



# Sofia Anthony

## Instrumentation & Controls Engineer Intern

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### SUMMARY

Driven Mechanical Engineering student excelling in energy systems through hands-on projects and research. Eager to contribute to innovative solutions while collaborating with a team. Demonstrated ability in engineering principles and effective problem-solving using programming both independently and in group settings. Defined by strong organizational skills, attention to detail, and a growing proficiency in automation and integration of artificial intelligence within engineering frameworks, actively pursuing knowledge that will enhance project efficiencies.

### EDUCATION

#### Bachelor's Degree in Mechanical Engineering

University of Alabama 🎓 GPA: 3.7 📅 2028 📍 Tuscaloosa, AL

**Coursework:** Thermodynamics, Fluid Mechanics, Energy Systems, Automation Systems

### TECHNICAL SKILLS

- **Programming Languages:** Python, MATLAB
- **Engineering Tools:** AutoCAD, SolidWorks, ANSYS
- **Data Analysis Software:** Microsoft Excel, MATLAB, R
- **Collaboration Platforms:** Microsoft Teams, Slack, Google Drive
- **Project Management Tools:** Trello, Asana, JIRA
- **Automation Tools:** MATLAB, LabVIEW, Simulink
- **Presentation Software:** Microsoft PowerPoint, Prezi, Google Slides
- **Simulation Software:** Simulink, COMSOL, ANSYS Fluent
- **Academic Software:** MATLAB, SolidWorks, MathCad
- **Networking Tools:** Cisco Packet Tracer, Wireshark, Wireshark

### EXPERIENCE

#### Capstone Project Developer

University Project 📅 January 2025 - Present 📍 Tuscaloosa, AL

Technology-focused role centered on developing an automated energy monitoring system. Responsibilities include leading design discussions, troubleshooting, and enhancing data accuracy of energy solutions by integrating MATLAB for solution development.

- Designed an automated energy monitoring prototype, significantly boosting data accuracy.
- Collaborated with peers to devise renewable energy solutions, presenting insights to faculty, stimulating cross-departmental interest.
- Ran extensive testing scenarios to validate systems across various conditions, ensuring performance reliability.
- Implemented advanced data analysis techniques using Excel, which streamlined project tracking procedures.
- Established requirements by engaging local businesses, resulting in project specifications aligned with industry standards.

#### Research Assistant

University Research Lab 📅 August 2024 - December 2024 📍 Tuscaloosa, AL

Focused on innovative carbon capture technologies as part of a structured research team. Contributed through thorough data handling and analysis using modern tools for improved reporting.

- Assisted in designing experimental setups for cutting-edge carbon capture research projects.
- Utilized Python scripts for efficient data transformation, augmenting reporting capabilities.
- Prepared detailed presentations of complex data for ease of understanding during departmental meetings.

### STRENGTHS

- ✓ **Organizational Skills**  
Juggled multiple tasks simultaneously during capstone projects, consistently meeting deadlines with elegant coordination.
- 💡 **Problem-Solving Ability**  
Navigated engineering challenges through creative solutioning, leading to more effective outcomes reflecting team needs.
- 🔗 **Technical Proficiency**  
Effective use of programming languages like Python and MATLAB showcases technical growth aiding engineering applications.
- 👥 **Collaboration**  
Engaged team members during project discussions, increasing collective input strength, adding perspectives from all participants.
- 💬 **Communication Skills**  
Shared complex data findings compellingly during research presentations, bolstering clarity among varied audience backgrounds.

### SKILLS

Mechanical Engineering

Energy Systems Automation

Python MATLAB Data Analysis

Project Management

System Design Problem Solving

Team Collaboration

Presentation Skills

Technical Writing

Workflow Optimization

Carbon Capture Technologies

User-Centered Design

Experimental Setups

## LANGUAGES

English Native

Spanish Intermediate

## MY CAREER



● Capstone Project Developer at University Project (1.6 Years)

● Research Assistant at University Research Lab (4 Months)

- Actively participated in weekly progress meetings, contributing solutions to engineering challenges encountered.
- Improved laboratory efficiency through implementation of systematic equipment tracking methods.

### Team Member

Hackathon Project 📅 March 2024 📍 Tuscaloosa, AL

Engagement involved collaborative mobile application development aimed at tracking energy consumption effectively. Gained spotlight for innovation and functionality enhancements through user feedback.

- Built parts of a mobile app for energy monitoring, demonstrating inventive use of programming to solve real-world problems.
- Automated specific calculations to track energy savings efficiently, advancing the app's utility.
- Fostered collaboration with peers to integrate user-centered design changes, enhancing overall experience.
- Presented the final product to judges, garnering recognition for outstanding concept execution.
- Demonstrated adaptability and initiative through real-time working code modifications based on director recommendations.

## LEADERSHIP & AWARDS

- Dean's List, University of Alabama (2024, 2025)
- Winner, University Hackathon (2024)

## CERTIFICATIONS

- Python for Everybody Specialization 📅 2026
- MATLAB Onramp 📅 2026

## PROFESSIONAL AFFILIATIONS

- Member, Engineering Student Association (2023 – Present)
- Volunteer, Local Community Clean-Up Initiative (2024)

## ADDITIONAL INFORMATION

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

## REFERENCES

AVAILABLE ON REQUEST