

Madison R. Lilly

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OBJECTIVE

Seeking a full-time position working with heat transfer, thermal management systems, and HVAC&R in the space, green building, and renewable energy industries where my skills and experience will excel in propelling a team in leading the field into the future.

RESEARCH EXPERIENCE

Embry-Riddle MicaPlex Thermal Systems Lab, Daytona Beach, FL January 2019 – Present

Principal Researcher – Silicone Rubber and Micro-Encapsulated Phase Change Material Thermal Composite

- Researched, developed, and implemented experimental procedures for synthetization and subsequent use of micro-encapsulated phase change material.
- Currently conducting ongoing experiments to maximize latent heat capacity and tensile strength of thermal composite samples.
- Wrote grant application and awarded \$7300 for research through the ERAU Office of Undergraduate Research.
- Project will culminate in April 2021 with a comprehensive report and presentation.

Key Achievement:

- Received commendation from head of ERAU environmental health and safety department for excellence in research, preparation, and implementation of safety regulations and procedures.

EDUCATION

Embry-Riddle Aeronautical University, Daytona Beach, FL

Master of Science in Mechanical Engineering May 2021 – May 2023

Bachelor of Science in Mechanical Engineering, Minor in Applied Mathematics August 2016 – May 2021

Honors: National Society of Leadership and Success

Relevant Coursework: Engineering Materials Science and Lab, Sustainable Design, Thermodynamics I, Thermodynamics II, Heating Ventilation and Refrigeration.

SKILLS

Programming/Computation Languages:

- MATLAB (500 hrs)
- Python (100 hrs)

Data Acquisition and Modeling:

- Mettler Toledo STARe (100 hrs)

Computer Aided Design (CAD):

- Autodesk Inventor 2016 (600 hrs)
- CATIA V5 (400 hrs)
- SOLIDWORKS 2019 (400 hrs)

EMPLOYMENT HISTORY

Disney College Program Intern August 2018 – January 2019

Walt Disney World, Orlando, FL

- Maintained excellent standards of health and safety as primary attraction level supervisor
- Maximized positive guest interactions while simultaneously mitigating guest grievances
- Contributed to attractions team assisting upwards of 20,000 guests per day

ASPIRE Program Intern September 2015 – August 2016

Johns Hopkins University Applied Physics Lab – Laurel, MD

- Performed data analysis and organized product recommendations for sub-scale simulations
- Designed, built, and operated 1/10th scale testbed
- Coordinated design and additive manufacturing of scale models and associated electronics