

# **Skin Melanoma Cancer Detection and Classification using Machine Learning**

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**Abstract:** *Early identification of melanoma skin cancer is essential for effective therapy. Melanoma is currently recognized as the most lethal type of skin cancer among all others due to its high propensity to metastasize to distant organs if undiagnosed and untreated. In the clinical diagnosis of many disorders, non-invasive medical computer vision or medical image processing is becoming increasingly important. These methods offer an automatic image analysis tool for a quick and accurate lesion evaluation. The steps in this study's methodology include gathering a database of dermoscopy images, pre-processing, segmentation using thresholding, statistical feature extraction using Gray Level Co-occurrence Matrix (GLCM), Asymmetry, Border, Color, Diameter, etc., and feature selection using Principal Component Analysis.*

**Keywords:** Melanoma, Convolution Neural Network (CNN), Gray Level Co-occurrence Matrix (GLCM), Asymmetry, Border, Color, Diameter, (ABCD)