SMART AGRICULTURE USING IOT

I. LITERATURE SURVEY

Pratibha Gangurde, Manisha Bhende Proposed a Novel Approach for Precision Agriculture Using Wireless Sensor Network [1]

In this paper wireless sensors are used to monitor the crops found on the agriculture lands. Sensor networks are used to measure the water level, temperature, humidity, pesticides and so on [2] [3]. Wireless sensors are very cheap, small. Here few sensors are developed for monitoring the agriculture lands. Using these sensors the time and effort for growing the crops can be reduced and the productivity can be increased. WSN use different types of topologies like bus, star, grid and ring. In star topology all the nodes cannot communicate directly [4]. Compare to other topologies ring network is better because for every node only two neighbors are present for communication. The messages can be transmitted in both clockwise and also in anticlockwise direction.

Vaibhavraj S. Roham, Ganesh A. Pawar Proposed Smart Farm using Wireless Sensor Network [5] [6]

In this paper wireless sensor network is also called as Zigbee Network. In this sensors are called as nodes and those nodes are embedded with other sensors. It used to measure temperature and humidity. Nodes monitor the environment and forward the information to router. Router forward the data's to co-coordinator which is connected to internet [7]. Finally all the collected data's are stored in database for processing. Here computers and mobile application are used to monitor the greenhouse [8]. Smart phone android applications are designed and connected to internet. Application is connected to web server and can monitor the crops without the help of human.

J.Infantial Rubala, D. Anitha Proposed Agriculture Field Monitoring using Wireless Sensor Networks to Improving Crop Production [9]

In this paper WSN are used in all kinds of crops for monitoring as well as for delivering the water, fertilizer and also for other uses. Data are not collected frequently from the crops because frequent collection does not provide any useful information and it provide heavy burden to sensors [10] [11]. Hour based data collection can be done. This helps the farmer to grow the crop and earn high yield with low cost.

K. Lakshmisudha, Swathi Hegde, Neha Kale, Shruti Iyer Proposed Smart Precision based Agriculture using Sensors [12] [13]

In this paper sensors are used for monitoring the soil moisture, humidity level and send the data through network. It reduces the human effort and the crop can be yield with low cost. In the implementation raspberry pi is used and it is connected to 5V power supply. The soil moisture sensor and humidity sensor are used for measuring soil and humidity. Using serial communication data are transmitted in the form of 0's and 1's [14] [15]. Where 0 indicate the motor is turned on. Permissible level get reach the notification is send to user mobile. Motor can be turned using smart phones. Each and every 1minute moisture values are monitored using moisture sensor. Required level is reached motor gets off automatically.

Nikesh Gondchawar, Prof. Dr. R. S. Kawitkar proposed the IoT based Smart Agriculture [16]

In this paper the mobile robot sensor is used as node 1. It is used to control the water pumps automatically. The level of water content is low the pump gets ON automatically or the level of water content in a land is high the pump gets OFF automatically. In node 2 some sensors like light sensor, motion detector, humidity sensor, room heater, temperature sensor are used in raspberry pi. The temperature sensor used to measure the level of temperature in farm land. In node 3 the moisture sensor is used to measure the soil content in farm land. The transmitted data is sent to node 2 and it is sent to microcontroller. The data is used to control the water pumps. Raspberry pi is a small size computer used for computing and network. All the data is sent to farmer mobile phone. The data is sent to base station through GPS (Global Positioning System). The microcontroller is used to transmit the data to raspberry pi.

Gokul L. Patil.et.al proposed the Smart Agriculture System based on IoT and its Social Impact [17]

In this paper to produce the crop with high yield and to reduce the human effort. In this paper some sensors are used to measure the crop land. Sensors like Temperature Sensor, Moisture Sensor, Pressure Sensor and Humidity Sensor are used in farm land. The change in Temperature in the form land used to reduce the nutrient content in form land. Moisture Sensor works on the principle of electrical conductivity. The Moisture content is one of the important factor of crop growth. The Pressure Sensor connected to microcontroller to regulate the water flow. The Humidity Sensor used to measure Humidity level in air.

II. REFERENCE

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