Abstract

Texture can be observed in many natural and synthetic images from multispectral satellite images to the microscopic images of cell or tissue samples. Texture is an innate property of virtually all surfaces, the grain of wood, the weave of fabric, the pattern of crop in fields etc. It contains important information about the structural arrangement of surfaces and their relationship to the surrounding environment. Since the textural properties of images appear to carry useful information, for discriminating purpose features have always been calculated for textures.

The paper deals with the pattern classification using texture features. The features used in the project are standard deviation and entropy of all parts obtained after 3rd level decomposition using DWT. A mean feature vector is calculated and is used for classification. For classification distance similarity is used. The different distances used are Euclidean distance, Manhattan distance, Bray Curtis distance and Canberra distance. The
efficiency of classification is calculated for each distance and is compared. The time required for each retrieval, in every distance method used, is also calculated.

Reference


Index Terms

Computer Science       Pattern Recognition

Key words

Texture

pattern classification

DWT

Euclidean distance

Bray Curtis distance
Texture Based Pattern Classification

Manhattan distance

Canberra distance