# LITERATURE SURVEY

## TEAM ID:PNT2022TMID50102

## SMART FARMER-IoT ENABLED SMART FARMING APPLICATION.

| SNO | PAPER | AUTHOR | YEAR | METHOD AND ALGORITHM | ACCURACY/ PRECISION |
|---|---|---|---|---|---|
| 1 | Internet-of-Things (IoT)-Based Smart Agriculture: Toward Making the Fields Talk | Muhammad Ayaz | 2019 | This article highlights the potential of wireless sensors and IoT in agriculture, as well as the challenges expected to be faced when integrating this technology with traditional farming practices. IoT devices and communication techniques associated with wireless sensors encountered in agriculture applications are analysed in detail. Sensors are available for specific agriculture applications, like soil preparation, crop status, irrigation, and insect and pest detection are listed. This technology helps the growers throughout the crop stages, from sowing to harvesting, packing and transportation. | 87% |

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| **2** | IoT-Equipped and AI-Enabled Next Generation Smart Agriculture: A Critical Review, Current Challenges, and Future Trends | Sameer Qazi and Bilal A. Khawaja | 2022 | Smart agriculture techniques have recently seen widespread interest from farmers. This is driven by several factors, which include the widespread availability of economically-priced, low-powered Internet of Things (IoT) based wireless sensors to remotely monitor and report conditions of the field, climate, and crops. This enables efficient management of resources like minimizing water requirements for irrigation and minimizing the use of toxic pesticides. Furthermore, the recent boom in Artificial Intelligence can enable farmers to deploy autonomous farming machinery and make better predictions of the future based on present and past conditions to minimize crop diseases and pest infestation | 90% |
| **3** | Internet of Things for the Future of Smart Agriculture: A Comprehensive Survey of Emerging Technologies | Othmane Friha; Mohamed Amine Ferrag; Lei Shu; Leandros Maglaras; Xiaochan Wang | 2021 | This paper presents a comprehensive review of emerging technologies for the internet of things (IoT)-based smart agriculture. We begin by summarizing the existing surveys and describing emergent technologies for the agricultural IoT, such as unmanned aerial vehicles, wireless technologies, open-source IoT platforms, software defined networking (SDN), network function virtualization (NFV) technologies, cloud/fog computing, and middleware platforms. We also provide a classification of IoT | 93% |

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| | | | | applications for smart agriculture into seven categories: including smart monitoring, smart water management, agrochemicals applications, disease management, smart harvesting, supply chain management, and smart agricultural practices. Moreover, we provide taxonomy and a side-by-side comparison of the state-of-the-art methods toward supply chain management based on the blockchain technology for agricultural IoT. | |
| **4** | Recent Developments of the Internet of Things in Agriculture | Vippon Preet Kour, Sakshi Arora | 2020 | this paper contributes towards the recent IoT technologies in the agriculture sector, along with the development of hardware and software systems. The public and private sector projects and startup's started all over the globe to provide smart and sustainable solutions in precision agriculture are also discussed. | 80% |