PROJECT OBJECTIVES

Date	7 - Nov – 2022
Team ID	PNT2022TMID41391
Project Name	Project – Smart Farmer-IoT Enabled smart Farming Application
Team Members	R.Nandhini, J.Jayamalini, S.Sneka , V.K.Oviya

Smart Farmer-IoT Enabled smart Farming Application

ABSTRACT:

The paper entitled “Implementation of smart farming using IoT” will be used by farmers for monitoring water supply to the fields and also providing protection for the fields from animals. It uses Thing speak platform to find the soil moisture, find the entry of animals into the fields. The need for this projects to reduce the work of farmers and increase the crop production. In the proposed system the greenhouse parameters like water level and humidity are monitored continuously and data is uploaded continuously to server system using IOT gateways technology. The purpose of Arduino Uno is that it connects all components associated with the development kit. Each I/O pin is associated with a particular component of the kit for performing particular function. The output of the sensors is monitored continuously so that the motor can be switched On/Off. The values of the sensors are continuously uploaded in the server system. As per the system working is concerned the farmer can switch ON the motor by sending a message through his mobile to the arduino by using GSM module. Similarly when animals try to enter the field a warning message is sent to the farmers mobile.

Internet of Things (IoT) is present and future of every field impacting everyone’s life by making everything intelligent. It is a network of different devices which make a self-configuring network. The new developments of Smart Farming with use of IoT, by day turning the face of conventional

agriculture methods by not only making it optimal but also making it cost efficient for farmers and reducing crop wastage. The aim is to propose a technology which can generate messages on different platforms to notify farmers. The product will assist farmers by getting live data (Temperature, humidity, soil moisture, UV index, IR) from the farmland to take necessary steps to enable them to do smart farming by also increasing their crop yields and saving resources (water, fertilizers). The product proposed in this paper uses ESP32s Node MCU, breadboard, DHT11 Temperature and Humidity Sensor, Soil Moisture Sensor, SI1145 Digital UV Index / IR / Visible Light Sensor, Jumper wires, LEDs and live data feed can be monitored on serial monitor and Blynk mobile. This will allow farmer to manage their crop with new age in farming.

Internet of Things (IoT) play crucial role in smart agriculture. Smart farming is an emerging concept, because IoT sensors capable of providing information about their agriculture fields. The paper aims making use of evolving technology i. e. IoT and smart agriculture using automation. Monitoring environmental factors is the major factor to improve the yield of the efficient crops. The feature of this paper includes monitoring temperature and humidity in agricultural field through sensors using CC3200 single chip. Camera is interfaced with CC3200 to capture images and send that pictures through MMS to farmers mobile using Wi-Fi. Agriculture is the primary occupation in our country for ages. But now due to migration of people from rural to urban there is hindrance in agriculture. So to overcome this problem we go for smart agriculture techniques using IoT. This project includes various features like GPS based remote controlled monitoring, moisture & temperature sensing, intruders scaring, security, leaf wetness and proper irrigation facilities. It makes use of wireless sensor networks for nothing the soil properties, and environmental factors continuously.