

OPTIMAL ALGORITHM FOR MELANOMA SKIN CANCER DETECTION

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ABSTRACT

The skin cancer is one of the most Hazardous form of the Cancers found in the Humans today; especially, in the recent years, number of melanoma skin cancer patients have been recorded rapidly all over the world. Skin cancer is found in various types such as Melanoma, Basal and Squamous cell Carcinoma. Among them Melanoma is the most unpredictable. The detection of Melanoma cancer in early stage can be helpful to cure it. However, the segmentation of the melanoma skin cancer lesion in traditional approach is a challenging task due to the number of false positives is large and time consuming in prediction. Hence, the development of automated computer vision system becoming as an essential. The aim in this study is to identify the specific cancer region with accuracy than traditional approaches. So, the objectives of this study are to examine existing systems and identify the major issues of the systems and finding future directions based on image processing techniques. The input to the system is the skin lesion image and then by applying novel image processing techniques. The finding of the study shows that, the new proposed approach could achieve 97.54% sensitivity, 97.69% specificity, and 97.56% accuracy respectively. This tool is more useful for the rural areas where the experts in the medical field may not be available. Since the tool is made more users friendly and robust for images acquired in any conditions, it can serve the purpose of automatic diagnostics of the melanoma Skin Cancer.

Keywords: Canny edge, Thresholding, Watershed.