

Agricultural Sensor Development Intern – Fall 2025 / Spring 2026

Overview

Contribute to development and validation of terrestrial sensor systems for resource utilization demonstrations. Work closely with sensor and software teams to refine prototypes.

Key Responsibilities

- Prototype agricultural sensor modules: design PCBs for environmental sensing (soil moisture, temperature, spectral reflectance).
- Write firmware for microcontrollers (Arduino, STM32) to log and transmit environmental data; integrate with cloud platforms.
- Conduct greenhouse or lab tests: evaluate sensor accuracy and repeatability using regolith simulants or soil analogs.
- Develop data-analysis scripts (Python) to visualize trends, generate calibration curves, and produce performance summaries.
- Participate in iterative hardware-in-the-loop tests: collaborate on field tests, collect real-time telemetry, and suggest design improvements.

Required Qualifications

- Enrolled in Electrical Engineering, Agricultural Engineering, Mechatronics, or similar.
- Hands-on experience with sensor interfacing and embedded programming (C/C++ or Python).
- Familiarity with data-logging hardware and basic electronics prototyping (breadboarding, PCB design).
- Strong analytical skills; able to communicate test results clearly.

Preferred Qualifications

- Knowledge of precision agriculture metrics and remote-sensing fundamentals.
- Experience with IoT data platforms (AWS IoT Core, Azure IoT) or edge computing frameworks.

Duration & Compensation

- Full time (35-40hr/week) from August 25 to December 15, 2025 (Fall) or January 15 to May 1, 2026 (Spring).
- Potential continuation into Summer 2026.