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Abstract

In the proposed work, classification of diseased and undiseased arecanut have been determined using texture features of Local Binary Pattern (LBP), Haar Wavelets, GLCM and Gabor. This work has been carried out in two stages. In the first stage, LBP have been applied on each color component of HSI and YCbCr color models and histogram of LBP is generated. The statistical method correlation is used to measure the distance between histogram of training

set and query sample and obtained a success rate of 92.00%. We have not achieved better results in the first stage. In the second stage, texture features of Haar wavelets, GLCM and Gabor have been used. In this stage, RGB input arecanut image is transformed to HSI and YCbCr color models and texture features are extracted from each color component. Subset of texture features with high degree of discrimination power has been identified empirically based on combination of texture features. The kNN classifier gave a success rate of 100% for discriminative subset of texture features.

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Index Terms

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Keywords

Arecanut Classification Discriminative Texture Features Gabor Filters Glcm Haar Wavelets

Lbp