DARA SAFE

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EDUCATION

University of Wisconsin – Madison
B.S. Mechanical Engineering and Energy Sustainability Certificate, Class of 2023

- Overall GPA: 3.48 / Major GPA: 3.58

ACCOMPLISHMENTS & SKILLS

- Advanced in Microsoft Office 365 Tools
- Created research reports related to power and renewables
- Project management experience
- Strong interpersonal, communication, and teamwork skills

PROFESSIONAL EXPERIENCE

Engine Research Center 6/22 – 8/22
Assistant

- Worked 4-6 hours daily designing, building, and fixing lab equipment, sorting and organizing supplies, and cleaning out research spaces.
- Learned about diesel and gas internal combustion engines and how to identify testing requirements for optimizing combustion performance and pollutant emission control.

Internship on Demand Spectrum Brands 10/21 – 12/21
Pre-Intern

- Worked 40 total hours designing and collaborating with a cohort of engineering students to redesign a Russell Hobbs kettle utilizing the implementation of light piping while aiming to stay under 5% of manufacturing costs.
- Learned and applied early-design research, design thinking principles, design of manufacturing, and decision matrix to ensure performance and aesthetic quality meet the final customer's needs.

Gas Cleaning Technologies 5/21 – 9/21, 4/19 – 8/19
Intern

- Worked 5-10 hours weekly with the process team to conduct literature searches, process data, and assist with material selection for various process equipment.
- Gained experience in air pollution control, clean energy, and optimization for metallurgic process plants.

PROJECT EXPERIENCE

Senior Design 1/23 – Present
Team Leader

- Worked with team of four to design an open-source insect monitoring device to track insect population and diversity.
- Managed project tasks and deadlines, communicated next steps during weekly team meetings, and ensured that all team members remained on schedule and within budget.

Hydrogen and Electrochemical Research for Decarbonization (HERD) Lab 1/23 – Present
Student Assistant

- Researched perovskite materials for air electrodes in solid oxide electrolysis cells and in metal-air battery cells.
- Plan to develop a detailed manufacturing method of perovskite by the end of Spring 2023.

Independent Study 9/22 – 12/22

- Composed a research report on industrial steel reheat furnace mechanisms and the integration of hydrogen production pathways to reduce carbon emissions.
- Presented a summary of my findings to Professor David Rothamer weekly.

ACTIVITIES

Insight Wisconsin 10/19 – 12/21
General Member

- Applied lean engineering principles to complete two rounds of the prototype cycle, including prototype testing and revisions.
- Created drawings and 3D prototype design of a bike compost trailer and lens switcher and presented progress updates to corporate professionals and other club departments.

Badger Powerlifting Team 9/19 – 5/20
Head Captain

- Managed weekly practices and team competitions and led periodic seminars on exercise technique and execution.
- Worked with 30+ members to set, work towards, and accomplish their SMART goals with an 80% success rate.
- Grew club by more than 20% through individual recruitment and promotion via social media.