

Ideation Phase
Literature Survey

Date	19 September 2022
Team ID	PNT2022TMID54368
Project Name	Smart Farmer - IoT Enabled Smart Farming Application
Maximum Marks	4 Marks

Title & Author(s)	Year	Technique(s)	Findings/Pros/Cons
<p>IOT Based Monitoring System in Smart Agriculture. 2017 International Conference on Recent Advances in Electronics And Communication Technology (ICRAECT). Prathibha S., Hongal A., and Jyothi M. (2017).</p>	2017	ATmega ESP8266 Wi-Fi Module	Sends the information about humidity and temperature in air of field to farmer. No automatic support system
<p>IOT Based Smart Irrigation System. International Journal of Trend in Scientific Research and Development Lahande P., and Mathpathi D. (2018).</p>	2018	ATMEGA8P Cloud server	By adding we can improve a web scope that can predict the weather and irrigation Plants / crops accordingly. A water meter can be installed for evaluation .The amount of water used for irrigation, thus calculating the cost
<p>On the design of Nutrient Film Technique hydroponics farm for smart agriculture. Alipio M., Dela Cruz A., Doria J., and Fruto R</p>	2019	Fuzzy technology	Performance evaluation model An independent T-test was conducted to see whether the two groups of plants had significant differences. Both groups used the IoT system and plants that did not use the IoT system. the sample took the test sample from plant data on the 30th day. The number of samples tested from each group was 30 mustard plants. The total sample used for the T-test was 60 mustard plants. To find out whether the two groups had a significant difference in plant height, a standardized test was carried out with the following hypothesis:
<p>Smart Irrigation System Based Thingspeak and Arduino. Benyezza H., Bouhedda M., Djellout K., and Saidi A. (2018).</p>	2018	ThingSpeak	<p>Advantages- Modern machines can monitor and control farmers' efforts. The amount of time saved as a result of the IoT program could be significant. And, in today's world, we could all use a little more energy. Maintain a successful soil moisture monitoring system. We can program the system to automatically irrigate a plot of land. Lessen the influence on the environment. .</p> <p>Disadvantages- <ul style="list-style-type: none"> • Smart farming necessitates constant internet access. The rural section of emerging countries did not meet those standards, thus the internet is slower. </p>

Wireless Sensor Network and Internet of Things in Precision Agriculture. Kiani F., and Seyyedabbasi A. (2018).	2018	Wireless sensor network	water issue and irrigation methods play an important role in efficient water using and increase productivity. So, water consumption reduction that helps farmers economic at the small farms. Furthermore, farmer's information about weather conditions of next days can help to make decisions that are more accurate.
"IOT Based Smart Crop-Field Monitoring and Automation Irrigation System" R. Nageswara Rao, B. Sridhar (2018)	2018	Open-field agriculture	Smart farming combines different technologies, devices, protocols, and computing paradigms to enable the farmers to make the most out of innovations. Innovations in agriculture are called the " <i>digital agricultural revolution</i> " and will transform all aspects of agriculture, resulting in more productive, efficient, sustainable, inclusive, transparent, and resilient systems.
"A Model for Smart Agriculture Using IOT", Proceedings on Global Trends in Signal Processing and Information Computing and Communication Prof. K. A. Patil, Prof. N.R Kale(2016)	2016	Wireless sensor network	The survey proposes smart agriculture using various devices. The communication between the devices is increased by the use of IoT. Using IoT in agriculture improves the functionalities used in farming. Until now, the only way of handling the agricultural activities is by traditional method. In this survey Using WSN, data acquisition and transfer and monitoring becomes easy. This technique provides smart solution for crop growth using IoT.
"Smart Farming: Sensing Technologies" S.S. Sarmila, N.B. Harshini, S.R. Ishwarya, C.R. Arati(2018)	2018	Wireless sensor network	The sensors used in the system can be maintained and is operable for the entire cultivation period by using rechargeable batteries or solar panels. For communication, capabilities such as Bluetooth or an SMS to URL or to a smartphone is used to remotely monitor the whereabouts