Hybrid Support Vector Machine and Distance Classifier in Breast Tumor Detection

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Abstract

It is time to look back to balance life style as cancer is affecting all stage of life. Several research studies are going on to make the detection process of cancer painless. Technology is playing an important role in this process. We are pursuing our work in support of easy detection of cancerous tumor by applying technology. Artificial Intelligence is used to detect MRI images and help in decision making. In our work we have proposed two hybrid model. First model is the combination of Support vector machine and Modified Back Propagation Neural Network. Second model is combination of Distance classifier and Modified Back Propagation. We have collected more than five thousand MRI dataset related to breast cancer. These images were preprocessed and applied in this hybrid models.

In the first section of our work, we have given introduction of Support vector machine. In the second and third section hybrid model of the Support vector machine and distance classifier are discussed. In result and discussion, we have presented the sample of statistical data and output. Our model is 97% accurate in detection of tumor in breast.

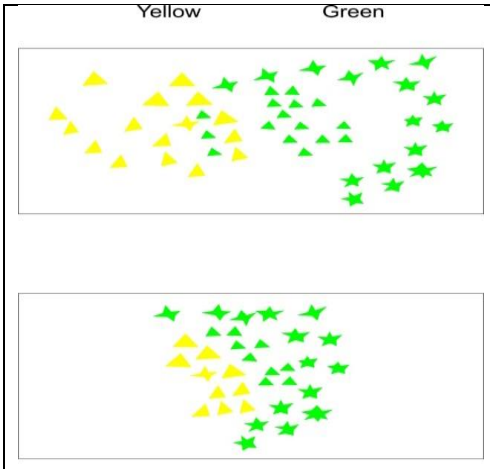

Figure 1. Architecture of SVM Non Linear Separable

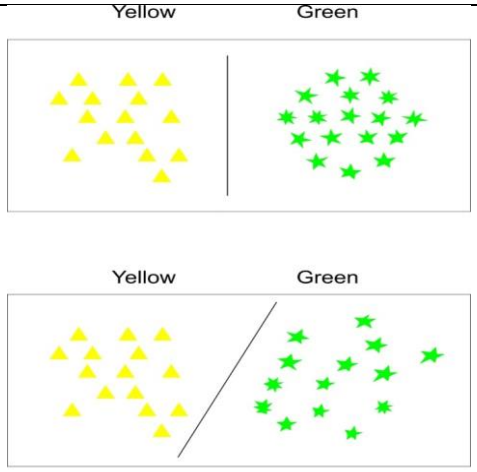

Figure 2. Architecture of SVM Linear Separable

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