

**Paper Title:**

Performance Analysis of Different CNN Architecture with Different Optimisers for Plant Disease Classification

**Paper Link:**

<https://ieeexplore.ieee.org/document/8728282/>

**1 Summary****1.1 Motivation**

Microbial illness on plants causes the loss of more than 16% of total productivity. In this 16%, the damage caused by fungi alone accounts for 70% to 80%.

**1.2 Contribution**

The study aims to detect and identify diseases in grape plants, including black rot, leaf blight, and black measles infections using several Deep Learning methods. This study also aims to observe the performance of different models.

**1.3 Methodology**

The authors approached for transfer learning using several CNN architectures, they are: Inception, ResNet, MobileNet. As architectures learn from the parameters (weights and bias) several optimization techniques are also used, such as: SGD, Adagrad, Adam, Adadelta and performances were observed with different optimizers.

**1.4 Conclusion**

inception v3 architecture with adam optimizer is one of the optimum choices for classifying grape leaves to identify the type of disease.

**2 Limitations****2.1 First Limitation**

The study did not discuss parameters and features, and why inception\_v3 performed better among the others.

**2.2 Second Limitation**

This study could use more models and evaluation metrics to analyze the result

**3 Synthesis**

Early identification of disease in plants is very important to detect the disease and increase the yield. This paper will help the farmers and decision makers to produce more healthy crops and make preventive decisions for better quality yielding.