Crop Yield Prediction and Recommendation in Agriculture using Machine Learning Algorithms

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Abstract: The accurate prediction of crop yield is a complex and multifaceted task, requiring consideration of various factors such as climate conditions, soil properties, and geographic location. To achieve precise crop yield prediction, it is necessary to identify the relationships between these factors and crop yield using comprehensive datasets and advanced algorithms. In this paper, we propose the use of machine learning techniques, specifically Decision Tree and Random Forest models, to predict crop yield and provide crop recommendations. By analysing factors such as temperature, rainfall, and area, these models enable farmers to make informed decisions about crop selection and cultivation practices, while also mitigating the depletion of soil nutrients caused by continuous cultivation of the same crop. Our proposed crop recommendation system takes into account a range of factors, such as annual temperature, rainfall, and soil type and content, providing farmers with tailored recommendations for optimal crop selection and yield.

Keywords: Crop Yield Prediction, Agriculture, Machine Learning Algorithms, Recommendation Systems, Data Analysis.

REFERENCES


