Abstract

This paper holds a survey on plant leaf diseases classification using image processing. Digital image processing has three basic steps: image processing, analysis and understanding. Image processing contains the preprocessing of the plant leaf as segmentation, color extraction, diseases specific data extraction and filtration of images. Image analysis generally deals with the classification of diseases. Plant leaf can be classified based on their morphological features with the help of various classification techniques such as PCA, SVM, and Neural Network. These classifications can be defined various properties of the plant leaf such as color, intensity, dimensions. Back propagation is most commonly used neural network. It has many learning, training, transfer functions which is used to construct various BP networks. Characteristics features are the performance parameter for image recognition. BP networks shows very good results in classification of the grapes leaf diseases. This paper provides an overview on different image processing techniques along with BP Networks used in leaf disease classification.


**Index Terms**

Computer Science  
Image Processing
Keywords

Back Propagation; Image Processing; Artificial Neural Network