Classification of Skin Melanoma using ANN

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Abstract

Cancer is one of the most deadly types of disease in the present era and skin cancer is one of them, an early detection of skin cancer can save many lives. Skin cancer occurs on the melanocytic cells of skin, so skin cancer is also known as malignant melanoma. It causes abnormal growth of melanocytic cells which produces sun protective pigment melanin. Due to melanin, melanoma appears as black or brown colour. For the detection of melanoma, conventional method is Biopsy. It is done by removing the skin sample and sample goes through a series of laboratory test. It is a time consuming process. It is more advantageous if computer based melanoma detection is used. This computer based detection contains imaging and artificial intelligence technique. In this paper we present novel approach for the detection of melanoma. This detection can be done with different steps- Dermatoscopy, Processing of image, Segmentation of region of interest, Feature extraction using Gray Level Co-occurrence Matrix (GLCM).These features are used for classification of cancerous and non-cancerous melanoma using Back-Propagation Artificial Neural Network (ANN).
References


14. American cancer society, “Cancer Facts and Figure 2015”.

Index Terms

Computer Science Applied Sciences
Keywords

Melanoma, Dermatoscopy, Segmentation, Gray Level Co-occurrence Matrix, Artificial Neural Network