Skin Cancer Detection using GLCM Matrix Analysis and Back Propagation Neural Network Classifier

Abstract

The presented work here is focused on extraction of features inclusive of contrast, correlation, homogeneity, entropy, radius, standard deviation and perimeter etc for exact detection of the cancer stage and the post treatment progress could be estimated by the direction and dimensional analysis of parameters. A statistical method of examining texture that considers the spatial relationship of pixels is the gray-level co-occurrence matrix (GLCM), also known as the gray-level spatial dependence matrix. The GLCM functions characterize the texture of an image by calculating how often pairs of pixel with specific values and in a specified spatial relationship occur in an image, creating a GLCM, and then extracting statistical measures from this matrix. A back propagation neural network is suggested for classification of different class of skin cancer by providing sufficient no. of training images to the classifier. The classification results are given in result section of the paper.

References

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**Index Terms**

Computer Science
Information Sciences

**Keywords**

Skin Cancer   Neural Network   Back Propagation