

Eliza Cannon

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SUMMARY

Early career mechanical engineer focused on thermal and fluid sciences, with supervised academic research and project experience evaluating component and **system performance**. Applies thermodynamics, heat transfer, fluid mechanics, analytical modeling, experimental testing, **engineering standards**, and **technical documentation** to support sound design decisions. Defines test objectives, develops calculation methods, collects laboratory measurements, compares predicted and observed behavior, and records assumptions with clear traceability. Communicates findings with technical stakeholders and responds thoughtfully to review feedback. Academic work reflects care for environmentally responsible product development, practical constraints, repeatable methods, and reliable **engineering judgment**. Ready to contribute useful analysis, clear documentation, and collaborative problem solving within a team guided by experienced engineers.

EDUCATION

Bachelor's Degree in Mechanical Engineering

Purdue University GPA: 4.0

2026

West Lafayette, IN

Coursework: Thermodynamics, heat transfer, fluid mechanics, experimental methods, engineering design

TECHNICAL SKILLS

- **Thermal Sciences:** Thermodynamics, Heat Transfer, Fluid Mechanics
- **Analytical Methods:** First Principles Analysis, Calculation Models, Performance Evaluation
- **Experimental Testing:** Laboratory Testing, Measurement Collection, Test Objectives
- **Engineering Documentation:** Technical Documentation, Calculation Records, Findings Reports
- **Engineering Standards:** Engineering Standards, Traceability, Requirements Review
- **Data Analysis:** Predicted Behavior, Observed Behavior, Measurement Trends
- **System Design:** System Performance, Component Performance, System Architecture
- **Problem Solving:** Structured Problem Solving, Physical Principles, Practical Constraints
- **Technical Communication:** Technical Conclusions, Stakeholder Presentations, Review Discussions
- **Product Development:** Product Architecture, Design Decisions, Environmental Responsibility

SKILLS

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|--------------------------|---------------------------|--------------------------|---------------------------|
| • Thermal fluid analysis | • Experimental testing | • Problem solving | • Test planning |
| • Thermodynamics | • Engineering standards | • System performance | • Technical communication |
| • Heat transfer | • Technical documentation | • Component architecture | • Design decisions |
| • Fluid mechanics | • Data analysis | • Analytical methods | |

EXPERIENCE

Thermal Systems Engineering Capstone

January 2026 to May 2026

Capstone Project

West Lafayette, IN

Supported a supervised thermal fluid component evaluation from requirements through testing, review, documentation, and technical communication. Connected analytical predictions with measured behavior while preserving traceable decisions and clear evidence for design discussion.

- Defined **thermal** fluid requirements and test objectives for **component performance** evaluation.
- Built analytical calculations using thermodynamics, **heat transfer**, and **fluid mechanics** principles.
- Collected laboratory measurements and compared **observed behavior** with predicted component performance.
- Recorded assumptions, methods, findings, and decisions for repeatable **technical review**.
- Presented evidence based conclusions to project stakeholders and incorporated review feedback.
- Evaluated architecture choices against requirements, physical principles, and practical constraints.

Undergraduate Thermal Fluid Researcher

September 2025 to December 2025

University Research Lab

West Lafayette, IN

Contributed under faculty guidance to thermal fluid research focused on component behavior, laboratory measurements, and engineering interpretation. Maintained organized records that supported repeatability, technical discussion, and continued development of sound engineering judgment.

- Characterized **component** thermal and **fluid** performance through supervised laboratory experiments.
- Prepared test methods linking measurement plans with research questions and expected outcomes.

- Applied engineering standards when documenting **calculations**, procedures, and **experimental** findings.
- Reviewed measurement trends against physical principles and practical **system** constraints.
- Shared clear **technical conclusions** with researchers during project review discussions.
- Revised analysis after feedback and preserved traceable records for future experiments.

Applied Thermal Sciences Project

January 2025 to May 2025

Course Project

West Lafayette, IN

Completed supervised course work applying first principles analysis, **engineering standards**, and technical documentation to thermal fluid performance questions. Practiced moving from defined requirements through calculations, evidence review, and concise engineering conclusions.

- Applied first principles analysis to a **thermal** fluid performance problem.
- Defined scope, requirements, calculation methods, and expected project outcomes.
- Documented engineering assumptions, calculations, findings, and **technical conclusions** clearly.
- Compared **analytical** results with physical principles and practical design constraints.
- Communicated project **findings** through concise technical explanations and supporting evidence.
- Incorporated instructor feedback into revised calculations and documented **design decisions**.

PROJECTS

Sustainable Thermal Component Study 📅 2026

Evaluated a thermal fluid component using analytical calculations and laboratory evidence. Connected performance behavior with environmentally responsible product considerations, traceable engineering decisions, and practical architecture choices.

Laboratory Measurement Repeatability Study 📅 2025

Developed a supervised measurement approach for thermal fluid research. Compared predicted and observed behavior, documented limitations, and organized findings for repeatable technical review.

LEADERSHIP & AWARDS

- Senior Design Technical Communication Recognition, 2026
- Dean's List, 2025
- Mechanical Engineering Peer Tutor, 2025 to 2026

CERTIFICATIONS

- University Laboratory Safety Certification 📅 2025
- Thermal Fluid Analysis Certificate 📅 2026

PROFESSIONAL AFFILIATIONS

- Mechanical Engineering Peer Tutor, Purdue University, 2025 to 2026
- Campus Sustainability Project Volunteer, 2025

LANGUAGES

- English (Native)
- Spanish (Intermediate)

ADDITIONAL INFORMATION

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

REFERENCES

AVAILABLE ON REQUEST