

# Advanced Skin Cancer Detection Using Machine Learning

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**Abstract:** Early skin disease prediction is essential for effective therapy. Melanoma is now commonly acknowledged to be the most dangerous kind of skin cancer among the others because, in the event that it is not detected and treated promptly, it has a significantly increased risk of spreading to other body parts. Medical image processing and non-invasive computer vision are becoming more and more important for the clinical diagnosis of various illnesses. These techniques provide an automated image analysis tool for a rapid and accurate lesion assessment. The steps involved in this study include building a database of dermoscopic images, preprocessing, thresholding, segmentation, statistical feature extraction using a Gray Level Co-occurrence Matrix (GLCM), feature selection using Principal Component Analysis (PCA), determining the overall Dermoscopic Score, and classification using a Convolution Neural Network (CNN).

**Keywords:** Convolutional Neural Network (CNN), Principal Component Analysis (PCA), and Gray Level Co-occurrence Matrix (GLCM).

