TOP STUDENT PROJECTS

Best innovations from UBDTCE, Davangere

PROJECT TITLE

SMART CROP CARE ROBOT



Team 10

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PROBLEM STATEMENT

Farmers face difficulties in identifying plant diseases at an early stage. Manual monitoring of large farms is time-consuming and may lead to incorrect diagnoses. Excessive use of pesticides increases costs and harms the environment. There is a need for an automated system that can detect plant diseases accurately and spray pesticides only where required.

SOLUTION

We developed an AI-powered smart agricultural robot using ESP32, Husky Lens AI Camera, a water pump, a relay module, and a motor driver. The robot moves through the field, captures images of plants, identifies diseased plants using AI image recognition, and automatically sprays pesticides on affected plants. This reduces manual effort, saves pesticides, improves crop health, and increases agricultural productivity. The system enables early detection of plant diseases, helping prevent the spread of infections across the field. It ensures targeted pesticide application, reducing chemical wastage and environmental impact.





SCAN ME

Technology stacks:

- ESP32
- Arduino IDE
- Husky Lens AI Camera
- Embedded C
- Artificial Intelligence (AI)
- Robotics
- Sensors & Automation