

## **SKIN DISEASE DIAGNOSIS USING NEURAL NETWORKS**

*Skin disease is one of the commonly occurring diseases which are difficult to diagnose because they have similar features and the process is also very complex. A patient needs a dermatologist who has good and vast experience in order to give precise results at the right time. A prototype with back propagation neural network can be used to assist the dermatologist and hence it improves expert diagnosis method in terms of time efficiency and diagnosis accuracy. Feature selection is a must because of the presence of noisy, irrelevant or misleading features. Two feature selection methods namely Correlation Feature Selection and Fast correlation-based Filter will give a smaller number of features with greater accuracy and faster response time. The adjustment of parameters in Back propagation neural network gives good performance. The findings shows that Fast correlation based filter method offers the shortest elapsed time and highest result compared to correlation feature selection method and the full features with an accuracy of 91.66%. Datasets for performing experiment were taken from the bookmark website and it is processed to avoid unwanted features. Features after processing were fed to the artificial neural networks for carrying out the testing as well as training. For each input the network will perform the comparison process that is the output obtained is compared with the target and the process repeats until the output and target becomes the same. The features can be of two types, clinical features and histopathological features. Each of these features is used in training as well as testing of data. In the final prototype the values of features according to severity can be entered. With these inputs we can finally diagnose the disease.*