# Smart Farmer - IoT Enabled Smart Farming Application

## LITERATURE SURVEY

| S.NO. | PAPER TITLE | AUTHOR NAME | PUBLICATION YEAR | RESULTS |
|---|---|---|---|---|
| 1. | Machine learning applications in IoT based agriculture and smart farming | MWP Maduranga, Ruvan Abeysekera | 2020 | To improve productivity of agriculture through intelligent farm management, the data analyzing must be well analyzed and processed. High-performance computing capability in ML opens up new opportunities for data-intensive science as the amount of data collected increases; In this article we review existing approaches have been made to the smart agriculture and farming based on IoT and ML separately. Also, we propose novel concepts that how can ML-IoT can be blended in such applications. |
| 2. | A Survey on the Role of IoT in Agriculture for the Implementation of Smart Farming | Muhammad Shoaib Farooq, Shamyla Riaz, Adnan Abid, Kamran Abid, Muhammad Azhar Naeem | 2019 | A sensor performs multiple tasks like soil sensing, temperature sensing, weather sensing, light sensing, and moisture sensing. Similarly, devices perform many control functions like, node discovery, device identification and naming services etc. All these functions are performed by any device or sensor which |

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| | | | | is controlled through a microcontroller. |
| 3. | Smart farming: IoT based smart sensors agriculture stick for live temperature and moisture monitoring using Arduino, cloud computing & solar technology | Anand Nayyar, Vikram Puri | 2016 | The aim/objective of this paper is to propose a Novel Smart IoT based Agriculture Stick assisting farmers in getting Live Data (Temperature, Soil Moisture) for efficient environment monitoring which will enable them to do smart farming and increase their overall yield and quality of products. The product being proposed is tested on Live Agriculture Fields giving high accuracy over 98% in data feeds. |
| 4. | IoT based intelligent irrigation support system for smart farming applications | Neha Kailash Nawandar, Vishal Satpute | 2019 | A crop irrigation management system with sensor data fetch, transfer and operate functionalities is proposed to meet the expectations. The system comprises of sensing, data processing and actuator sections, with a network of ambient temperature and humidity at a height and soil moisture sensor placed at the root zone of the subject. Results show that there is tolerable error in the reconstructed data and 62.5% and 67.5% compression is achieved for ambient temperature, humidity and soil moisture respectively. |
| 5. | IOT based smart farming | C Mageshkumar, KR Sugunamuki | 2020 | This project includes the various features like soil moisture sensor, temperature sensor, |

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| | | | | humidity sensor for facilitate the irrigation in proper way. Various sensor nodes are deployed at different locations in the farm to automate the irrigation anytime anywhere. This project will be more helpful for the farmer's welfare. |
| 6. | Survey, comparison and research challenges of IoT application protocols for smart farming | Dimitrios Glaroudis, Athanasios Iossifides, Periklis Chatzimisios | 2020 | The unprecedented capability of data collection and management offered by IoT is based on several factors of the underlying communication network architecture and technology, one of the most important being the application-level protocol that is used among IoT nodes, gateways, and application servers. Furthermore, it provides a comparison among them, in terms of well-accepted key performance indicators and comments on their suitability in the framework of smart farming as well as the corresponding challenges that have to be faced towards their efficient implementation. |