

Internet of Things (IoT) based Smart Agriculture System

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Abstract: *The Internet of Things (IoT) based smart agriculture system is an emerging technology that uses sensors, gateways, cloud platforms, and mobile applications to provide real-time data on weather, soil moisture, crop growth, and livestock health to farmers. This research paper focuses on the development and implementation of an IoT-based smart agriculture system. The system offers several benefits, such as increased efficiency, improved resource management, enhanced crop quality, better decision-making, and remote monitoring. However, there are also potential negative impacts, such as cost, technical skills, dependence on technology, data privacy and security, and environmental impact, that must be considered. Careful planning, implementation, and monitoring can help to mitigate these risks and ensure that smart agriculture systems are sustainable and effective. This research aims to give an overview of how predictive analysis and Internet of Things (IoT) devices, along with cloud management and security systems, can be used in agriculture to support multiple crops. It also takes into account the experiences of farmers and highlights the challenges and difficulties that may arise when introducing modern technology into traditional farming practices. By utilizing statistical and quantitative methods, this research seeks to bring about significant and positive changes in the current agriculture system. In simpler terms, this study explores how smart farming can enhance food production, resource management, and labor efficiency, while acknowledging the challenges and benefits of integrating modern technology into traditional farming practices.*

Keywords: IoT, Smart agriculture

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