Smart Farming-IOT Enabled Smart Farming Application

Team ID   :PNT2022TMID44795

College Name   :Sri shanmugha College of Engineering & Tech

Department   :Electronics and Communication Engineering

Team Leader   :SATHISKUMAR V

Team Member   :HARIPRASAD J

Team Member   :SATHISKUMAR A

Team Member   :KANGAI AMARAN D

S.No	TITLE	PROPOSED WORK	TOOLS USED/ ALGORITHM	TECHNOLOGY	ADVANTAGES/ DISADVANTAGES
1	Smart farming- IOT Enabled smart farming application	The Internet of things are various sensors, autonomous vehicles, control systems and robotics. At below, these are various stages of prediction in agriculture from farm to fork	• IOT cloud server accesses	• Internet Of Things	The purpose of Smart Farming is to increase the quality and quantity of agricultural production by using sensing technology// the smart agriculture needs availability of internet continuously
2	Internet of Things (IoT), these days is playing a crucial role of transforming "Traditional Technology" from homes to offices to "Next Generation Everywhere Computing". "Internet of Things"	Smart IoT based Agricultural stick being developed for live monitoring of Temperature, Moisture using Arduino, Cloud Computing and Solar Technology is discussed	• ESP8266 Wi-Fi Module • Arduino Mega 2560 • Sensors • 6 Watts Solar Panel	• Embedded Systems • Communication protocols	Crop Management, Pest Management, Agriculture Precision, Agriculture Fields Monitoring via Sensors and even Drones.// Need technical support

S.NO	TITLE	PROPOSED WORK	TOOLS USED/ ALGORITHM	TECHNOLOGY	ADVANTAGES/ DISADVANTAGES
3	IOT ecosystem architecture for smart agriculture	Farmers cannot be physically present on the field 24 hours a day. Also, the farmers may not have the knowledge to use different tools to measure the ideal environmental conditions for their crops.	• Surveillance camera • Soil moisture sensor • Air humidity sensor • Temperature sensor • Ultaviolet sensor	• Communication technology	Agility. One of the benefits of using IoT in agriculture is the increased agility of the processes//Given any security measures, the system offers little power and can lead to various kinds of network attacks.
4	UAV Farming	Drones in agriculture are used to monitor crops by carrying out proximity surveys and for biological treatments through aerial distribution at low altitudes.	• Micro air vehicle(MAV) • Verticle take-off and landing(VTOL) • Low attitude-short endurance(LASE)	• cloud computing • IOT security	Drones may pose a danger to aircraft. Drones may be a risk to the general public. Relatively new technology that is not mature yet.

S.No///	TITLE	PROPOSED WORK	TOOLS USED/ ALGORITHM	TECHNOLOGY	ADVANTAGES/ DISADVANTAGES
5	Aquaponics farms	Achieving a good balance between fish, bacteria, and plants is essential in aquaponics. Once you have a good balance, you will have a successful and sustainable aquaponics system design that you can rely on.	• A fish tank • A grow bed • Grow media • Air pump with air stones • EC or TDS meter	• Vertical Aquaponics • IBC Aquaponics • Dutch bucket aquaponics	No reliance on mined and manufactured fertilizers. Efficient, sustainable and highly productive. Produce is free of pesticides and herbicides//Not A Lot of Fish. One Part Fails, It All Fails Overall.
6	Precision farming	Precision farming is an approach where inputs are utilised in precise amounts to get increased average yields, compared to traditional cultivation techniques.	• Global position system • Geographical information system • Grip sampling • Yield maps	• Gps guidance • Control systems • Autonomous vehicles • Robotics	Reduced costs. ... Increased Profitability. ... Enhanced Sustainability. ... Better Harvestability. ... Increased Land Values.//Initial capital costs may be high and so it should be seen as a long-term investment.

THANK YOU