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#### IoT in Smart Agriculture for Potato Crop Optimization Using Neural Network Techniques

Nader Behdad, Sofia Arkhstan, Najaad OubeBlika

- 1. Electrical and Computer Engineering, The Polytechnic University of the Philippines, Manila, 1016, Philippines
- 2. Department of Computer System, South Ural State University, 454080 Chelyabinsk, Russia
- 3. Energies Materials and Industrial Engineering Research Center, Faculty of Sciences and Technology, University of Tamanghasset, Tamanrasset, 10034, Algeria

#### Abstract:

The integration of Internet of Things (IoT) technologies in agriculture is transforming traditional farming into smart agriculture, enabling data-driven decision-making and enhanced crop productivity. This study focuses on the application of IoT systems combined with neural network techniques for optimizing potato crop production. By deploying IoT sensors to monitor soil moisture, temperature, humidity, and other environmental variables in real time, data is continuously collected and analyzed. Neural networks are then used to model the complex relationships between environmental factors and crop yield, facilitating accurate predictions and adaptive responses. The proposed framework not only improves resource efficiency, such as water and fertilizer use, but also supports precision farming practices that contribute to sustainable agricultural development. Experimental results demonstrate significant improvements in potato yield, early disease detection, and optimized irrigation scheduling.

### **Keywords:**

Smart agriculture, IoT, neural networks, potato crop optimization, precision farming, agricultural sustainability.

# **REQUEST FOR FULL TEXT**

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