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Smart Agriculture: Integrating IoT and Remote Sensing for Crop Management

Agriculture is undergoing a digital transformation with the integration of IoT and remote sensing technologies. This paper proposes a smart farming model that monitors soil health, irrigation needs, and pest activity through IoT-enabled sensors and satellite imagery. Machine learning algorithms are used to predict crop yields and optimize resource use. Field experiments show up to 30% reduction in water consumption and 20% yield improvement.

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