Abstract

Currently mammography is the method of choice for early detection of breast cancer. The image segmentation aims to separate the structure of interest objects from background and other objects. Detection of breast cancer is a very crucial step in mammograms and therefore needs an accurate and standard technique for breast tumor segmentation. In the last few years, a number of algorithms have been published in the literature. Each one has their own merits and de-merits. Fuzzy-level set and wavelet with level set is proposed to facilitate mammogram image segmentation. The existing active contour models can be classified as edge-based models and region-based model. In fuzzy level set, edge based active contour model is used while, in wavelet with level set, a region-based image segmentation technique using active contours with signed pressure force function is used. Furthermore, after evaluating various parameters wavelet with level set is considered to be better than fuzzy level set, as segmentation of mass area is more effective having less error value and it shows higher PSNR as compared to other method.
References


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Index Terms

Computer Science

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Keywords

Segmentation, fuzzy-level set, wavelet with level set, active contour, region of interest.