AGRI-COMPANION USING MACHINE LEARNING

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**ABSTRACT:**

With the help of the online application Agri-Companion, farmers will be able to increase agricultural productivity, minimize soil erosion on cultivated land, use fewer chemicals to produce crops, and make the most of available water resources. The random forest method is used in this project to estimate agricultural productivity and determine product costs using temporal information. It has shown that the suggested technique works with a static dataset and often covers a small area. The acquired meteorological data has been extensively used to suggest the appropriate crops that the farmers should choose under the given soil and climatic conditions. Due to seasonal climatic variations as well as the importance of essential elements like soil, water, and air, the use of different fertilizers is similarly unpredictable. Agricultural yields are steadily declining in this setting. Offering farmers a user-friendly recommender system is the problem's answer. In this project, we present a model that takes these issues into account. The suggested methodology enables crop selection based on environmental and economic criteria in an effort to increase crop yields and meet the nation's rising food demand. By examining variables including rainfall, temperature, humidity, soil nutrients, and soil ph, the suggested model forecasts crop production. Farmers will be able to detect diseases in their plants and regulate the soil's nutrient level thanks to a web application.