

KAYLEE FRYE

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EDUCATION

Clemson University, *College of Engineering, Computing and Applied Sciences*
B.S. Mechanical Engineering

Expected: May 2026
GPA: 3.8

EXPERIENCE

Mechanical Engineering Intern, *Siemens Energy*, Clemson, SC May 2024 - Present

- Reduced inspection time for turbine components by 35 percent by improving maintenance steps and tracking failure patterns.
- Performed mechanical testing and calibration of tools using dial indicators, torque analyzers, and multimeters.
- Worked with engineers and technicians to troubleshoot issues in rotating-equipment test benches, resolving most priority problems the same day.

Research Assistant, *Advanced Manufacturing Lab, Clemson University*, Clemson, SC Jan 2024 - Present

- Designed and printed test samples using PLA and ABS, improving tensile strength through optimized print settings.
- Ran tensile, compression, and bending tests using Instron equipment and maintained consistent test accuracy.
- Analyzed test and microscopy data in MATLAB and Python to evaluate performance and failure modes.

PROJECTS & VOLUNTEERING

Automated Sorting Mechanism, Machine Design Course Project Jan 2024 - Apr 2024

- Built a sorting system using stepper motors, an Arduino, and a belt-drive assembly.
- Completed motion and load calculations to size gears, supports, and motor torque.
- Logged performance data and created plots to compare accuracy and throughput.

Thermal Control System, Mechanical Systems Workshop Sep 2023 - Dec 2023

- Built a small cooling system using a thermistor sensor, a Peltier device, and a custom PCB.
- Designed a filter circuit to stabilize readings and reduce noise.
- Wrote a Python control script to regulate temperature within one degree Celsius.

Robotic Gripper Prototype, Robotics Systems Project Jan 2023 - Apr 2023

- Designed and built a two-finger robotic gripper using a servo-driven linkage mechanism to handle small components.
- Modeled the gripper in SolidWorks and performed basic stress checks to select safe material thicknesses.
- Programmed the gripper using Arduino to control grip force and opening width.

Wind Tunnel Test Fixture, Aerodynamics Lab Project Sep 2022 - Dec 2022

- Built a small-scale fixture to measure drag and lift on 3D-printed airfoils in a low-speed wind tunnel.
- Collected velocity, pressure, and force data using LabVIEW and analyzed results in MATLAB.
- Compared measured lift-to-drag ratios with theoretical values for final lab reporting.

SKILLS

- **Design:** SolidWorks, AutoCAD, Fusion 360, 3D Printing (FDM), GD&T, Rapid Prototyping
- **Analysis:** MATLAB, Python (NumPy, SciPy, Pandas, OpenCV), LabVIEW, Material Testing, R, Minitab