Prediction of Skin Diseases using Machine Learning Algorithms

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Abstract: *Skin diseases caused by fungi, bacteria, allergies, viruses and other infections are some of the common ailments that affect people. With the advent of cutting-edge medical technology, the diagnosis of skin diseases has been made possible and easy with the added benefits of the speed and accuracy. One of the challenges with diagnosis of skin diseases is that it is very expensive due to the high dermatologists' fees as well as the cost of the medical equipment used in screening. An image processing system used for the diagnosis of skin diseases is costly but it increases the speed at which diagnosis is done including increase in the number of accurate diagnoses per day. This paper proposes a skin disease diagnosis based on Machine Learning, particularly neural networks which are trained with a given dataset and later using images taken from screening medical equipment in digital, predict a particular skin disease with respect to a given dataset. Training involves the input of a dataset from which the minimum number of images after the sum of all classes in the dataset is obtained. The selected images are resized into uniform dimensions to avoid reduction of accuracy in prediction before feature collection is done. Matlab gives the best platform for implementing as it has high processing power which allows it to handle large amount of dataset and also the capability to debug the code easily.*

Keywords: Convoluted Neural Networks (CNN), Deep Neural Networks (DNN), Residual Neural Networks (RNN), MATLAB Resnet-50

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