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AgroVision AI

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Abstract: *Agriculture remains the backbone of India's economy, yet farmers continue to face challenges related to unpredictable crop prices, inefficient water usage, climate variability, and lack of actionable market intelligence. AgroVision AI is an integrated, AI-powered agricultural intelligence platform designed to empower farmers with data-driven insights. Leveraging advanced machine learning models such as LSTM and CatBoost, AgroVision AI predicts crop prices, recommends efficient irrigation schedules, offers precise crop health analysis, and provides real-time weather forecasting. The platform integrates external APIs for dynamic market price updates and weather conditions, while delivering user-friendly dashboards and visual insights through a modern web interface. By synthesizing market trends, soil conditions, climatic factors, and historical data, AgroVision AI enhances agricultural decision-making, optimizes resources, and maximizes profitability for farmers. This research paper presents the design, methodology, and potential impact of AgroVision AI in revolutionizing the agricultural ecosystem through predictive analytics and smart farming technologies.*

Keywords: Artificial Intelligence, Crop Price Prediction, Smart Irrigation, Weather Forecasting, Agricultural Analytics, Machine Learning, AgroTech

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