RADON TRANSFORM BASED CLASSIFICATION OF MAMMOGRAMS WITH IMPROVED LOCALIZATION

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ABSTRACT

This paper focuses on the development of a highly efficient computer aided detection system to classify normal and abnormal mammograms and to localize the calcification. The contrast enhancement of the image is done as a preprocessing step using contrast limited adaptive histogram equalization (CLAHE). Local maxima of the image is obtained using H-dome transformation. Extraction of features includes Discrete Cosine Transform (DCT) and Radon Transform (RT).The extracted features are given as the input to the SVM classifier. This algorithm tested on one hundred images and classified the normal and abnormal mammograms and finally reduced the region of interest by localizing the abnormalities like calcifications.

KEYWORDS: CLAHE, H-Dome Transformation, DCT, Radon Transform, SVM