PROPOSED SOLUTION

Smart Farming has enabled farmers to reduce waste and enhance productivity with the help of sensors (humidity, temperature, soil moisture, etc.) and automation of irrigation systems. Further with the help of these sensors, farmers can monitor the field conditions from anywhere. Internet of Things based Advanced Farming is highly efficient when compared with the conventional approach. The applications of intelligent Agriculture solutions not only targets conventional, large farming. With operations, but could also be new levers to uplift other growing or common trends in agricultural like organic farming, family farming (complex or small spaces, particular cattle and/or cultures, preservation of specific or high-quality varieties, etc.), and enhance highly transparent Farming.

In smart irrigation, automated sprinkler systems or intelligent pumps are used. Soil moistures sensors are used in different areas to get the moisture of the soil in agricultural land. Based on the results from the soil moisture sensors, theintelligent pumps or intelligent sprinklers are turned On/Off.

Farmers usually use a sampling method to calculate soil fertility, moisture content. Fortunately, this sampling doesn't give accurate results as chemical decomposition varies from location to location. Meanwhile,this not much helpful. To resolve this thing, it plays an essential role in Farming. Sensors can be installed at a uniform distance across the length and breadth of the farmland to collect the accurate soil data, which can be further used in the dashboard or mobile application for the farm monitoring.

A unified solution which can be integrated with different types of Internet of Things devices.The most common challenge for the Internet of Things in agriculture is connectivity. Every area doesn't have proper internet connectivity.The second most common challenge for Internet of Things based Advanced Farming is the lack of awareness among consumers.Due to various service providers, it becomes really difficult to maintain interoperability between different IoT systems.A scalable solution that can be integrated with thousands of IoT devices for large farms.

The emergence of a new breed of smart applications requires middleware platforms that enable the rapid development of IoT-based solutions, which can be hosted partially in fog nodes, as well as in a traditional cloud datacenter. Currently, there is no scalable de facto open IoT platform but the European Commission is pushing FIWARE to fill this gap. We analyzed the performance of FIWARE under different platform configurations comparing fog/cloud and cloud-only scenarios for precision irrigation in smart farming. Our results reveal interesting and non-intuitive findings, such as that fog computing does not always improve the overall system performance and in some cases it even makes it worse. Also, the network between the farm and the cloud datacenter causes some unexpected differences between different scenarios.

Agriculture and farming is the backbone of the society which serves the basic needs of the human livelihood. Indian climate is always favorable for growing crops and providing agricultural platform. Though agriculture is one of the most prime fields to engage the workforce still, it lacks adequate technological support for improvement of the crop quality and build a healthy nation. The major concern related to agriculture and economy to any country is that there is a huge gap of financial gain for the farmers and the outside market. It makes the farmers incapable to

estimate the inflation rates and finally leads them to distress. The proposed work deals with the above said drawback by implementing an agricultural business model which facilitates the farmers to know their crop and the market better. The farmers can grow and cultivate crops according to the market demands thus leading to a good financial prospect and lesser loss. This proposal also deals with monitoring the crop health condition during its growth period to give a clear understanding of the crop quality that can be delivered to the market. Both of the proposed methods helps the farmer to estimate and precalculate the financial investments and gains and plan the budget in a managed way. The health condition of the crop is summarized with the help of image processing and SVM. The parameters to check the health condition of the crops can be incorporated with Internet of things (IoT) and sensor networks, so that the farmers can monitor their crop conditions with ease.