

# PROJECT SCOPE DOCUMENT

## SMART AGRICULTURE SYSTEM BASED ON IOT

### PROJECT SUMMARY:

Despite the perception people may have regarding the agricultural process, the reality is that today's agriculture industry is data-centered, precise, and smarter than ever. The rapid emergence of the Internet-of-Things (IoT) based technologies redesigned almost every industry including "smart agriculture" which moved the industry from statistical to quantitative approaches. Such revolutionary changes are shaking the existing agriculture methods and creating new opportunities along a range of challenges. This article highlights the potential of wireless sensors and IoT in agriculture, as well as the challenges expected to be faced when integrating this technology with the traditional farming practices. IoT devices and communication techniques associated with wireless sensors encountered in agriculture applications are analyzed in detail. What sensors are available for specific agriculture application, like soil preparation, crop status, irrigation, insect and pest detection are listed. How this technology helping the growers throughout the crop stages, from sowing until harvesting, packing and transportation is explained. Furthermore, the use of unmanned aerial vehicles for crop surveillance and other favorable applications such as optimizing crop yield is considered in this article. State-of-the-art IoT-based architectures and platforms used in agriculture are also highlighted wherever suitable. Finally, based on this thorough review, we identify current and future trends of IoT in agriculture and highlight potential research challenges.

### PROJECT REQUIREMENTS:

This smart agriculture using IOT system is powered by Arduino, it consists of Temperature sensor, Moisture sensor, water level sensor, DC motor and GPRS module. ... This all is also seen in IOT where it shows information of Humidity, Moisture and water level with date and time, based on per minute.

### TECHNICAL REQUIREMENTS:

In IoT-based smart farming, a system is built for monitoring the crop field with the help of sensors (light, humidity, temperature, soil moisture, etc.) and automating the irrigation system. The farmers can monitor the field conditions from anywhere.

### FUNCTIONAL REQUIREMENTS:

To build an IoT solution for agriculture, you need to choose the sensors for your device (or create a custom one). Your choice will depend on the types of information you want to collect and the purpose of your solution. In any case, the quality of your sensors is crucial to the success of your product— it will depend on the accuracy of the collected data and its reliability.

#### SOFTWARE REQUIREMENTS:

This smart agriculture using IOT system is powered by Arduino, it consists of Temperature sensor, Moisture sensor, water level sensor, DC motor and GPRS module. When the IOT based agriculture monitoring system starts it checks the water level, humidity and moisture level.

#### PROJECT DELIVERABLES:

IoT based SMART FARMING SYSTEM for Live Monitoring of Temperature and Soil Moisture has been proposed using Arduino and Cloud Computing . The System has high efficiency and accuracy in fetching the live data of temperature and soil moisture. The IoT based smart farming System being proposed via this report will assist farmers in increasing the agriculture yield and take efficient care of food production as the System will always provide helping hand to farmers for getting accurate live feed of environmental temperature and soil moisture with more than 99% accurate results.

#### PROJECT TEAM:

I had no team .

#### PROJECT SCHEDULE:-