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A Review on Skin Lesion Classification using Machine Learning

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Abstract: *One of the most critical steps in medical health is the proper diagnosis of the disease. Dermatology is one of the most volatile and challenging fields in terms of diagnosis. Dermatologists often require further testing, review of the patient's history, and other data to ensure a proper diagnosis. Therefore, finding a method that can guarantee a proper trusted diagnosis quickly is essential. Several approaches have been developed over the years to facilitate the diagnosis based on machine learning. However, the developed systems lack certain properties, such as high accuracy. This study proposes a system developed in MATLAB that can identify skin lesions and classify them as normal or benign. The classification process is effectuated by implementing the K-nearest neighbor (KNN) approach to differentiate between normal skin and malignant skin lesions that imply pathology. KNN is used because it is time efficient and promises highly accurate results. The accuracy of the system reached 98% in classifying skin lesions.*

Keywords: Machine learning, Skin disease, K-nearest neighbor, Skin detection, MATLAB, Graphical user interface

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