Segmentation of Skin Lesion towards Melanoma Skin Cancer Classification

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Melanoma, one type of skin cancer is considered o the most dangerous form of skin cancer occurred in humans. However it is curable if the person detects early. To minimize the diagnostic error caused by the complexity of visual interpretation and subjectivity, it is important to develop a technology for computerized image analysis. This paper presents a methodological approach for the classification of pigmented skin lesions in dermoscopic images. Firstly, the image of the skin to remove unwanted hair and noise, and then the segmentation process is performed to extract the affected area. For detecting the melanoma skin cancer, the meanshift algorithm that segments the lesion from the entire image is used in this study. Feature extraction is then performed by underlying ABCD dermatology rules. After extracting the features from the lesion, feature selection algorithm has been used to get optimized features in order to feed for classification stage. Those selected optimized features are classified using kNN, decision tree and SVM classifiers. The performance of the system was tested and compare those accuracies and get promising results.