To Increase the Crop Production and to Predict the Leaf Disease

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Abstract*: Crop production plays a critical role in ensuring food security and meeting the growing demands of an expanding global population. However, challenges such as limited arable land, water scarcity, climate change, and pest pressures pose significant threats to agricultural productivity. Therefore, developing effective strategies to increase crop production is imperative for sustainable agricultural and food systems. Firstly, precision agriculture techniques offer great potential for improving crop productivity, these include sensing technologies to monitor the crop health, and optimize the fertilization practices. By precisely tailoring inputs to crop requirements, farmers can reduce resource wastage and maximize yields, and healthy soils with improved nutrient- cycling and reduced diseases contribute to higher yields and long-term agricultural sustainability.*

Moreover, efficient and optimal crop management is also needed in hand to improve the essential phase of productivity of the crop and the demand of the population. To achieve this, the integration of technology-driven solutions can greatly aid farmers in making informed decisions regarding crop selection and fertilizer suggestion. The crop recommendation module recommends the crop to the user by the parameters given by the user to the application. The fertilizer suggestion module suggests the needed fertilizer for the soil by the nutrient level trained in the set. And the leaf disease module predict the disease and it would tell the precaution measures to the user by detecting the diseases. In addition to the point agriculture is predominant area in the economy of all corners. However there need to be improvision version to increase the crop production and this is done using machine learning and deep learning methods. This journal offers a thorough description of the modules

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