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Patent Search

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Abstract:

Forests are large areas gathering trees and other plants. Wildfires are one of major hazards of global warming; they destroy forests and speed up the deforestation. Other wildfires are also caused by human errors in wilderness environments. Dry vegetation fuels a wildfire's rapid ignition and spread. It is difficult to extinguish a fire with the best efforts of forest firefighters. Smoke and air pollution from wildfires may harm human health and ruin property. Forest fires are difficult to detect at time anticipate it, because they spread rapidly. Early-warning systems that they are more accurate are really needed. These systems could be implemented with IoT, machine learning or deep learning. In this paper, we focus on this direction of research and we examine literature proposals utilizing IoT and DL to detect wildfires and their spread via comprehensive evaluation and comparison of existing works.

Complete Specification

We Claim:

1. A Smart System for Air Quality Monitoring and Detect Forest Fires Using the Internet of Things claims the summative attainment of the IoT aided communication protocols, its technical requirements were designated, and performance accuracies were verified with conducted wildfire case study.
2. The case study outcomes have expressed the significance of the Internet sensor modules with real-time data logging and tracking and monitoring to fulfil the tasks allocated.
3. The implementation steps for a smart forest alert monitoring system with self-decision-making protective actions related to parameter measures and alert and implementing the harm mitigation actions were established with installed model prototype

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