

Machine Learning in Sustainable Potato Farming Optimization Through IoT and Neural Networks

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Abstract:

The global demand for sustainable agriculture necessitates the development of intelligent farming systems capable of optimizing crop yield while conserving resources. This study explores the application of machine learning techniques, particularly neural networks, integrated with Internet of Things (IoT) technologies to enhance potato farming practices. The proposed framework leverages real-time environmental and soil sensor data collected via IoT devices to inform predictive models that guide irrigation, fertilization, and disease management. Neural networks are employed to model complex interactions between agronomic factors and yield outcomes, facilitating adaptive decision-making for farmers. The system demonstrates significant improvements in crop productivity and sustainability, reducing input waste and environmental impact.

Keywords:

Smart agriculture, potato farming, IoT, machine learning, neural networks, sustainability

REQUEST FOR FULL TEXT

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