

Smart Plant Monitoring and Automated Irrigation System Using IOT

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Abstract: *The IoT-based Smart Plant Monitoring System represents a transformative approach to modern agriculture by leveraging the power of the Internet of Things (IoT) to enhance the monitoring and management of plants in agricultural settings. This system integrates advanced sensor technologies, wireless communication, and data analytics to provide real-time insights into the health and environmental conditions of plants, thereby optimizing resource utilization and improving overall crop yield. The key components of the proposed system include a network of sensors strategically placed within the agricultural field to capture vital data related to soil moisture, temperature, humidity, light intensity, and nutrient levels. These sensors are connected through IoT-enabled devices, forming a cohesive network that continuously collects and transmits data to a centralized cloud-based platform. The cloud platform acts as a repository for the acquired data, where advanced analytics algorithms process the information in real-time.*

The Internet of Things (IoT) plays a very Important role in improving cultivation methods for greenhouses ,gardening and providing farmers with relevant information to make decisions for optimal yields. In this project we create an Iot Based plant monitoring system based on the IoT concept that remotely provides users with information related to temperature, humidity, and soil moisture intensity for monitoring plant conditions. The IoT-based smart plant monitoring system is designed to enhance plant care and cultivation using Internet of Things (IoT) technology. It integrates various sensors such as temperature, humidity, soil moisture, and light intensity sensors to collect real-time data on environmental conditions. The system can also automate watering based on the moisture levels in the soil, ensuring plants get the right amount of water. By providing timely alerts and useful insights, the IoT Smart Plant Monitoring System makes plant care easier and more efficient.

Keywords: IoT Smart Plant Care and Plant Monitoring System

