Ideate for India

Plant Disease Classifier

Category - Agriculture

The Plant Disease Classifier (PDC) is aimed at farmers. Its main application is to classify the following 24 plant leaf diseases:

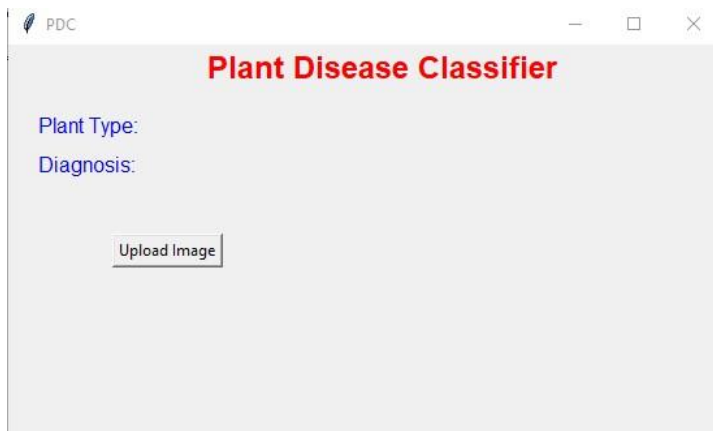| Plant	Disease
Apple	1. Apple Scab 2. Black Rot 3. Cedar Apple Rust
Cherry	4. Powdery Mildew
Corn/ Maize	5. Cercospora leaf spot 6. Common Rust 7. Northern Leaf Blight
Grape	8. Black Rot 9. Esca (Black Measles) 10. Isariopsis Leaf Spot
Peach	11. Bacterial spot
Pepper	12. Bacterial Spot
Potato	13. Early Blight 14. Late Blight
Strawberry	15. Leaf Scorch
Tomato	16. Bacterial Spot 17. Early Blight 18. Late Blight 19. Leaf Mold 20. Septoria Leaf Spot 21. Spider Mites 22. Target Spot 23. Tomato Mosaic Virus 24. Tomato Yellow Leaf Curl Virus

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About This Project

For this project we will be doing Image Classification by building a Convolutional Neural Network (Deep Learning) using TensorFlow and Keras via Python programming language. We will be using the PlantVillage Plant Disease dataset for our project. The link to the dataset is provided below:

https://github.com/spMohanty/PlantVillage-Dataset/tree/master/raw/color

The following libraries will be used:

- ➢ Opencv
- ➢ TensorFlow
- ➢ Keras
- ➢ Tqdm
- ➢ Pickle
- ➢ Matplotlib
- ➢ NumPy
- ➢ SciPy
- ➢ Pandas
- ➢ Tkinter

The Plant Disease Classifier GUI

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The Plant Disease Classifier predicting Bell Pepper leaf with Bacterial Spot from leaf image only.

Other References:

https://arxiv.org/abs/1511.08060

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