Literature survey

TEAM ID:PNT2022TMID19466

TEAM MEMBERS
AHINO -722819106004
DHANAPAL – 722819106015
GOKUL- 722819106024
LINGESHWARAN- 722819106046

[1]J. Doshi, T. Patel, and S. kumar Bharti, "Smart Farming using IoT, a solution for optimally monitoring farming conditions," Procedia Computer Science, vol. 160, pp. 746–751, 2019, doi: 10.1016/j.procs.2019.11.016.

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.

[2]M. Jagatheesan and G. Janaki, "Weather Monitoring System using IoT for Smart Farming," ECS Transactions, vol. 107, no. 1, pp. 17439 –17445, Apr. 2022, doi: 10.1149/10701.17439ecst.

The proposed weather monitoring system is based on IoT technology designed using proteus simulation tool which collects necessary environmental data by using a Temperature sensor (LM35), Pressure sensor (BMP180), Soil moisture sensor, Rain sensor, and Raspberry Pi (RPI3) and the data are fed to ThingSpeak platform to predict the suitable condition for crop growth and better crop yield.

[3]S. Panigrahi, "SMART FARMING: IOT Based Smart Sensor Agriculture Stick For Live Temperature And Humidity Monitoring," SSR N Electronic Journal, 2020, doi: 10.2139/ssrn.3651933.

Internet of Things (IoT) technology has evolved in each and every field of common man's life by making everything smart and intelligent. IoT refers to a network of things which make a self-configuring network. The development of various different Intelligent Smart Farming IoT based devices is day by day changing the face of agriculture which helps in production of crops by not only upgrading it but also making it cost-effective and reducing wastage. These paper is to propose a Smart IoT based Agriculture Stick that will farmers in getting live Data of Temperature, Soil Moisture, etc and other factors for efficient environment monitoring which will help them to do smart farming and increase their overall yield and quality of products. The Agriculture stick being proposed through this paper is integrating with Arduino Technology, Breadboard and mixed with different various sensors and live data feed can be obtained online through

mobile phone. The product being proposed is tested on Live Agriculture Fields giving high accuracy in data feeds in different soil condition at different locations.

[4]J. Bauer and N. Aschenbruck, "Design and implementation of an a gricultural monitoring system for smart farming," 2018 IoT Vertical a nd Topical Summit on Agriculture - Tuscany (IOT Tuscany), May 20 18, doi: 10.1109/iot-tuscany.2018.8373022.

The integration of modern information technologies into industrial agriculture has already contributed to yield increases in the last decades. Nowadays, the emerging Internet of Things (IoT) along with Wireless Sensor Networks (WSNs) with their low-cost sensors and actors enable novel applications and new opportunities for a more precise, site-specific, and sustainable agriculture in the context of Smart Farming. In this paper, we present a holistic agricultural monitoring system, its design, and its architectural implementation. The system primarily focuses on in-situ assessment of the leaf area index (LAI), a very important crop parameter. Moreover, we introduce real-world challenges and experiences gained in various deployments. Finally, first results are exemplarily demonstrated in order to briefly address the potential of our system.

[5]"Smart Farming using IoT," Special Issue, vol. 8, no. 4S, pp. 45–5 1, Jul. 2020, doi: 10.35940/ijeat.d1015.0484s19.

Abstract: Rural and urban areas in India face a variety of comparable problems within the domain of agriculture, which calls for certainly comparative answers for being coordinated towards finding these issues. The purpose of this concept is to analyze the ability of IoT techniques in relation to impoverishment in these areas, besides the requirements known in these commodities and with stress on farming. This work analyzes samples of an internet of things to modify the

farming desires of the commodities for the region to maximize the yield production. In India, most of the peoples relay on agriculture and a big part of nation's income originate from the agriculture. Automation of agriculture method is one in all the crucial steps to our country, which needs to import immense quantity of crops from different nations to satisfy the need of peoples. The main challenge of the rural and urban agriculture area is that the correct observation of the land health, the environment, and arrange the spraying.