FERTILIZER RECOMMODATION SYSTEM FOR DISEASE PREDICTION

**PROBLEM STATEMENT:**

**->Agriculture is the most important Sector in today’s life. Most of the plants are affected by a wide variety of bacterial and fungal diseases.**

**->Diseases on plants placed a major constraint on the production and major threat of food security. Hence, early and accurate identification of plant diseases are essential to ensure high quantity and best quality.**

**->In recent years, the number of diseases on plants and degree of harm caused has increased due to the variation in pathogen varieties, changes in cultivation methods and inadequate plant protection techniques.**

**->An automated system is introduced to identify different diseases on plants by checking the symptoms shown on the leaves of the plant.**

**-> Deep learning techniques are used to identify the diseases and suggest the precautions that can be taken for those diseases.**

**MODULES:**

1) Crop Recommendation: This module take content of soil and predict which crop is best.

2) Crop Disease Detection: This module required one effected leaf image and after processing it provide us an information about crop disease and solution on that disease

3) Fertilizers Recommendation: This module take content of soil and recommend which fertilizers are required to put in your farm

ADVANTAGE:

1)This project implements Deep learning techniques are used to identify the diseases and suggest the precautions that can be taken for those diseases.

2) The adequate quantity and quality of fertilizers provide the essential nutrients to the soil for the sustained production of crops

3) Instead of a single classifier, the machine learning component is designed with an assembly of multiple classifiers. Each classifier’s performance is evaluated in terms of two well established accuracy metrics; percentage accuracy and Cohen’s kappa.

PRIMARY BENEFICIARY:

1)The Farmers Who Were In an area where the plants are mostly affected by diseases and to those who are in rural areas who don’t have ideas about types of fertilizers

2)Industries based on Grains, Plants for medicines etc...

SECONDARY BENIFICIARY:

1)The People Who Depends on FARMERS for food

2)The Animals Which Depends on the Leaves to Live

HARDWARE SETUP:

1.Soil sample is collected in a small bowl for analysis.

2.The NPK sensor used has two electro chemical

diodes which should be immersed in the soil sample.

3.The diodes will calculate the ions movement in the

soil and produce the total nutrient content in the soil

as a ppm.

4.The individual NPK ratio will be calculated

later with the ppm value

CONCLUSION:

The SYSTEM OFFERS THE FEATURES:

1.Registration of a user

2.Authentication of a user

3.Registration of crop

4.Registration of Agricultural practice

5.Suggestion of a crop

6.Recommendation of crop similar to another

7.Information on crop rotation

