



## ESP32 Project Intern

**Organization:** ASU SolarSPELL Initiative (Solar Powered Educational Learning Library)

**Location:** Tempe Campus

**Type:** Unpaid or for credit | ~10 hours/week

**Eligibility:** Open to all students and universities; international students welcome. (Counts as on-campus experience for ASU students—**no OPT/CPT required.**)

**Application Deadline:** November 19, 2025

*Applications will be reviewed weekly on a rolling basis until the positions are filled.*

**Start Date:** January 12th, 2026

### About the Internship

The SolarSPELL Initiative at Arizona State University is seeking an intern(s) with a passion for hands-on technology and open-source innovation to help develop and assemble integrated IoT systems using the ESP32 microcontroller. These systems will support SolarSPELL's efforts in remote, offline environments and include two projects:

- A soil sensing device
- Green House environment control system

Ideal candidates will have experience or strong interest in microcontrollers, circuit assembly, ability to solder, and programming with Arduino and/or MicroPython. This internship offers the opportunity to gain practical skills in prototyping and sensor integration, while creating step-by-step documentation to support DIY replication and open hardware development.

Your work will directly contribute to SolarSPELL's mission of providing low-cost, sustainable, and educational technologies in communities with limited or no internet access.

### About SolarSPELL

SolarSPELL (Solar Powered Educational Learning Library) is a global educational initiative based at ASU. We create offline, solar-powered digital libraries designed for areas with little to no access to electricity or internet. Our libraries provide a WiFi hotspot that enables free

access to curated educational resources via any smartphone, tablet, or laptop.

- Learn more: <http://solarspell.org>

### **Responsibilities:**

- Assemble and integrate low-cost sensors with ESP32 boards (e.g., temperature, humidity, soil moisture, PIR, camera modules)
- Program devices using Arduino or MicroPython
- Document assembly and prototyping processes in a clear, step-by-step format
- Utilize open-source software for coding - AI assist is a plus
- Data collection
- Remote monitoring
- Low-power operation
- Circuit Soldering

### **Ideal Candidate**

- Basic experience with microcontrollers (preferably ESP32)
- Familiarity with circuit assembly
- Proficiency in Arduino and/or MicroPython programming
- Interest in hands-on prototyping and open hardware solutions
- Solder skills
- Globally minded and eager to support communities around the world

### **How to Apply**

- Submit your application here: <http://bit.ly/SPELL-SP26>
- Upload a **resume and cover letter in PDF format** using the naming convention:  
[LastName\_FirstName\_DesiredPosition]

For questions, contact SolarSPELL's Student Engagement Coordinator, Cassie Barrett, at [cbarre38@asu.edu](mailto:cbarre38@asu.edu)