Abstract

In this paper, method for the segmentation, feature extraction & classification for ultrasonic biomedical images are proposed. The method has been applied & implemented. Some sets of descriptors corresponding to texture measurements and geometrical features are extracted for each segmented object and applied to a classifier. The paper reports comparative results of classification of ultrasound images; research experimentation has been implemented on various ultrasound images from the standard datasets. The present experimental study is aimed at comparing the evaluation of image processing algorithms and classification techniques applied on the ultrasound images. Different image segmentation techniques have been proposed here for feature extraction. Currently, there is a large amount of research work going on in the field of automated system for inspection, analysis of ultrasound enhancement, feature extraction and classification. Comparison of other classification methods and application of image processing on the ultrasound images of are aimed to categorize the US images for medical diagnosis purpose to make accept/reject decisions as per the international biomedical standards. The diagnosis scheme includes three steps: Preprocessing, feature extraction and classification.
Finally experimental results are reported for three different classifiers (Support Vector Machine, ANFIS, CPNN).

References

Classification of Biomedical Images using Counter Propagation Neural Network


Index Terms

Computer Science
Biomedical

Keywords

X Ray, Ultrasound Imaging, Preprocessing Techniques: Enhancement, Segmentation & Classifiers CPNN, ANFIS & SVM