EARLY DETECTION OF BREAST CANCER IN DIGITAL MAMMOGRAMS BASED ON IMAGE PROCESSING AND MACHINE LEARNING

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Abstract:
A method based on artificial intelligence using digital mammograms data has been proposed in this paper for detection of breast cancer. The method is based on an image processing technique for enhancing the image. Regions of interest (RoI) have been detected based on ground truth (GT) data and markings using the enhanced images. Texture features based on gray-level-co-occurrence matrices (GLCMs) and intensity based features are extracted from RoI. Neural network based supervised classifier system has been used for classification purpose which can discriminate between benign and malignant mammograms. A total of sixty eight digital mammograms have been used to train the classifier based on the two aforementioned techniques. GLCM showed ninety-two percent accuracy as compared to the intensity based method which provided eighty-five percent accuracy. The obtained results indicated that automated detection of breast cancer is beneficial for early diagnosis which increases the survival rates of patients.

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