

Early Detection Of Skin Cancer (Melanoma) Using Extract Suitable Features Dermatoscopy Images

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The purpose of this thesis is to provide a new method for extracting image characteristics to enhance the diagnosis of melanoma skin cancer. The color of the skin is divided into three groups: benign, dysplastic, and melanoma. Melanoma is a skin cancer and often begins in skin cells called melanocytes. In parts of the world, especially in western countries, melanoma has been more than other areas. Diagnosis of melanoma in the early stages of the disease can greatly prevent death this cancer. Since the diagnosis of this disease is difficult in the early stages, even by efficient physicians, the presentation of a method that makes it easy to diagnose melanoma is very useful and valuable at many early stages. In the proposed method, dermatoscopic images were first performed under the necessary preprocessing then by precisely mapping the image Extracted the proper characteristics of skin lesions and extracted properties in a vector with a special vector name. Finally, the use of appropriate and efficient categorization such as neural networks (NN) and support vector machine (SVM) will be effective in distinguishing skin lesions in order to diagnose the type of disease in the affected patient. Since the most important step in detecting skin cancer the images is the extraction of important features related to skin lesions in the image, we focus on this important step in this thesis. This algorithm was successful at diagnosis of melanoma with approximately 94% accuracy. The results of the simulation indicate the simplicity and precision of the method proposed in the development and implementation of early diagnosis of skin cancer (melanoma) compared with the previous methods.

Keywords : Image Processing;Melanoma; Classification; Property Extraction;Neural Networks; Support Vector Machine

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