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Fertilizer and Crop Yield Prediction using Machine Learning

Dr. T Subburaj and Chandana A S
Department of Master of Computer Applications
Raja Rajeswari College of Engineering, Bengaluru, Karnataka, India
shubhurajo@gmail.com and chandureddyas2001@gmail.com

Abstract: *The agricultural sector is indispensable to feeding the growing global population, making efficient crop management and yield prediction imperative. Traditional farming practices often rely on subjective decision-making and generalized fertilizer application methods, leading to suboptimal resource utilization and yield outcomes. In this research, we introduce an innovative method Utilizing the capability the bunch of algorithms introduced for machine learning tasks to precise fertilizer recommendation and crop yield prediction. The developed system provides farmers with personalized fertilizer recommendations tailored to their specific soil and crop requirements, thereby minimizing waste and maximizing yield potential. Additionally, real-time monitoring and feedback mechanisms enable adaptive adjustments throughout the growing season, ensuring timely interventions to mitigate adverse outcomes and optimize productivity.*

Keywords: Yield Optimization Algorithms ,Smart Farming Analysis, Precision Agriculture Modeling, Crop Nutrition Predictive Systems, Data-Driven Agronomy, Soil Fertility Analysis.