A Review on Digital Image Processing Techniques for Automatic Detection, Quantification and Identification of Plant Diseases

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Abstract

This paper presents a study of different methods based on digital image processing techniques for detection, quantification and identification of plant diseases. Diseases can affect at any part of plant i.e. root, stem, leaf, fruit etc. This paper includes only those methods in which leaves were affected by diseases. Disease symptoms must be visible on leaves. Identification of the plant diseases is a very vital process to avoid the losses in both quality and quantity of crops in agricultural production system. It is very tough job to monitor the plant diseases manually. Manual plant disease monitoring system needs more processing time and expertise in the plant disease. So a fast, automatic and accurate approach to identify the plant diseases is needed. Hence, image processing techniques are used for the detection, quantification and identification of plant diseases because these techniques are fast, automatic and accurate. Disease detection by image processing techniques includes the main steps like image acquisition, image pre-processing, image segmentation, feature extraction and identification of disease.
References


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Index Terms

Computer Science  Image Processing

Keywords

Plant diseases; image processing; image segmentation