IBM

LITERATURE SURVEY

SMART FARMER – IOT ENABLED SMART FARMING APPLICATION

Team Details

Team Id :- PNT2022TMID28579

1. R .PRAVEEN KUMAR
2. N.SANJAY
3. E.PARASURAMAN
4. N.VIGNESH

Literature Survey on “Smart Farmer – IOT Enabled Smart Farming Application”

Reference	Technologies used	Advantages	Disadvantages
[1]	Microcontroller: CC3200 Chip, MCU Communication Technologies: MMS, Wi-Fi Module Sensors: Camera, Temperature Sensor, Humidity Sensor	• Sends the information about humidity and temperature in air of field to farmer. • Uses MMS technology to send captured images.	• MMS adds extra cost • No automatic support system
[2]	Microcontroller: ATMEGA328P Cloud server: Adafruit Server Communication Technologies: Wi-Fi Sensors: Soil Moisture Sensor	• Controlling the actions of motor pump (ON/OFF) based on the threshold value.	• No sprinkles • No smart drains • No automatic support system
[3]	Microcontroller: Arduino Cloud server: ThingSpeak Sensors: Light Intensity, pH, Electrical Conductivity, Water Temperature, Relative Humidity	• Hydroponic System • Bayesian Network Model • System has manual and automatic mode	• Extremely computationally expensive model
[4]	Microcontroller: Arduino UNO Cloud server: ThingSpeak Communication Technologies: Wi-Fi Sensors: Water Level Sensor, Moisture Sensor	• Farmers can monitor their fields remotely • Irrigation control system	• Lack of automated decision support system
[5]	Microcontroller: Arduino Sensors: Temperature Sensor, Humidity Sensor, Soil Moisture Sensor	• Data regarding sensors stored on server and user can view via GUI application.	• Decision making is rely on user or farmer • No automatic support system

REFERENCES :

[1] Prathibha S., Hongal A., and Jyothi M. (2017). IOT Based Monitoring System in Smart Agriculture. 2017 International Conference on Recent Advances in Electronics And Communication Technology (ICRAECT). doi: 10.1109/icraect.2017.52.

[2] Lahande P., and Mathpathi D. (2018). IOT Based Smart Irrigation System. International Journal of Trend in Scientific Research and Development Volume-2(Issue-5), pp. 359-362. doi: 10.31142/ijtsrd15827.

[3] Alipio M., Dela Cruz A., Doria J., and Fruto R. (2019). On the design of Nutrient Film Technique hydroponics farm for smart agriculture. Engineering in Agriculture, Environment and Food, 12(3), pp.315- 324. doi: 10.1016/j.eaef.2019.02.008.

[4] Benyezza H., Bouhedda M., Djellout K., and Saidi A. (2018). Smart Irrigation System Based Thingspeak and Arduino. International Conference on Applied Smart Systems (ICASS). doi: 10.1109/icass.2018.8651993.

[5] Kiani F., and Seyyedabbasi A. (2018). Wireless Sensor Network and Internet of Things in Precision Agriculture. International Journal of Advanced Computer Science and Applications, 9(6). doi: 10.14569/ijacsa.2018.090614.