LITERATURE REVIEW

[1] Akshay Atole at el.(2012) proposed an idea on Farming as a major input sector for economic development of any country. Livelihood of the majority of the population of countries like India depends on agriculture. In this project, it is proposed to develop a Smart Farming System that uses the advantages of cutting edge technologies such as IoT, Wireless Sensor Network and Cloud computing to help farmers enhance the way farming is done. Using sensors like temperature, humidity, moisture etc. are used to get information about the field and help farmers to make precise decisions on insights and recommendations based on the collected data.

[2] Harshkumar Prakashbhai Thakor et al.(2019) proposed this paper discusses various models employed in Farming and proposes Smart Digi-farming models which focus on farming using IoT (Internet of Things), Mobile application for the dissemination of farming and commercial information and online sale of produce. Training on the latest fertilizers, farming tools and digitization in agriculture will attract youth towards farming and making India self-sufficient in food grains. Happiness Index of farmers is measured and improved through this model which drives the farmers away from suicidal tendencies and ushers in confidence, productivity and changes the lifestyle of the farmer.

[3] Nahina Islam et al. (2020)proposed The Internet of Things (IoT) has changed the definition of smart farming and enhanced it's capabilities to monitor and assess crop and soil quality; to plan planting locations to optimize resources and land area. The Low-Power Wide-Area Network (LPWAN) technologies have enhanced these capabilities by increasing the wireless communication range, by eliminating the dependency of Backhaul networks and by reducing power consumption. In this paper, we have presented an experimental analysis of LPWAN literature with the support of simulation and actual implementation of a Long Range Wide Area Network (LoRaWAN) based IoT network for smart farming.

[4]Kamlesh Chandra purohit et al. (2019) on Rural and urban areas in India face a variety of comparable problems within the domain of agriculture, which calls for certainly comparative answers for being coordinated towards finding these issues. The purpose of this concept is to analyze the ability of IoT techniques in relation to impoverishment in these areas, besides the requirements known in these commodities and with stress on farming. This work analyzes samples of an internet of things to modify the farming desires of the commodities for the region to maximize the yield production.

[5] M.S.D. Abhiram et al. (2020) proposed this idea: Smart agriculture is a farming system which uses IoT technology. This emerging system increases the quantity and quality of agricultural products. IoT devices provide information about the nature of farming fields and then take action depending on the farmer input. In this paper, an IoT based advanced solution for monitoring the soil conditions and atmosphere for efficient crop growth is presented. The developed system is capable of monitoring temperature, humidity, soil moisture level using NodeMCU and several sensors connected to it. Also, a notification in the form of SMS will be sent to the farmer's phone using Wi-Fi about the environmental condition of the field.

[6] Nermeen Gamal Rezk et al.(2020) proposed this paper suggests an IoT based smart farming system along with an efficient prediction method called WPART based on machine learning techniques to predict crop productivity and drought for proficient decision support making in IoT based smart farming systems. From the results, the proposed method proved to be most accurate in providing drought prediction as well as the productivity of crops like Bajra, Soybean, Jowar, and Sugarcane. The WPART method attains the maximum accuracy compared to the existing supreme standard algorithms, it is obtained up to 92.51%, 96.77%, 98.04%, 96.12%, and 98.15% for the five datasets for drought classification, and crop productivity respectively. Likewise, the proposed method outperforms existing algorithms with precision, sensitivity,

[7] Abhishek Raghuvanshiet al.(2021) proposed that the majority of countries rely largely on agriculture for employment. Irrigation accounts for a sizable amount of water use. Crop irrigation is an important step in crop yield prediction. Field harvesting is very reliant on human supervision and experience. It is critical to safeguard the field’s water supply. The shortage of fresh water is a major challenge for the world, and the situation will deteriorate further in the next few years. Security and privacy are major concerns not only in agriculture-related IoT networks but in all applications of the Internet of 'ings as well. In this framework, the NSL KDD data set is used as an input data set. In the preprocessing of the NSL-KDD data set, first all symbolic features are converted to numeric features. Feature extraction is performed using principal component analysis. 'en, machine learning algorithms such as support vector machine, linear regression, and random forest are used to classify preprocessed data set. Performance comparisons of machine learning algorithms are evaluated on the basis of accuracy, precision, and recall parameters.

[8] Muhammad Shoaib Farooq et al.(2021) proposed the paper onInternet of things (IoT) is a promising technology which provides efficient and reliable solutions towards the modernization of several domains. IoT based solutions are being developed to automatically maintain and monitor agricultural farms with minimal human involvement. The article presents many aspects of technologies involved in the domain of IoT in agriculture. It explains the major components of IoT based smart farming. A rigorous discussion on network technologies used in IoT based agriculture has been presented, that involves network architecture and layers, network topologies used, and protocols. Furthermore, the connection of IoT based agriculture systems with relevant technologies including cloud computing, big data storage and analytics has also been presented. In addition, security issues in IoT agriculture have been highlighted. A list of smart phone based and sensor based applications developed for different aspects of farm management has also been presented. Lastly, the regulations and policies made by several countries to standardize IoT based agriculture have been presented along with few available success stories. In the end, some open research issues and challenges in the IoT agriculture field have been presented.