Abstract

The cotton leaf disease detection is the process of detecting disease by analyzing their visual properties. The visual properties extraction process from the images is known as the feature extraction. The feature extraction process can be done using the various feature descriptors like SIFT, SURF or other most suitable candidate. The feature descriptors are then passed to the classifier for the evaluation of the feature. The classifier is the algorithm, which is used to classify the feature on the basis of its similarity with the training dataset. The training dataset is the collection of features previously extracted from the known objects (the leaves with specific disease in this case). The leaves with disease are classified on the basis of their similarity with the training dataset of disease samples previously described by the feature descriptors. In this paper, our aim is to solve the cotton disease detection problem using the image processing techniques automatically from the input image. The disease classification will primarily based upon the visibility of the disease on the cotton leaves, which further can be used for the identification using the classifier. The proposed model implementation would be done using the MATLAB simulator and the proposed model results would be obtained in the form of the
accuracy, precision, recall, elapsed time and many other similar parameters.

References


4. Qinghai He, Benxue Ma, Duanyang Qu, “Cotton pests and diseases detection based on image processing,” TELKOMANIA, Vol 11, no 6, June 2013


8. Haiguang Wang, Guanlin Li, Zhanhong Ma, Xiaolong Li, "Image Recognition of Plant Diseases Based on Principal Component Analysis and Neural Networks" 2012 8th International Conference on Natural Computation (ICNC 2012)


2011


18. Di Cui, Qin Zhang, Mingan Li, Youfu Zhao and Glen L.Hartman “Detection of Soyabea rust using a multispectral image sensor,"Springer Link-Journal article, 2009


Index Terms

Computer Science          Applied Sciences
Keywords

Cotton disease classification, disease verification, leaf borne disease classification, disease feature descriptor, SIFT, SURF, vector classifier.