



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