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MAMMOGRAM CLASSIFICATION BASED ON CONVENTIONAL HAAR TRANSFORM

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Abstract

In this study, to classify the microcalcification severity in digital mammogram images discrete wavelet transform (DWT) is used. The leading cause of cancer mortality among women arises due to breast cancer. Digital mammogram plays an important role for cancer diagnosis. The early sign of breast cancer is the appearance of microcalcifications clusters on mammogram images. In this proposed method discrete wavelet transform is utilized as feature extraction technique. In which features are extracted from the DWT decomposed mammogram. The extracted features are fed as input to the classifier. The classification of microcalcification clusters into benign or malignant is done by k nearest neighbor classifier (KNN). The proposed DWT based classification of microcalcification approach achieves satisfactory performance than the conventional Haar transform.

Keywords: Discrete wavelet transforms, microcalcification, mammogram, benign, malignant, nearest neighbor classifier, energy features.