LITERATURE SURVEY

[1] Almalki, F.A., Soufiene, B.O., Alsamhi, S.H. and Sakli, H., (2021) , has presented a paper on" A low-cost platform for environmental smart farming monitoring system based on IoT and UAVs". This paper shows a low-cost platform for comprehensive environmental parameter monitoring using flying IoT. The proposal is based on experimental work to fulfill the requirements of automated and real-time monitoring of the environmental parameters using both under- and aboveground sensors.

[2] Bauer, J. and Aschenbruck, N., (2018), has proposed a paper on , " Design and implementation of an agricultural monitoring system for smart farming". In this proposed paper, a holistic IoT-based agricultural monitoring system is presented. The main component of this system is an in-situ WSN that is tailored for the collection of sensor information that is of special interest for Smart Farming. The focus of the sensor network is on the continuous assessment of the LAI that is relevant for a precise monitoring of crop growth processes. Using an MQTT-based IoT infrastructure and PLMN connectivity, this sensor network is connected to a central server. The server is responsible for data persistence, analytics, and also for visualization that can be used as decision support for farmers.

[3] Bacco, M., Berton, A., Ferro, E., Gennaro, C., Gotta, A., Matteoli, S., Paonessa, F., Ruggeri, M., Virone, G. and Zanella, A., (2018) has presented a paper titled on ,"Smart farming: Opportunities, challenges and technology enablers ". This paper presented an overview of IoT technologies in several smart farming scenarios. Different agricultural domains have been analysed in this work, highlighting the most relevant communication requirements, and providing a mapping between the presented use cases and the enabling technologies. We considered UGVs and UAVs, surveying different uses and their requirements. We are convinced that deep learning architectures and CNN techniques can be key enablers for their joint use, thus opening to a better understanding and management of the farmland.

[4] Bacco, M., Barsocchi, P., Ferro, E., Gotta, A. and Ruggeri, M., (2019) has presented a paper on, "The digitisation of agriculture: a survey of research activities on smart farming". A key component in this paper is the use of hardware and software technologies, like the deploying of sensor nodes, control systems, robotics, satellites for imagery and positioning, data storage and analysis, advisory systems, and terrestrial and aerial drones.

[5] Idoje, G., Dagiuklas, T. and Iqbal, M., (2021) , has proposed a paper on , “Survey for smart farming technologies: Challenges and issues” . The application of smart farming to crop and animal production and post-harvesting is discussed. The impact of climate change on agriculture is also considered. This paper contributes to knowledge by iterating the challenges of smart technology to agriculture while highlighting the issues identified from existing framework of smart agriculture. The authors identify many gaps in existing research affecting the application of IoT in smart farming, and suggest further research to improve the current food production globally, to provide better food management and sustainability measures across the globe.

[6] Maduranga, M.W.P. and Abeysekera, R., (2020) ,has presented a paper entitled on “ Machine learning applications in IoT based agriculture and smart farming: A review. This paper proposed that , High-performance computing capability in ML opens up new opportunities for data-intensive science as the amount of data collected increases; ML algorithms could be applied to further enhance application intelligence and functionality. In this article we review existing approaches have been made to the smart agriculture and farming based on IoT and ML separately.

[7] Mahajan, H.B., Badarla, A. and Junnarkar, A.A., (2021), has proposed a paper on, “CL-IoT: cross-layer Internet of Things protocol for intelligent manufacturing of smart farming”. This paper proposed that , The existing protocols use energy and distance in general for clustering and data transmissions which did not solve the problems of long-distance communications in farming applications. So a cross-layer-based clustering and routing algorithms have designed to reduce network communication delay, latency, and energy consumption.

[8] Ramli, M.R., Daely, P.T., Kim, D.S. and Lee, J.M., (2020), has presented a paper on,“ IoT-based adaptive network mechanism for reliable smart farm system”. This paper presents an adaptive network mechanism for a smart farm system by using LoRaWAN and IEEE 802.11ac protocols. The system has the ability to adjust a protocol based on the network condition.