Literature Survey

Smart Farmer - IOT Enabled Smart Farming Application

ABSTRACT:

India is agriculture sector, on either side, is losing ground every day, affecting the ecosystem\'s output capacity. In order to restore vitality and put agriculture back on a path of higher growth, there is a growing need to resolve the issue. A large-scale agricultural system necessitates a great deal of upkeep, knowledge, and oversight. The IOT is a network of interconnected devices that can transmit and receive data over the internet and carry out tasks without human involvement. Agriculture provides a wealth of data analysis parameters, resulting in increased crop yields. The use of IOT devices in smart farming aids in the modernization of information and communication. For better crop growth moisture, mineral, light and other factors can be assumed. This research looks into a few of these characteristics for data analysis with the goal of assisting users in making better agricultural decisions using IOT. The technique is intended to help farmers increase their agricultural output.

INTRODUCTION:

The India is an agricultural country. Nowadays, at regular intervals the lands are manually irrigated by the farmers. There is a chance that the water consumption will be higher or that the time it takes for the water to reach the destination will be longer, resulting in crop dryness. Real-time temperature and humidity monitoring is crucial in many agricultural disciplines. However, the old method of wired detection control is inflexible, resulting in several application limitations. This project achieves irrigation automation as a crucial answer to this problem. This is accomplished with the aid of a Raspberry Pi, which controls the moisture and temperature sensors based on the input provided. Moisture sensors are used in the construction of an automated plant watering system for this purpose. The main aim of our project is to reduce the complexity of supervision and to avoid the continuous monitoring. We can accomplish smart agriculture using our system. This system includes IOT-based

agricultural monitoring. The Internet of Things (IOT) is transforming the agriculture business and addressing the enormous difficulties and huge obstacles that farmers confront today in the field. The soil moisture sensor is put into the soil to determine whether the soil is wet or dry, and If the moisture level in the soil is low, the relay unit attached to the motor switch must be monitored on a regular basis. When the soil is dry, it will turn on the motor, and when the soil is moist, it will turn off the engine.

EXISTING SOLUTIONS:

1) TITLE OF THE PAPER : Internet of Things (IoT) for Smart precision Agriculture and Farming in Rural Area, IEEE

    AUTHOR : Nurzaman Ahmed, Debashis De , Senior Member, IEEE, and Md. Iftekhar Hussain, Member, IEEE,

    METHOD : the authors have described that with the use of fog computing and WIFI-based long distance network in IoT, itis possible to connect the agriculture and farming bases situated in rural areas efficiently.

2) TITLE OF THE PAPER : An Overview of Internet of Things (IoT) and Data Analytics in Agriculture.

    AUTHOR : Olakunle Elijah , Student Member, IEEE, Tharek Abdul Rahman, Member,IEEE,Igbafe Orikumhi, Member,IEEE, Chee Yen Leow , Member, IEEE, and MHD Nour Hindia, Member, IEEE,

    METHOD : the authors have described several benefits and challenges of IoT have been identifified. They also presented the IoT ecosystem and how the combination of IoT and DA can be enabled in smart agriculture.

3) TITLE OF THE PAPER : Internet of Things Monitoring System of modern Eco-agriculture Based on Cloud Computing,

    AUTHOR : Shubo Liu, Liqing Guo, Heather Web, Xiao Yao, Xiao Chang.

    METHOD : The authors have described an integrated framework system platform incorporating Internet of Things (IoT), cloud computing, data mining and other technologies and proposed a new model for its application in the field of modern agriculture.

4) TITLE OF THE PAPER : Smart Agriculture using IOT.

   AUTHOR : Sweksha Goyal, Unnathi Mudra, Prof Sahana Shetty.

   METHOD : The authors have aimed in making a technology which is completely automated. The paper takes care of all major factors of agriculture i.e. monitoring, irrigation and security. The methodology used in this system can monitor the humidity, moisture level and can even detect motions.

5)TITLE OF THE PAPER : IoT based Smart Agriculture, International Journal of Science, Engineering and Technology Research (IJSETR)

   AUTHOR : Sidhanth Kamath B, Kiran K Kharvi , Mr. Abhir Bhandary, Mr. Jason Elroy Martis,

   METHOD : The authors have suggested a low cost IoT enabled smart agricultural system which can evaluate the farmland and predict which type of crop is best for that land based on the data collected from local conditions of that land varying from humidity to soil moisture content.

6) TITLE OF THE PAPER : A Model for Smart Agriculture Using IOT, International Journal of Innovative Technology and Exploring Engineering (IJITEE).

   AUTHOR : A.Anusha, A.Guptha, G.Sivanageswar Rao, Ravi Kumar Tenali.

   METHOD : The authors have gathered continuous information of farming generation condition that gives simple access to horticultural offices, for example, alarms through Short Messaging Service (SMS) and advices on climate design and crops.

7) TITLE OF THE PAPER : IOT Based On Smart Agriculture.

   AUTHOR : Mr.N.Sivakumar, Mr.P.Thiyagarajan,Ms.R.Sandhiya,

   METHOD : The authors have proposed a sensor system which monitors and maintains the desired soil moisture content via automatic water supply.

CONCLUSION:

   So after knowing about some IoT applications in agriculture, we can say that it is definitely revolutionize the agriculture industry in a few years. IoT has been applied in several areas of agriculture. A lot of

research is underway to ensure more IoT devices are used to make the managing of farms easier and increase productivity. IoT is allowing farmers to easily obtain data that is useful in many ways such as decision making. With the increasing demand for food due to the rapid population increase, we expect more IoT applications in the next few years. The system uses information from soil moisture sensors to irrigate the soil to avoid the damage of crops due to over irrigation or under irrigation. The project provided us with an opportunity to study the existing systems, along with their features and drawbacks. Future work includes the usage of the application in the native languages. Also giving notifications in native audio format to assist the farmers.