JAYLEN CALLAHAN

ELECTRICAL ENGINEERING INTERN

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STRENGTHS

Analytical Thinking
Approached each task with critical thought, leading to robust evaluations that enhanced sensor design quality.

Team Collaboration
Regularly engaged with peers and mentors, fostering an environment of shared ideas that propelled projects forward.

Effective Communication
Presented findings clearly, ensuring all stakeholders were aligned while making reports accessible to varied audiences.

Problem Solving
Identified issues swiftly in circuit designs, prompting timely interventions that resulted in reliable prototypes.

Passion for Sustainability
Driven by a commitment to environmental technology, always looking for green innovation opportunities in engineering applications.

SKILLS

Embedded C | Circuit Design | PCB Layout | Data Analysis | Python | MATLAB | DMM | Oscilloscope | Technical Documentation

LANGUAGES

English — Native

Spanish — Intermediate

SUMMARY

Enthusiastic Electrical Engineering student keen on contributing to innovative environmental technology. Experience in digital and analog circuit design, PCB layout, and embedded systems development equips me for hands-on contributions. Collaboration with senior engineers refined my skills in solving complex problems through teamwork. Competency in embedded C programming allows me to develop functional firmware efficiently. A growing passion for environmental technology drives my analytical approach toward designing effective sensing solutions. Ready to enrich advanced soil moisture sensing projects and promote sustainability through engineering excellence.

EDUCATION

Bachelor's Degree in Electrical Engineering
Oregon State University GPA: 3.8 2026 Corvallis, OR
Coursework: *Circuit Design, Embedded Systems, Data Analysis, Environmental Technology*

TECHNICAL SKILLS

- **Programming Languages:** C, Python
- **Testing Tools:** DMM, Oscilloscope
- **Project Management Tools:** Trello, Asana
- **Software Frameworks:** Embedded C
- **Data Analysis Tools:** Python, MATLAB
- **Design Software:** Altium Designer, Eagle
- **Documentation Tools:** LaTeX, Microsoft Word
- **Circuit Design Components:** Transistors, Resistors, Capacitors
- **Simulation Tools:** MATLAB Simulink, LTSpice
- **Environmental Technology Principles:** Sensing Technologies, Renewable Energy

EXPERIENCE

Electrical Engineering Co-op
University Project December 2025 - March 2026 Remote

Collaborated with faculty on the design of advanced soil moisture sensors while focusing on both analog and digital aspects of circuit development. This role involved hands-on work in both emulating real-world scenarios and refining circuit designs to ensure high reliability standards across components treated in laboratory conditions.

- Worked closely with a team to design advanced soil moisture sensors, integrating inputs from each phase for a cohesive end product.
- Created schematic captures and aided in PCB layout, aligning closely with design for manufacturability principles.
- Developed and debugged embedded C firmware tailored specifically for sensor operations, enhancing data acquisition timelines.
- Conducted multidimensional laboratory testing to evaluate sensor accuracy, iteratively refining setups based on empirical observations.
- Utilized DMMs and oscilloscopes for troubleshooting, resolving design discrepancies and validating solutions effectively.
- Analyzed sensor datasets with Python, compiling insightful data summaries for impactful project representation and understanding.

Electrical Engineering Intern

MY CAREER

- Electrical Engineering Co-op at University Project (3 Months)
- Electrical Engineering Intern at Student Lab (5 Months)

Student Lab June 2025 - November 2025 Salem, OR

Gained substantial practical experience by participating in a solar power project, which enriched knowledge of electronic subsystems while facilitating collaboration within diverse teams.

- Engaged actively in crafting electronic subsystems targeted towards encouraging energy efficiency, fundamentally spinning off learning experiences during trial phases.
- Hands-on lab engagement maximized exposure to cutting-edge testing methodologies alongside rigorous standard equipment integration.
- Participated dynamically in assessing the functionality and design efficiencies during weekly meetings recognized as a collaborative platform for improving project outcomes.
- Contributed significantly to assembling technical documentation, bolstering team communication, accessibility, and comprehension of design intent.
- Worked alongside MATLAB for comprehensive data analysis, further sharpening visualization techniques for presentation clarity.
- Developed an energy monitoring device prototype, showcased at various university events, demonstrating applied innovations resonating with sustainable principles.

LEADERSHIP & AWARDS

- Dean's List, Oregon State University (2025)
- First Place, University Hackathon (2025)

CERTIFICATIONS

- Certified in Python Programming 2026
- Fundamentals of Embedded Systems Design 2026

PROFESSIONAL AFFILIATIONS

- Member, Engineering Student Association
- Volunteer, Local Environmental Clean-Up Initiatives

ADDITIONAL INFORMATION

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

REFERENCES

AVAILABLE ON REQUEST