AgriTech: Empowering Smart Agriculture with AI-Driven Dynamic Agricultural Insights and Predictive Analytics

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Abstract: *The agricultural sector faces increasing challenges with changing climate, fluctuating market demands, and resource scarcity. Addressing these issues requires innovative solutions that leverage data-driven insights and predictive technologies. AgriTech is an AI-enhanced platform designed to empower farmers with real-time agricultural updates, predictive analytics, and personalized recommendations to support decision-making and optimize crop productivity. This application integrates data from soil analysis, weather forecasts, and crop health diagnostics to offer actionable insights, such as tailored crop suggestions based on soil health and environmental conditions. By providing farmers with an accessible and intuitive interface, AgriTech enables sustainable farming practices, improves yield predictability, and fosters resilience in modern agriculture. This project aims to bridge the gap between traditional agricultural practices and advanced AI technologies, fostering a new era of smart, sustainable farming.*

Keywords: Smart Farming, Artificial Intelligence (AI), Crop Suggestions, Sustainable Agriculture

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463

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