

- **Most of the farmers use large portions of farming land and it becomes very difficult to reach and track each corner of large lands.**
- **Sometime there is a possibility of uneven water sprinkles. This result in the bad quality crops which further leads to financial losses.**
- **In this scenario the Smart Irrigation System using Latest IoT technology is helpful and leads to ease of farming.**

PROBLEM STATEMENT

To design and develop automatic irrigation system that switches a motor pump ON/OFF by sensing moisture content of the soil through application of Internet of Things (IOT).



How does Smart
Irrigation System using
IOT works?



The Smart Irrigation System

has wide scope to automate the complete irrigation system.

Here we are
building a IoT
based
Irrigation
System using



**ESP8266
NodeMCU
Module and
DHT11 Sensor**

It will not only automatically irrigate the water based on the moisture level in the soil but also send the Data to ThingSpeak Server to keep track of the land condition.

The System will consist a water pump which will be used to sprinkle water on the land depending upon the land environmental condition such as Moisture, Temperature and Humidity.





It is important to note that the different crops require different Soil Moisture, Temperature and Humidity Condition.





**We are using such a crop
which will require a soil
moisture of about 50-55%.**

Motor pump will turn on automatically to sprinkle the water and it will continue to sprinkle the water until the moisture goes upto 55% and after that the pump will be turned off.



The sensor data will be sent to ThingSpeak Server



ThingSpeak

in defined interval of time so that it can be monitored from anywhere in the world



CREATED USING
POWTOON



THE NEED OF AN AUTOMATIC IRRIGATION:

- 1. Easy and simple to install.**
- 2. Resources and Energy can be saved, so that can be utilized in proper way and amount.**





Why build a Smart Irrigation System project?

IOT is changing the way we live. IOT is also changing the way trees and plants live! This project helps you understand how to implement IOT in very important areas like agriculture and irrigation.

