Project Title

SMART IRRIGATION SYSTEM

Problem Statement

Farmers in many regions struggle with inefficient irrigation practices that rely on guesswork rather than actual soil and weather conditions. Fields are often overwatered or underwatered, wasting scarce water, raising energy costs, and stressing crops. Lack of timely information about soil moisture and environmental conditions prevents precise decisions, leading to uneven growth and lower yields. Climate variability and irregular rainfall make scheduling even harder, especially for smallholders with limited tools, reducing income, resilience, and long term farm sustainability. worldwide ahead

Project Team



TEAM 2 - ACADEMIC AVENGERS

Team Members

Noshitha K M
Divyashree R
Sanjana AR
Subramani M D
Hemanth V R

SDG 2 Zero Hunger

SDG Goals

SDG 6: Clean Water and Sanitation

Solution

Smart irrigation system built around an Arduino controller and reliable field sensors offers farmers an easy way to automate watering decisions. Soil moisture probes, temperature and humidity sensors, and simple rainfall gauges collect real time data from the field. The controller processes these readings using clear thresholds set by the farmer and turns pumps or valves on only when crops truly need water. This prevents over irrigation, reduces runoff, and saves energy. The system can run on solar power and work offline, making it suitable for rural areas. With basic training, farmers can install, calibrate, and maintain it at low cost. Over seasons it improves water productivity, supports healthier root growth, and increases yields. Data logs help farmers learn patterns, plan schedules, and share insights with neighbors.

