, testing, validation activities
- **Engineering Documentation:** Technical reports, design specifications, presentations
- **Release Management:** Manufacturing release, design records, production handoff
- **Design Methods:** Design for manufacturability, analytical problem solving, structured CAD
- **Collaboration Tools:** Engineering reviews, supplier coordination, manufacturing communication

SKILLS

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|-----------------------|--------------------|-------------------------|---------------|
| • Mechanical design | • Thermal analysis | • Prototyping | • Metal parts |
| • Siemens NX | • Heat transfer | • Testing | • Sheet metal |
| • 3D CAD | • Thermodynamics | • Manufacturing release | • Teamwork |
| • Product development | • Fluid flow | • Plastic parts | |

PROFESSIONAL AFFILIATIONS

- Mechanical engineering peer collaboration focused on product design, testing, and manufacturing readiness.
- Professional interest group participation centered on thermal systems, CAD development, and design for manufacturability.

LANGUAGES

- English (Native)
- Spanish (Intermediate)

ADDITIONAL INFORMATION

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

REFERENCES

AVAILABLE ON REQUEST