

Machine Learning Based Tomato Plant Disease Identification using Data Augmentation

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ABSTRACT

In agriculture, health of crops remains a major concern, with climate change, factors leading to disease in crops have increased. Crop diseases can have different effects, but if we can spot diseases that spread through leaves at an early stage and identify them accurately, we can prevent them from getting worse. With the advancement of machine learning algorithms, in the field of deep learning and image processing we can use it for appropriate identification of plant leaf disease and provide the required treatment. In this paper, we aim at identifying tomato plant leaf diseases as it is a crop that is widely cultivated and consumed. Throughout the course of our research, we have explored five distinct categories, which includes Bacterial Spot, Late Blight, Septoria Leaf Spot, Yellow Leaf Curl Virus, and Healthy Tomato Plants. We have applied data augmentation techniques and trained on Convolution Neural Network (CNN) to obtain best possible results. These methods provide a clearer path in achieving plant leaf disease detection in the stages where it could be terminated.

Keywords: Machine learning, Deep Learning, Image processing

How to Cite

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