SMART FARMER - IOT ENABLED SMART FARMING APPLICATION

Literature survey

**TEAM ID** : PNT2022TMID50155

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**PAPER-1**: Poonia, Ramesh C., Gao, Xiao-Zhi, Raja, Linesh, Sharma, Sugam, Vyas, Sonali , Smart Farming Technologies for Sustainable Agricultural Development IGI Global, 10-Aug-2018

Smart Farming Technologies for Sustainable Agricultural Development provides innovative insights into the latest farming advancements in terms of informatics and communication. The content within this publication represents the work of topics such as sensor systems, wireless communication, and the integration of the Internet of Things in agriculture-related processes. It is a vital reference source for farmers, academicians, researchers, government agencies, technology developers, and graduate-level students seeking current research on smart farming technologies.

**PAPER-2**: Annamaria Castrignano, Gabriele Buttafuoco, Raj Khosla, Abdul Mouazen, Dimitrios Moshou, Olivier Naud Academic Press, Agricultural Internet of Things and Decision Support for Precision Smart Farming, 09-Jan-2020

Agricultural Internet of Things and Decision Support for Smart Farming reveals how a set of key enabling technologies (KET) related to agronomic management, remote and proximal sensing, data mining, decision-making and automation can be efficiently integrated in one system. Chapters cover how KETs enable real-time monitoring of soil conditions, determine real-time, site-specific requirements of crop systems, help develop a decision support system (DSS) aimed at maximizing the efficient use of resources, and provide planning for agronomic inputs differentiated in time and space. This book is ideal for researchers, academics, post-graduate students and practitioners who want to embrace new agricultural technologies.

**PAPER-3**: Govind Singh Patel, Amrita Rai, Nripendra Narayan Das, R.P. SinghCRC Press, Smart Agriculture: Emerging Pedagogies of Deep Learning, Machine Learning and Internet of Things,10-Feb-2021

Smart Agriculture: Emerging Pedagogies of Deep Learning, Machine Learning and Internet of Things endeavours to highlight the untapped potential of Smart Agriculture for the innovation and expansion of the agriculture sector. The sector shall make incremental progress as it learns from associations between data over time through Artificial Intelligence, deep learning and Internet of Things applications. The farming industry and Smart agriculture develop from the stringent limits imposed by a farm's location, which in turn has a series of related effects with respect to supply chain management, food availability, biodiversity, farmers' decision-making and insurance, and environmental concerns among others. All of the above-mentioned aspects will derive substantial benefits from the implementation of a data-driven approach under the condition that the systems, tools and techniques to be used have been designed to handle the volume and variety of the data to be gathered. Contributions to this book have been solicited with the goal of uncovering the possibilities of engaging agriculture with equipped and effective profound learning algorithms. Most agricultural research centres are already adopting Internet of Things for the monitoring of a wide range of farm services, and there are significant opportunities for agriculture administration through the effective implementation of Machine Learning, Deep Learning, Big Data and IoT structures

**PAPER-4**: Amitava Choudhury, Arindam Biswas, T. P. Singh, Santanu Kumar Ghosh Springer Nature, Smart Agriculture Automation Using Advanced Technologies: Data Analytics and Machine Learning, Cloud Architecture, Automation and IoT,01-Jan-2022

Smart Agriculture Automation Using Advanced Technologies: Data Analytics and Machine Learning, Cloud Architecture, Automation and IoT addresses the challenges for developing and emerging trends in Internet-of-Things (IoT) for smart agriculture platforms. It also describes data analytics & machine learning, cloud architecture, automation & robotics and aims to overcome existing barriers for smart agriculture with commercial viability. It discusses IoT-based monitoring systems for analyzing the crop environment, and methods for improving the efficiency of decision-making based on the analysis of harvest statistics. The book explores a range of applications including intelligent field monitoring, intelligent data processing and sensor technologies, predictive analysis systems, crop monitoring, and weather data-enabled analysis in IoT agro-systems. This volume will be helpful for engineering and technology experts and researchers, as well as for policy-makers

**PAPER-5**: Aqeel-ur- Rehman,OMICS Group International - eBooks, Smart Agriculture an Approach Towards Better Agriculture Management,12-Feb-2015

Smart Agriculture an Approach Towards Better Agriculture Management, An Approach towards Better Agriculture Management aims to present utilization of advanced technologies towards the better management of Agriculture requirements. The book is triggered by ubiquitous applications of sensors and actuators, and the real-world challenges and complexities to the Wireless Sensors and Actuator Networks¿ (WSAN) application. Agriculture is a very vast domain. This book is providing coverage of some of the aspects of the agriculture like Introduction to the concept of Smart Agriculture, Automatic Irrigation Management, Water Management, use of advanced technology like GIS towards Agriculture and Agricultural Ontologies to provide semantic understanding for computing devices.