Fertilizers Recommendation System For Disease Prediction

Introduction

Diseases in plants and crops can be efficiently analysed by Machine learning model and can provide better solution for the problem with crops. It can also suggest the better Fertilizer for the disease by analyse using the trained model. Computer Vision library is useful by observing the disease image and process it to applicable data. The Machine Learning model make use of the data from image and make prediction of disease in crops.

The diseases are mainly caused by abnormal chemical behaviour in plants. Other main reason is pathogens. They affects the crops and cause diseases and results in decrease in quality of crops. To avoid this , Fertilizers can be used for crops. For using right fertilizer , we should know more details about disease. For better prediction of disease and to suggest better fertilizer, machine learning system can be used efficiently.

Farmers can simply upload the image of crop's disease in system and get the suggested fertilizer from it. It will reduce the time cost for the farmers and effort taken for finding the fertilizer.

Review

The model is using classification method using Convolutional neural network (CNN) for image processing and prediction. The efficiency of model id purely depend on how the model is trained and the amount of data in dataset. Different data of various diseases in dataset will increase the prediction of disease by the model

Advantage:

Analysing can be done efficiently by automated machine learning model and can reduce the possibility of wrong information.

Disadvantage:

New diseases cannot be predicted as there is data in previous dataset. We need to update the new data of disease in existing dataset and train the model for better prediction.

References:

1) Cloud based Automated Irrigation and leaf disease detection system using an android application. International conference on Electronics, Communication and Aerospace Technology, ICECA 2017.

2) Duan Yan-e, Design of Intelligent Agricultural Management Information System based on IOTI, IEEE, 4th, Fourth reference on Intelligent computation technology and automation, 2011 https://ieeexplore.ieee.org/document/5750779