PROJECT OBJECTIVE

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TEAM ID	PNT2022TMID01765
PROJECT NAME	Fertilizer Recommendation System for Disease Prediction

Project Objective:

In day-to-day life, Agriculture is the most important sector. Most plants are affected by a wide variety of bacterial and fungal diseases. Farmers face several challenges when growing crops like uncertain irrigation, poor soil quality, etc. Especially in India, a major fraction of farmers does not have the knowledge to select appropriate crops and fertilizers. Mostly, the plant leaf diseases are caused by Pathogens which are positioned on the stems of the plants. These different symptoms and diseases of leaves are predicted by different methods in image processing. These different methods include different fundamental processes like segmentation, feature extraction and classification and so on. Mostly, the prediction and diagnosis of leaf diseases are depending on the segmentation such as segmenting the healthy tissues from diseased tissues of leaves Moreover, crop failure due to disease causes a significant loss to the farmers, as well as the consumers. While there have been recent developments in the automated detection of these diseases using Machine Learning techniques, the utilization of Deep Learning has not been fully explored. Additionally, such models are not easy to use because of the high-quality data used in their training, lack of computational power, and poor generalizability of the models. To this end, we create an open- source easy-to-use web application to address some of these issues which may help improve crop production. In particular, we support crop recommendation, fertilizer recommendation, plant disease prediction, and an interactive news-feed. In addition, we also use interpretability techniques in an attempt to explain the prediction made by our disease detection model.