Abstract

Breast Cancer is one of the most affecting diseases in the world. Architectural Distortion is one of the indications of breast cancer. It is an abnormal arrangement of tissue strands of the breast, often a radial or perhaps a somewhat random pattern, but without any associated mass as the apparent cause of this distortion. This project used Contourlet Transform based method to detect the location of the architectural distortion in mammograms. The dominant angle is detected in this Contourlet decomposition which comprises of Laplacian Pyramidal Filter bank and Steerable Gaussian Filter. The textural features will not show any deviation in the distorted area. Here the methods proposed will assist the Radiologist to identify the unidentified potential sites of distortion. Therefore the main aim of this work becomes the reduction of the region of interests. In this project 39 cases were tested in which 19 are Architectural Distorted image from the MIAS database and 17 Normal images. The proposed algorithm detected 1502 regions of interest (ROIs) with 247 True Positives and 1255 False Positives. In this paper 26 textural features were considered and result is obtained as 0.77 with an artificial neural network. The proposed methods have significant result in detecting the architectural distortion in mammograms of interval cancer cases.

Refer
Architectural Distortion Detection in Mammogram using Contourlet Transform and Texture Features

References

Architectural Distortion Detection in Mammogram using Contourlet Transform and Texture Features


Index Terms

Computer Science
Image Processing

Keywords

Breast Cancer  Contourlet Transform  Texture features