Abstract

Breast cancer is one serious disease that is causing a high rate of mortality worldwide. Thus, it is critical to devise applications that can help in the early detection and diagnosis of this type of cancer as it spreads rapidly to the rest of the body. At present, mammography is the technique used to detect abnormalities in masses and calcifications in the breast. However, in the early stage, masses are very small and granular which makes early detection is challenging task. With the advances in the field of computer vision, image processing techniques can be applied on medical images to develop automated breast recognition system for early detection. This paper proposes an approach that uses texture description of images known as Local Binary Pattern (LBP) and Histogram of Oriented Gradients (HOG) to represent features in the breast. After the extraction of masses or calcification, LBP and HOG were applied on the image. Both methods showed a very high recognition rate compared to other existing breast cancer detection system.


Index Terms

Computer Science
Biomedical
Keywords

Automated breast cancer detection, LBP, HOG