Literature Survey on the selected Project and Information Gathering

Date	19 September 2022
Team ID	PNT2022TMID52019
Project Name	Smart Farmer – IoT Enabled Smart Farming Application
Maximum Marks	4 Marks

SI.NO	Title-Name of the author-Initialization year	Concept	Disadvantages	Future Work
1	**Internet of Things (IoT), Agriculture, Soil moisture sensor, Arduino-UNO ATmega328p, IR sensor, Smart farming.**	Using an IR sensor, we can detect the pest, birds, and humans through their temperature sensing and informs them to the user. By using this technology, we can increase productivity and can feed more people in the future. It focuses on developing devices and tools to manage, display and alert the users using the advantages of The cloud computing devices that can create a whole computing system from sensors to tools that observe data from agricultural field images	The IoT related equipment allows the farmer to understand the use of technology and to learn. Given any security measures, the system offers little power and can lead to various kinds of network attacks.	Improvement has to be made for electrical components.

2	**Smart Agriculture System using IoT Technology, September 2020 by Adithya Vadapalli,Swapna Peravali & Venkata Rao Dadi**	The identification of smart farming can give a boost in the deteriorating traditional agricultural sector. Use of smart techniques like precision farming, effective water management, soil moisture and humidity monitoring sure helps to yield more profit.	The network range is limited for small agricultural fields.	Controlling water usage plant growth with IoT can dry
3	**IoT in Agriculture Smart Farming Dr.S.Kanchana 2018**	Dramatic changes in the climate and natural disaster ,water irrigation ,Waste reduction ,Livestock monitoring, Smart green house gases can be collected and stored the IoT cloud for future issues.	Most of the high yielding seeds are for irrigated lands but 4% of our sown area is dry. Nearly 90% farmers are small and Marginal.	Controlling water usage plant growth with IoT can dry. IoT based sensors can be used to find the sick animals.
4	**IoT for Smart Precision Agricultural and Farming in Rural areas - Nuzaman Ahamed-2018**	Introducing WiLD network and fog computing in the existing WSN based solutions. A cross layer based MACAD routing solution that adapts traffic nature and set the improved delay.	It needs fast Internet continuously. The farmers need to understand the tech ology and learn it.	The MAC have to improve the throughput for end node connecting to reduce the congestion.
5	**IoT Equipped and AI Enabled Next generation smart agriculture- Sameer Qazi**	Using the IoT connected Sensors and we can decide what crops will yield optimal production . UAV's for smart cities surveillance in real time and proposed.	Hacking attacks on smart machinery and cyber threats to agro databases.	Paradigm shifted cloud based to edge AI application.5G wireless networks can be connected.

6	**IoT enabled Smart Agriculture-Stefania Lanza-2021**	The IoT enabled smart agriculture ecosystem by evaluating architecture .The use of IoT and big data will enable smart agriculture to enhance the efficiency.	Interference may be caused by different network systems such as same spectrum based such as zigbee , sigfox.	It have minimum number of networks to increase efficiency .The capability of each network system have to be increased.
7	**International journal of Research in science & Technology, January to March 2021 by Garigipati Vijay Kumar**	Smart agriculture farming system is a new idea for farming which uses IoT technology to monitor and send information to the cloud. Crops require adequate sunlight, humidity, fertilizer etc.. in order to grow. IoT technology serves us information from the field and store it in the cloud. By using the data farmers can decide what needs to be done and what time to be done can be measured.	The modules used here has to withstand several climate changes. The Wi-Fi module used here needs internet connection which is hard to implement in large agricultural fields. Shock might occur due to water as it is a good conductor.	Lack of mental and physical activity by humans and leading to health issues Complex system for maintenance Lack of security
8	**Smart Agriculture System using IoT Technology, September 2020 by Adithya Vadapalli,Swapna Peravali & Venkata Rao Dadi**	The IoT helps to reduce physical labour for the farmers. The data collected can be used to predict the weather for upcoming years. The Arduino Uno used here is compact and can be linked to several sensors . By graphing the crops conditional the overall analysis of care can be estimated	The farmers need to understand the technology and learn it	IoT based sensors can be used to find the sick animals.
9	**Internet of Things (IoT), Internet of Lighting, Fertilization, Agriculture, Remote, Communication**	Smart devices based on IoT must have unique identities, and they should have the ability to connect and interact with each other and with other network entities along with mobile and web-based platforms. the scarcity of agricultural capital is making the demands even more onerous.	Increased privacy concerns Increased unemployment rates Highly dependent on the internet Lack of mental and physical activity by	It have minimum number of networks to increase efficiency

	V Dankan Gowda et al 2021	These future technologies can be used to boost productivity by cultivating food more sustainably while also preserving the environment, thanks to improved water use and input and treatment optimization.	humans and leading to health issues Complex system for maintenance Lack of security Absence of international standards for better communication	

Problem statement:

- To provide efficient decision support system using wireless sensor natural which handle different activities of farm and gives useful information related to agriculture soil moisture, temperature, soil humidity control. The previous proposed systems have a drawback of network issues. Which causes delays in many operations.
- There is a problem of excess water supply or lack of water supply which makes the crops die. Because for rice, sugarcane, coconut crops require more water for the cultivation but in case of crops like pumpkin, ladies finger, carrot require water in drops so the requirement of water depends on the crops.
- There is a possibility of hackers to control the water supply by intruding into the server.
- After rain, there is no automated facility to alert the farmers about the presence of excess water in the field.