Abstract

The plant diseases are a normal part of nature but can cause significant economic, social and ecologic loss globally. It's difficult to monitor continuously plant health and detection of diseases. The paper presents a survey of recent studies on the area of plant disease recognition and classification from digital images using image processing and soft computing techniques. The main aim of the paper is to focus on the area of plant pathology recognition and classification only. The paper is omitting the disease severity quantification. Although the paper, considering the images of symptoms presents on plant leaves and stems only for limiting the survey. Each considered paper in the review, representing the comprehensive details of the technical implementation of an algorithm. The algorithm begins with digital image acquisition of infected and non-infected plants; perform image preprocessing, differentiate disease infected region from a non-infected region using segmentation, extract features from segmented images for recognition and classification. This survey expected to useful for researchers from plant pathology and pattern recognition field.
References


Recent Studies of Image and Soft Computing Techniques for Plant Disease Recognition and Classification


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Index Terms

Computer Science

Pattern Recognition

Keywords

Plant diseases, image processing, support vector machine (SVM), neural network.