RICE DISEASE DETECTION BY IMAGE ANALYSIS

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ABSTRACT

Rice is the major crop that is grown in India. Rice is the staple food in India. Rice plants are affected by various kinds of disease like hispa, brown spot, and leaf blast and show the syndrome in the leaf of these diseases. If these diseases are detected early and taken appropriate action, it will restrain extensive economic loss for the farmer.

Rice leaf diseases can be detected based on image processing techniques. Diseases are classified in rice plants by analyzing photographs of rice leaves. The method uses image processing algorithms to detect leaves and likely disease-induced lesions in the leaves.
Several attributes are computed based on the dimensions of leaves and lesions, the numbers and shapes of lesions, as well the color characteristics of lesions and intact portions of leaves. These attributes are used to build classification models using well established algorithms.

SYSTEM SPECIFICATIONS

ENVIRONMENT	SPECIFICATIONS
HARDWARE	• Processor - Intel Core i5 • Memory(RAM) - 4 or 8GB • Storage - 1 TB
SOFTWARE	• Python libraries • OS - Windows10 • Anaconda or Google Colab

TIMELINE

Review	Topics
Review 0	• Requirements • Specifications • Base Paper and References
Review 1	• Architecture Diagrams • Data Source • Data Preprocessing • Partial implementation of features
Review 2	• Complete Implementation • Results • Report for the Project

REFERENCES

1. Chawathe, S. S. (2020). **Rice Disease Detection by Image Analysis**. 2020 10th Annual Computing and Communication Workshop and Conference (CCWC). (Base paper)
2. Pukkela, P. and Borra, S., 2018. **Machine Learning Based Plant Leaf Disease Detection and Severity Assessment Techniques**: State-of-theArt. In Classification in BioApps. (Springer)
3. Zhang, X., Qiao, Y., Meng, F., Fan, C. and Zhang, M., 2018. **Identification of Maize Leaf Diseases Using Improved Deep Convolutional Neural Networks**. (IEEE)

4. **Dataset** : Images are collected from **ANGRAU RARS LAM**

Thank You