

STRENGTHS

-  **Thermal Modeling**
Built models for electronic assemblies and compared results with testing. Teams gained clearer evidence for design decisions.
-  **Heat Transfer Analysis**
Applied conduction and convection principles during product evaluations. A careful review often revealed useful cooling improvements.
-  **Validation Support**
Reviewed simulation inputs against observed results. Engineers received stronger context for refining assumptions and test plans.
-  **Technical Communication**
Turned analysis findings into concise summaries and presentations. Colleagues could act on results without sorting through excess detail.
-  **Collaborative Design Review**
Joined CAD and multidisciplinary reviews with practical thermal input. Shared questions early, which kept later prototype work focused.

SKILLS

- Thermal AnalysisHeat Transfer
- Thermal ModelingSimulation
- Validation Support
- Engineering Documentation
- CAD ReviewConduction
- ConvectionCooling Analysis
- Technical Requirements
- Design Reviews
- Prototype Evaluation

SUMMARY

Thermal engineer with four years supporting **thermal analysis**, heat transfer evaluation, simulation workflows, validation activities, and mechanical design decisions. Develops engineering models for electronic and mechanical assemblies, reviews test evidence, and documents assumptions, results, and recommendations clearly. Partners with multidisciplinary engineering teams during design reviews, prototype evaluation, and verification planning. Experience includes conduction, convection, **cooling requirements**, CAD review, model correlation, and technical presentations for **product development** programs. Practical growth has come from connecting analytical work with observed performance, then refining methods based on engineering feedback. Brings a thoughtful, collaborative approach to reliable thermal solutions, with clear communication that helps teams make sound design choices for advanced electronic and **aerospace cooling** systems.

EXPERIENCE

Thermal Engineer

Apex Thermal Research  June 2022 - Present  Madison, WI

Leads thermal analysis, modeling, validation, documentation, and design support for electronic and mechanical assemblies. Works with multidisciplinary engineers on performance reviews, testing, model correlation, and technical communication. Applies **mechanical engineering** methods to guide reliable product decisions.

- Developed **thermal models** for electronic assemblies, guiding design reviews with clearer performance evidence.
- Evaluated heat transfer behavior using engineering methods, supporting practical cooling decisions during **product development**.
- Created simulation inputs and reviewed validation data, helping engineers refine model assumptions and testing plans.
- Applied mechanical design principles during thermal reviews, improving product performance considerations for complex assemblies.
- Prepared analysis summaries and presentations, giving multidisciplinary teams clear findings for design discussions.
- Correlated engineering models with observed test results, strengthening confidence in validation conclusions.

Junior Thermal Engineer

Northstar Engineering Labs  July 2020 - May 2022  Milwaukee, WI

Supported thermal modeling and product development programs through heat transfer analysis, CAD review, technical documentation, prototype evaluation, and test preparation. Organized engineering data for verification decisions and developed practical judgment through supervised design and validation work.

- Supported **thermal modeling** projects for product development programs, improving analysis readiness for engineering reviews.
- Analyzed **conduction** and **convection** requirements, informing cooling evaluations for developing products and assemblies.
- Documented simulation assumptions and results, making recommendations easier for project engineers to assess.
- Assisted **CAD** reviews with thermal considerations, helping teams identify design improvements before prototype evaluation.
- Organized technical data for **verification** decisions, giving engineers cleaner records for follow up work.
- Contributed to **prototype evaluation** and test preparation, building practical experience with observed product behavior.

Test Preparation

Technical Communication

LANGUAGES

English Native

Spanish Intermediate

MY CAREER



● Thermal Engineer at Apex Thermal Research (4.2 Years)

● Junior Thermal Engineer at Northstar Engineering Labs (1.8 Years)

PROJECTS

Electronic Assembly Thermal Validation 📅 2024

Built a focused model and validation workflow for an electronic assembly, connecting heat transfer assumptions with observed test data. Documented inputs, findings, and recommendations for engineering review.

Cooling Requirement Evaluation 📅 2022

Evaluated conduction, convection, and cooling requirements across product concepts. Organized technical evidence that supported design comparisons, prototype planning, and practical thermal decisions.

LEADERSHIP & AWARDS

- Received Thermal Analysis Fundamentals Certificate recognition in 2025 for continued growth in engineering analysis practice.
- Selected by engineering peers to present thermal findings during multidisciplinary design review discussions.
- Recognized for clear technical documentation supporting model validation and prototype test preparation.

EDUCATION

Bachelor's Degree in Mechanical Engineering

University of Wisconsin Milwaukee 🎓 GPA: 3.5 📅 2020 📍 Milwaukee, WI

Coursework: Heat Transfer, Thermodynamics, Fluid Mechanics, Computer Aided Design

CERTIFICATIONS

- Thermal Analysis Fundamentals Certificate 📅 2025
- Mechanical Engineering Analysis Certificate 📅 2020

TECHNICAL SKILLS

- **Thermal Analysis:** Heat transfer, conduction, convection
- **Thermal Modeling:** Thermal models, simulation inputs, model correlation
- **Simulation Methods:** Engineering analysis, validation approaches, requirements analysis
- **Mechanical Engineering:** Thermodynamics, fluid mechanics, mechanical design
- **Computer Aided Design:** CAD review, assembly design, design revisions
- **Testing And Validation:** Prototype evaluation, test preparation, validation data
- **Engineering Documentation:** Technical documentation, analysis summaries, engineering reports
- **Product Development:** Design reviews, product evaluation, verification planning
- **Cooling Systems:** Electronic cooling, aerospace cooling, cooling requirements
- **Technical Communication:** Technical presentations, stakeholder discussions, analysis findings

PROFESSIONAL AFFILIATIONS

- Member, American Society of Mechanical Engineers, connecting ongoing learning with mechanical engineering practice.
- Participant, regional thermal engineering forums, sharing practical perspectives on modeling and validation work.

ADDITIONAL INFORMATION

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

REFERENCES

AVAILABLE ON REQUEST