

MACHINE LEARNING APPROACH FOR DETECTION OF TEA LEAF DISEASES USING CONVOLUTIONAL NEURAL NETWORK ARCHITECTURE

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India is a major global tea exporter, but tea cultivation faces yield losses of up to 40% due to diseases. Accurate identification of these diseases is vital to reduce production loss. Traditional visual detection methods are ineffective, so this study introduces a Deep Convolutional Neural Network (CNN) designed to classify tea leaf diseases, including Gray Blight, Algal Spot, Brown Blight, Helopeltis, Healthy Leaves, and Red Spot. The model was trained on 5,867 images from Kaggle and achieved a high accuracy of 98.25%, outperformed VGG16
