**PROPOSED SYSTEM**

M. Vidya and M. V. Karki proposed a benign vs melanoma skin lesion classifier wherein the algorithm applies feature extraction using ABCD rule, GLCM and HOG feature extraction. Geodesic Active Contour (GAC) technique, an active contour technique was used for image segmentation. The classification was done using SVM, KNN and Naïve Bayes classifier, where the SVM classifier outperformed with an accuracy of 97.8%

In the authors proposed an automatic skin lesion segmentation method in which preprocessing for noise and hair removal is performed in the first phase, followed by image segmentation using GrabCut and Flood fill algorithms. Classification of skin lesions is done by k-means clustering. The proposed method was tested on ISIC 2017 and PH2 datasets, resulted in accuracy of 92% and 96% respectively. The Dice coefficient values are obtained to be of 0.82 for ISIC 2017 dataset and 0.92 PH2.

The contour energy is the sum of internal energy (representing the elasticity and smoothness of the contour) and external energy (energy of contour towards the object in the image). In this technique, the contour energy is minimized by treating it as minimal partition problem. After applying level set formulation, it reduces to a ”mean-curvature flow”-like evolving active contour which then vanishes at the desired boundary. This method, unlike other proposed active contour segmentation techniques, does not rely on the edge function and the image gradient to halt the curve evolution, and hence it can be applied to segment the objects whose boundaries are not well-defined by the gradients.