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Fertilizers Recommendation System For Disease Prediction

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README.md

Fertilizers Recommendation System For Disease Prediction

MOTIVATION

- Farming is one of the major sectors that influences a country's economic growth.
- In country like India, majority of the population is dependent on agriculture for their livelihood. Many new technologies, such as Machine Learning and Deep Learning, are being implemented into agriculture so that it is easier for farmers to grow and maximize their yield.
- In this project, I present a website in which the following applications are implemented; Crop recommendation, Fertilizer recommendation and Plant disease prediction, respectively.
    - In the crop recommendation application, the user can provide the soil data from their side and the application will predict which crop should the user grow.
    - For the fertilizer recommendation application, the user can input the soil data and the type of crop they are growing, and the application will predict what the soil lacks or has excess of and will recommend improvements.
    - For the last application, that is the plant disease prediction application, the user can input an image of a diseased plant leaf, and the application will predict what disease it is and will also give a little background about the disease and suggestions to cure it.
- Project status: Prototype

Project workflow

Use for instance https://github.com/IBM-EPBL/IBM-Project-17508-1659672731:

> Fertilizers Recommendation System For Disease Prediction
>
> ```
> * Project Progress
>
>     * [Problem Statement] - [ https://github.com/IBM-EPBL/IBM-Project-17508-1659672731/blob/main/Problem_Statement_Fertilizer_recomentation_sy
>
>     * [Empathy Map] - [ https://user-images.githubusercontent.com/87495210/189498124-818e4c89-cfda-4961-bd84-85d1c1ab10d2.png ]
>
>     * [Literature Review] - [ https://github.com/IBM-EPBL/IBM-Project-17508-1659672731/blob/main/IBM_literature%20_survey.pdf ]
> ```
>
> ### Project Objectives:
>
> ```
> 1. Preprocess the images.
> 2. Applying the CNN algorithm to the dataset.
> 3. How deep neural networks detect the disease.
> 4. You will be able to know how to find the accuracy of the model.
> 5. You will be able to build web applications using the Flask framework.
> ```

Introduction

Agriculture is the most important sector in today's life. Most plants are affected by a wide variety of bacterial and fungal diseases. Diseases on plants placed a major constraint on the production and a major threat to food security. Hence, early and accurate identification of plant diseases is essential to ensure high quantity and best quality. In recent years, the number of diseases on plants and the 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.

Technical Architecture :

About

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Resources

Readme

Stars

17 stars

Watchers

2 watching

Forks

28 forks

Releases

No releases published

Packages

No packages published

Contributors 5

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- @JAYAPRAKASH2812200
- @BALABASKARANS

Languages

- Jupyter Notebook 100.0%

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