

## Topic : Plant Disease Classification and Detection

**Abstract:** Agricultural productivity is very dependent on the economy. Plant disease play an import role in agriculture because plant diseses are very natural and failure to care will have serious consequences for plants. Detection of plant diseses is important to prevent loss.

**Reference paper:** <https://ieeexplore.ieee.org/document/9142988>

The reference paper used is "Leaf disese detection and classification by Decision Tree Algorithm".

In this paper they are using decision tree algorithm to classify the healthy plant and disease plant. They are taking input image and doing preprocessing. of image. Then applying segmentation techniques. Now features are extracted and giving input to machine learning algorithm to classify the disease plant and healthy plant.

**Enhancement of work:** I want to use deep learning technique i.e convolutional neural network to classify the plants.

I will take input image. Since the images may not be clear, I will apply Averaging filters like gaussian low pass filter to make the images smoothning and also to remove noise in the preprocessing step. Now I will convert it to gray scale image. I will apply thrsholding techniqe to distinguish healthy part and disease part in the image. These I will feed to CNN network where the model gets trained and tested. I will be using Accuracy metric to check the model performance.