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AGRO-VISION: AI-Driven Predictive System for Crop Health, Price Forecasting, and Supply Chain Management

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Abstract: *In the era of smart agriculture, artificial intelligence (AI) and data-driven technologies have emerged as transformative tools for optimizing agricultural productivity and sustainability. This paper presents AGRO-VISION, an AI-driven predictive system designed to monitor crop health, forecast market prices, and streamline supply chain management. By integrating satellite imagery, environmental sensor data, and market information, the system leverages machine learning and deep learning models to provide real-time insights into crop conditions and future price trends. The proposed framework enables early detection of crop diseases, assists farmers and stakeholders in making informed decisions and enhances the efficiency of agricultural supply chains. The study demonstrates how the integration of predictive analytics, image processing and data intelligence can revolutionize precision agriculture and contribute to sustainable food production.*

Keywords: Smart Agriculture, Artificial Intelligence, Crop Health Monitoring, Price Forecasting, Supply Chain Management, Machine Learning, Predictive Analytics

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