Abstract

In this paper we propose an algorithm based on fuzzy threshold and clustering segmentation for different plant analysis. Segmentation of the plant from background objects is a challenging task for different plant leaf recognition and classification. Before applying the proposed method pre-processing technique like image conversion, noise reduction by median filter, morphological operation and finally wavelet transformation has to be processed. The proposed method provides good results based on fuzzy threshold and clustering techniques for detection of most homogeneity region in plant leaf images. The relative performance of the conventional and proposed methods is evaluated using Variation of Information, Energy, Entropy and Evaluation Time. It proves that the proposed method gives suitable results for efficient classification and recognition.

References

A Novel Approach for Plant Leaf Image Segmentation using Fuzzy Clustering

82-87, 2009.

- Huang, R.; Lum, E.; Ma, K. -L.; Multi-scale morphological volume segmentation and visualization, Proceeding of International Asia Pacific Symposium on Visualization, pp. 121-128, 2007.

Index Terms

Computer Science
Keywords
Segmentation  Fuzzy Thresholding  Morphological Operation  Wavelet Transformation  Fuzzy Clustering And Hausdorff Distance Method