

Literature Survey

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| S.No | TITLE | PROPOSED WORK | TOOLS USED/ ALGORITHM | TECHNOLOGY | ADVANTAGES/ DISADVANTAGES |
|------|---|--|--|--------------------|--|
| 1 | IOT Based Smart Farming using Cloud Computing | The implemented framework comprises of different sensors and devices and they are interconnected by means of remote correspondence modules. The sensor data is been sent and received from client end utilizing Internet connectivity which was enabled in the ARDUINO module-an open source IOT platform. This system is used to maintain the optimal conditions of the irrigation system effectively. The farmer can go through each and every information regarding the levels, at what time it's been functioning. | <ul style="list-style-type: none"> • Arduino UNO • Soil moisture sensor • Temperature and humidity sensor • Electrical conductivity sensor • pH sensor • Relay | Internet of Things | The agriculture stick being proposed via this paper will assist farmers in increasing the agriculture yield and take efficient care of food production as the stick will always provide helping hand to farmers for getting accurate live feed of environmental results. |

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| 2 | IOT based Smart Agriculture Monitoring and Irrigation System | In order to increase the quality of our crop, we must use technologies that analyze the essence of the harvest and offer advice to benefit both farmers and government. The Internet of things (IOT) is revamping the agribusiness engaging the farmers by the broad assortment of techniques, for instance, accuracy and conservative cultivation to go up against challenges in the field. | <ul style="list-style-type: none"> • Arduino board • Soil moisture sensor • IR sensor • Humidity sensor • Temperature sensor • WIFI module • Relay switch | Internet of Things | <ul style="list-style-type: none"> • The system helps in reducing the global warming to a great extent. • The plants can also be protected from fire by using this system. • It helps in reducing crop destruction. Thereby, the ecological balance is maintained. |

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|------|---|---|---|--------------------|--|
| 3 | A Smart Farming and “Crop Monitoring Technology” in Agriculture Using IOT | Our proposed program focuses on monitoring sensory farming conditions such as Humidity, Temperature, and soil moisture; LDR is used for hearing light power on the farm, and IR sensor used to identify insects, birds, and humans through their bodies temperature and notify the user with a message format on their mobile phones These sensors are an interface to process the Arduino-UNO module. LCD is used to make show different sensory conditions. | <ul style="list-style-type: none"> • Soil Moisture Sensor • Temperature Sensor • Humidity Sensor • Rain Detection Sensor • Light sensor • IR sensor • Arduino-UNO Microcontroller Board • WI-FI Modules | Internet of Things | It leads to higher, longer crop yields production time, better quality and less use of protective chemicals. By using IoT, we can increase crop yields agricultural farms. With this IoT platform, we can beware of weather conditions such as humidity and Temperature. |

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| 4 | IoT Based Smart Agriculture Monitoring System | An IOT Based Crop-field monitoring an irrigation automation system describes how to monitor a crop field. A system is developed by using sensors and according to the decision from a server based on sensed data, the irrigation. system is automated. Through wireless transmission the sensed data is forwarded to web server database. If the irrigation is automated then the moisture and temperature fields are decreased below the potential range. | <ul style="list-style-type: none"> • Soil moisture sensor • Temperature sensor (DHT-11) • Relay • Pump • IoT (WI-FI module ESP8266) • Power supply: 5V, 700mA Regulated power supply | Internet of Things | <ul style="list-style-type: none"> • It is easy to maintain and cost is reasonable to purchase. The components which are used are easily available. • It has advantage to observe the status on smartphone or laptop using internet. The information is up to date even in absence of farmer. • The collected data is updated and the farmer is conscious about the status of the crop. |

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| 5 | IOT based smart farming system | IoT plays an important role in smart agriculture. . Basically in agricultural information trans-mission, precise irrigation, intelligent cultivation control, agricultural product safety, and many more.Internet of Things inagriculture for sustainable rural development has been identified. | <ul style="list-style-type: none"> • laser scanner • RFID • photoacoustic electromagnetic sensors | Internet of Things | <ul style="list-style-type: none"> • Efficiency of input: It will improve the efficiency of inputs of agriculture like Soil, Water, Fertilizers, Pesticides, etc. • Cost reduction: It will reduce the cost of production. • Profitability: It will increase the profitability of farmers. • Sustainability: Improves sustainability. • Food safety: It will help to accomplish the Food Safety Mission. |

THANK YOU