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Optimization of Potato Farming Systems Through IoT and Neural Network-Based Applications

Khadija Shazly, Najaad OubeBlika, Wang Zhang

- 1. Faculty of Computer and Information, Mansoura University, Egypt
- 2. Energies Materials and Industrial Engineering Research Center, Faculty of Sciences and Technology, University of Tamanghasset, Tamanrasset, 10034, Algeria
- 3. School of Earth and Space Sciences, Peking University, Beijing, 100871, China

Abstract:

The optimization of potato farming systems is essential for increasing yield, improving resource management, and ensuring sustainability. This study investigates the integration of Internet of Things (IoT) and neural network-based applications to optimize potato farming processes. The IoT framework collects real-time data from sensors monitoring environmental factors such as soil moisture, temperature, humidity, and crop health. These data are fed into a neural network model, which predicts optimal irrigation schedules, fertilizer usage, and pest control strategies. The neural network is trained to analyze historical crop data and current environmental conditions to make precise recommendations for each stage of the farming cycle. By incorporating machine learning techniques, the system helps farmers make data-driven decisions, ultimately enhancing productivity and reducing waste. The results of this study demonstrate the potential of IoT and neural networks in creating a more efficient, sustainable, and resilient potato farming system.

Keywords:

Potato farming optimization, IoT, neural networks, precision agriculture, resource management, sustainability.

REQUEST FOR FULL TEXT

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