Automatic Recognition of Vegetable Crops Diseases based on Neural Network Classifier

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Authors:
Ismail El Massi, Youssef Es-saady, Mostafa El Yassa, Driss Mammass, Abdeslam Benazoun

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Abstract

This paper presents a pattern recognition system for the identification of the vegetable crops diseases from images. The proposed system is based on three main phases: Segmentation, feature extraction and classification. The segmentation of the images is carried out using k-means clustering method. Then, three type of features are extracted from the segmented images including color, texture and shape. These features are used for training and classification using neural networks. The tests of this study are carried out on 300 images of three vegetable crops diseases (Early blight, Late blight and Powdery mildew). The results, with a recognition rate of 95.3 %, show that the proposed system would be interesting to use as means of diagnosis of vegetable crops diseases.
References


Index Terms

Computer Science

Networks
Keywords

Pattern recognition, Classification, Neural network, Vegetable crops, Diseases, Image.