LITRATURE REVIEW

[1]. Muhammad Shoaib Farooq (member IEEE), Shamyla riaz , Adnan abid (member, ieee), Kamran abid , and Muhammad Azhar Naeem(2019) has presented a paper titled "A Survey on the Role of IoT in Agriculture for the Implementation of Smart Farming".Here 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.

[2]. Neha Kailash Nawandar and Vishal Satpute (2019) has presented a paper heading "IoT based intelligent irrigation support system for smart farming applications" .Here 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. The sensor generated data is compressed and then sent to an FTP server for processing. At the server, a 2-layer Neural Network with 4-Inputs, plant growth, temperature, humidity and soil moisture is used for decision making that controls water supply, fertilizer spray, etc. and a plant is used as the test object.

[3]. Nermeen Gamal Rezk , Ezz El-Din Hemdan , Abdel-Fattah Attia , Ayman El-Sayed and Mohamed A. El-Rashidy (2020) has presented a paper heading "An efficient IoT based smart farming system using machine learning algorithms". It is an efficient prediction method called WPART based on machine learning. Here five datasets are used for estimating the proposed method. The results indicated that the projected method is robust, accurate, and precise to classify and predict crop productivity and drought in comparison with the existing techniques. 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.

[4]. Abhishek Raghuvanshi , Umesh Kumar Singh , Guna Sekhar Sajja , Harikumar Pallathadka , Evans Asenso ,Mustafa Kamal , Abha Singh , and Khongdet Phasinam (2022) has presented a paper heading "Intrusion Detection Using Machine Learning for Risk Mitigation in IoT-Enabled Smart Irrigation in Smart Farming". In this framework, the NSL KDD data set is used as an input data set. In the pre-processing of the NSL-KDD data set, first all symbolic features are converted to numeric features. Feature extraction is performed using principal component analysis. Then machine learning algorithms such as support vector machine, linear regression, and random forest are used to classify pre-processed data set. Performance comparisons of machine learning algorithms are evaluatedon the basis of accuracy, precision, and recall parameters.

[5]. Akshay Atole, Amar Biradar, Apurva Asmar, Nikhil Kothawade and Sambhaji Sarode (2017) has presented an article titled on "Iot based smart farming system". This method uses 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 take precise decisions on insights and recommendation based on the collected data. One of the limitations of this system is that continuous internet connectivity is required at use rend which might prove to be costly for farmer. This can be overcome by extending the system to send suggestion via SMS to the farmer directly on his mobile using GSM module instead of mobile app.

[6]. Harshkumar Prakashbhai Thakor and Sailesh Iyer(2019) has presented a paper heading "Development and analysis of smart digi-farming robust model for production optimization in agriculture."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.

[7]. M.S.D. Abhiram; Jyothsnavi Kuppili; N.Alivelu Manga(2020) has presented a paper titled on "Smart Farming System using IoT for Efficient Crop Growth."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 Node MCU and several sensors connected to it. Also, a notification in the form of SMS will be sent to farmer and phone using Wi-Fi about environmental condition of the field.

[8]. Harendra Negi and Sushil Chandra Dimri has presented apaper heading "Smart farming Using IoT." 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. In India, most of the peoples relay on agriculture and a big part of nation's income originate from the agriculture. Automation of agriculture method is one in all the crucial steps to our country, which needs to import immense quantity of crops from different nations to satisfy the need of peoples. The main challenge of the rural and urban agriculture area is than the correct observation of the land health, the environment, and arrange the spraying.