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International Conference on Advances in Computer Science, Electrical, Electronics, and Communication Technologies : Submission (1150) has been created.

1 message

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Track Name: CE2CT2025

Paper ID: 1150

Paper Title: Smart Agriculture IoT-Based Crop Monitoring And Management System

Abstract:
The rapid advancement of IoT technology offers promising solutions for addressing challenges in
agriculture, particularly in crop monitoring and management. This project presents a smart agriculture
system that leverages IoT-based sensors to monitor critical environmental parameters affecting crop
health and productivity. The system incorporates a range of sensors, including temperature and
humidity sensors, pH sensors, and water level sensors, to provide real-time data on the
microenvironment surrounding crops. By integrating these sensors, farmers can make informed decisions
regarding irrigation, soil quality, and overall crop health, leading to optimized resource utilization
and improved yields.An additional feature of this system is an automated notification module that
alerts users when critical parameters reach predefined thresholds. For instance, if the water level
drops below an optimal level or other vital parameters indicate potential issues, the system notifies
the user, enabling timely intervention and minimizing risks to crop health.In addition to
environmental monitoring, the system includes a weed detection module specifically designed for crops
like paddy. This module identifies unwanted plant growth, allowing farmers to take timely action
against weeds that compete for resources and affect crop yield. By combining environmental monitoring
with automated weed detection, the system aims to reduce manual labor and minimize the use of
herbicides, thereby promoting sustainable farming practices. The proposed smart agriculture system is
intended to be scalable and adaptable, with potential applications across various crop types and
agricultural settings. Through this IoT-based approach, the project seeks to contribute to the
development of efficient and environmentally friendly farming practices.

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    Smart Agriculture Crop Monitoring And Management System .docx (266 Kb, Sun, 24 Nov 2024 17:46:44
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Submission Questions Response:
    1. Special Session
            SS3: AI/ML-based Computational Advances in Computer Science, Electrical, Electronics, and
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