Abstract

This paper presents an automated system for recognizing the medicinal plant leaves that are taken from the suburbs of the western ghats region. The dataset comprises of 250 different leaf images, of five species. Texture analyses of the leaf images have been done in this work using the feature computation. The features include grey textures, grey tone spatial dependency matrices (GTSDM) and Local Binary Pattern (LBP) operators. For each leaf image, a feature vector is generated from the statistical values. 70% of the images in the dataset are the training dataset and the rest are included in the test set. Six different classifiers are used to classify the plant leaves based on feature values. When features are combined without any preprocessing, it yielded a classification performance of 94.7%.

References

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**Index Terms**

Computer Science  
Image Processing

**Keywords**

image classification  texture features  plant identification