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Patent Search

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Abstract:

IoT and cloud based Drone Technology for Sustainable Agriculture to monitor soil analysis for field planning, crop monitoring, irrigation management, crop health assessment, livestock monitoring, and disaster management, transporting goods using Machine Learning Algorithms ABSTRACT: Several causes, such as a decline in output, weather fluctuations, and environmental challenges, are generating problems in India's agricultural sector. Utilizing agricultural drones in farming is a step toward economically, socially, and environmentally sustainable agriculture. This article explores the potential advantages of India embracing drone technology. In agriculture, drones are used for a variety of purposes, including soil analysis for field planning, planting, precise application of agrochemicals, crop monitoring, irrigation management, crop health assessment, livestock monitoring, disaster management, geo-fencing, crop biomass and damage estimation, insect control, and freight transport. Drones are deployed for reasons other than military and emergency services. Moreover, they work on transportation, geofencing, and disaster aid. This article also highlights the steps taken by the Indian government to advance drone technology. Particularly challenging issues of drone flight have been mentioned. The research indicates that utilising drone technology can save money, time, labour, and water. You are exposed to less harmful compounds if you use fewer chemicals, which is another advantage. According to study, millions of Indian farmers might gain from the Indian government purchasing and employing drone technology.

Complete Specification

Description:DESCRIPTIONS:
Information and communication technologies (ICTs) are being used to aid the agriculture industry in problem-solving. To feed the world's ever-growing population, rural communities will need to adapt to climate change and become more resilient. Accelerating efforts to achieve the Sustainable Development Goals by 2030 can be greatly facilitated by capitalising on the expansion and transformative potential of information and communication technologies, which offer an extraordinary platform for addressing some of these challenges. Currently, the FAO-ITU E-agricultural strategy guide is used to aid governments in finding, developing, and implementing long-term ICT solutions for agriculture. Using this approach, diverse groups interact to develop ICT solutions for agriculture. Access to exploitable, high-quality, real-time data in the agriculture industry is a big concern. Combining unmanned aerial vehicles, often known as drones, with linked analytics has the potential to considerably contribute in the resolution of some of the industry's most pressing problems. In the next five years, the agriculture industry will surpass the construction industry as the second largest consumer of drones worldwide, according to Goldman Sachs. Agriculture is increasingly employing IoT-enabled sensor networks to make sense of the vast volumes of data generated by these systems (IoT). India is a global leader in agriculture, and the nation possesses a vast amount of farmland. Despite India's independence for more than seven decades, agriculture remains rural families' primary source of income, employment, and food. Agriculture contributes 20.2% of India's gross domestic product, but employs just 45.6% of the population. Despite India's growing economy in recent decades, agriculture's share of the country's gross domestic product has remained largely steady. Not only does the agriculture industry earn less than the manufacturing and service industries, but it also has fewer advanced technologies. To satisfy the needs of a growing population, safeguard farmers' incomes, and address expanding national and global concerns such as the COVID-19 pandemic, agriculture must undergo substantial change. Drone technology is increasing rapidly as a result of its diverse applications. In addition to enhancing agricultural output overall, drones enable farmers

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