

# Skin Cancer Prediction using Deep Learning

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**Abstract:** *There are over 200 different forms of cancer. Out of 200 cases, melanoma is the most lethal form of skin cancer. The melanoma diagnostic process begins with clinical screening followed by dermatoscopy and histopathological examination. If cutaneous melanoma is detected early, the cure rate is high. The first step in diagnosing cutaneous melanoma is a visual examination of the affected areas of the skin. Dermatologists take the dermatoscopic images of the skin lesions by the high-speed camera, which have an accuracy of 65-80% in the melanoma diagnosis without any additional technical support. With further visual examination by cancer treatment specialists and dermatoscopic images, the overall prediction rate of melanoma diagnosis raised to 75-84% accuracy. The project aims to build an automated classification system based on image processing techniques to classify skin cancer using skin lesions images. There is a necessary need for early detection of skin cancer and can prevent further spread in some cases of skin cancers, such as melanoma and focal cell carcinoma. Anyhow there are several factors that have bad impacts on the detection accuracy. Recently, the use of image processing and machine vision in medical and medical applications is growing to a greater degree. In this article, convolutional neural networks are used to detect and classify cancer classes based on historical clinical image data using CNNs. Some of the goals of this study are to build a CNN model for skin cancer detection with over 80% accuracy, keep the false-negative rate below 10% in prediction, achieve over 80% accuracy, and render the data. Simulation results show that the proposed method has advantages over other comparison methods.*

**Keywords:** CNN Algorithm, Skin lesion images, Skin cancer prediction, Melanoma, Deep Learning

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