

IBM

LITERATURE SURVEY

SMART FARMER – IOT ENABLED SMART FARMING APPLICATION

**Team Id :- PNT2022TMID22829**

Literature Survey on “Smart Farmer – IOT

Enabled Smart Farming Application”

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| **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 |

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