



Reference design

Technical documentation

LANGUAGES



MY CAREER

0MONTHS

Data Center Cooling Researcher

Colorado State University Capstone Team 📅 January 2026 to May 2026 📍 Fort Collins, CO

Contributed to an integrated data center cooling concept that combined airflow, liquid loop, and electrical load scenarios. Coordinated modeling tasks with student designers and translated results into reference design recommendations focused on efficiency and resilience.

- Defined **simulation requirements** with faculty leads, aligning airflow and liquid loop studies with design questions.
- Modeled integrated cooling scenarios in **CFD**, revealing interactions between thermal and electrical loads.
- Evaluated **predictive analytics** outputs, helping compare efficiency and resilience across reference concepts.
- Validated model behavior against expected heat transfer trends, supporting defensible design conclusions.
- Coordinated review sessions with student designers, resolving assumptions before final analysis.
- Documented model limitations and results, giving reviewers clear context for design decisions.

Thermal Fluid Simulation Student

Student Lab 📅 August 2024 to December 2025 📍 Fort Collins, CO

Completed supervised laboratory studies in convection, fluid flow, heat exchangers, and numerical simulation. Applied structured measurement, model comparison, and technical reporting methods that built a strong foundation for thermal system analysis.

- Analyzed convection experiments with Python, connecting measured temperatures to heat transfer calculations.
- Simulated fluid flow cases, comparing numerical trends with supervised laboratory observations.
- Evaluated heat exchanger results, identifying assumptions that affected predicted **thermal performance**.
- Verified numerical models through mesh checks, residual review, and comparison with expected behavior.
- Coordinated laboratory data reviews with classmates, improving consistency across submitted analyses.
- Recorded methods and findings clearly, helping faculty assess modeling judgment and technical growth.

PROJECTS

Reduced Order Cooling Analytics 📅 2026

Created an academic reduced order analysis for cooling system optimization, linking simulation outputs with predictive analytics and practical efficiency comparisons.

Liquid Loop Resilience Study 📅 2025

Explored liquid loop behavior under varied thermal loads, connecting fluid performance with resilient data center cooling concepts.

LEADERSHIP & AWARDS

- Graduate Research Fellowship, 2025
- Engineering Research Poster Recognition, 2026
- Graduate Engineering Peer Mentor, 2025 to 2026

CERTIFICATIONS

- Coursera Thermodynamics Certificate 📅 2025
- Applied CFD Fundamentals, University Continuing Education 📅 2026

PROFESSIONAL AFFILIATIONS

- Thermal Fluids Graduate Seminar Coordinator, 2026
- Graduate Engineering Peer Mentor, 2025 to 2026

## ADDITIONAL INFORMATION

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

## REFERENCES

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AVAILABLE ON REQUEST