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Farmer Friendly Website

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Abstract: *In this work, the use of machine learning (ML) for precision and smart agriculture is examined. We provide a methodology that makes use of random forests and decision trees to forecast crop yields and suggest ideal growing weather. In addition to historical agricultural data from Faostat (1960-2023), the system makes use of meteorological data from IMD and MeteoStat. To get the data ready for model construction and Power BI dashboard generation, preprocessing is done on the data. The models that have been built investigate the relationships between crop yields and weather patterns, providing guidance for the creation of a farmer recommendation system. Powered by the ML backend, this recommendation system is implemented on an intuitive online platform that offers real-time insights. Moreover, a thorough Power BI dashboard is built using the preprocessed data to provide key performance indicators (KPIs) and agricultural trends. With the help of this framework, farmers may make better agricultural decisions based on data.*

Keywords: machine learning

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