

Project Title: Optimal Crop Watering System for Precision Agriculture with emphasis to Weather Conditions.

Batch No: 11

Abstract:

Optimal Crop Watering System presents a novel solution for optimizing water usage in agriculture through the development of an automatic on/off water pumping system using Internet of Things (IoT). The system leverages machine learning (ML) algorithm to intelligently control irrigation based on real-time soil moisture and weather conditions. The primary objective is to enhance water efficiency and crop yield by ensuring precise irrigation tailored to the specific needs of various crops.

The system integrates with sensors to continuously monitor soil moisture levels and weather parameters, such as temperature and humidity. A robust ML algorithm processes this data in real-time and adapts to the unique characteristics of different crops, optimizing watering schedules and durations. All collected data is securely transmitted to a cloud server using Application Programming Interfaces (APIs).

This innovative proposal system aims to contribute to sustainable agriculture practices by reducing water wastage, minimizing manual intervention, and increasing overall crop productivity by offering a scalable and adaptable approach to modern agricultural challenges.

Mentor: Mr. M M Siva Krishna M.Tech, (Ph.D.)

Team Members:

K. Suchita (20P31A0526)

K. Hari Rama Reddy (20P31A0525)

S. Aparna (21P35A0504)

K.Veerendranadh Reddy (20P31A0532)

Mentor Signature: