# Kayla Martinez, EIT

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## Education:

**Bachelor of Science, Mechanical Engineering** **May 2024**

*Minor in Computer Science and Robotics*
Rose-Hulman Institute of Technology, Terre Haute IN
**Related Courses***:* Graphical Communications, Computer Applications, Machine Learning, Deep Learning, Heat Transfer, Data Structures and Algorithms, Control Systems, Thermodynamics, Computer Visions, Mobile Robotics, Mechatronic Systems, Robotic Dynamics and Controls

## Skills:

SolidWorks, MATLAB, Simulink, GitHub, Python (NumPy, Pandas, Matplotlib, PyTorch, ScikitLearn, TensorFlow), GitHub, OpenCV, C/C++, Java, and Microsoft Visio

## Work Experience:

**Trane Technologies – Controls Project Engineer** **June 2024 – Current**

- Provided leadership to internal and customer-facing projects with technical guidance for HVAC BAS across the Midwest.
- Managed a portfolio of electromechanical engineering projects with varying degrees of difficulty by providing cost analysis, technical documentation, and efficiency evaluation
- Developed familiarity with communication protocols such as BACnet/MSTP, BACnet/IP, Lontalk, and Modbus
- Integrated a variety of HVAC units and sensors to achieve full functionality of control systems

**Envelop Group – Controls Engineering Intern** **Summer 2023**

- Produced flow diagrams, sequence of operations, network layouts, and electrical schematics
- Ensured functionality of HVAC control systems by troubleshooting
- Preformed device verification, loading, and commissioning of system controllers

**Brazeway – Manufacturing Intern** **Summer 2022**

- Identified deficits in current manufacturing process
- Documented need and saving due to proposed solutions
- Generated prototypes and experiments to test feasibility of designs

**Engineers Without Borders – President** **January 2023 - January 2024**

- Engineered solutions with team to help underprivileged community in Ecuador
- Communicated with professional mentors for project advice
- Lead club events by planning fundraisers in advance, marketing events to fellow students, and overseeing logistics

## Projects:

**NASA Sample Return - Senior Capstone Project** **August 2023 - May 2024**

- Won the Mechanical Engineering department award for designing a fully automated sailing system to maintain integrity of a hypothesized asteroid
- Completed multiple calculations to validate final product
- Used computer vision techniques to aid in automation of design
- Programed six-axis robot using inverse kinematics to perform desired tasks

## Certification:

**Engineer in Training (EIT) Certification**
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