Farm Connect Harvestify using ML

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Abstract: *Agriculture in India and around the world faces challenges such as low productivity, incorrect use of fertilizers, and late detection of crop diseases. To tackle these issues, this project proposes **Harvestify**, an intelligent agricultural assistant that uses machine learning to provide smart solutions for farmers. Harvestify integrates three core ML models: **Crop Recommendation**, which suggests the most suitable crop based on soil and environmental conditions; **Fertilizer Recommendation**, which advises the best fertilizers based on nutrient levels and crop type; and **Disease Detection**, which identifies plant diseases using image recognition. The system is built using a modern tech stack including React.js, Node.js, Express.js, and MongoDB, ensuring a smooth and responsive user experience. By enabling data-driven decision-making, Harvestify empowers farmers to improve yield, reduce losses, and adopt sustainable practices. This tool bridges the gap between technology and agriculture, aiming to make farming more efficient, accessible, and intelligent..*

Keywords: Smart agriculture, Machine learning in farming, Crop recommendation system, Fertilizer recommendation, Plant disease detection, Precision agriculture, AgriTech, Sustainable farming