Abstract

Nowadays, automatic defects detection in MR images is very important in many diagnostic and therapeutic applications. This paper introduces a Novel automatic brain tumor detection method that uses T1, T2_weighted and PD, MR images to determine any abnormality in brain tissues. Here, has been tried to give clear description from brain tissues using Gabor wavelets, energy, entropy, contrast and some other statistic features such as mean, median, variance, correlation, values of maximum and minimum intensity. It is used from a feature selection method to reduce the feature space too. this method uses from neural network to do this classification. The purpose of this project is to classify the brain tissues to normal and abnormal classes automatically, that saves the radiologist time, increases accuracy and yield of diagnosis.

Reference
- Marcel Prastawa a, Elizabeth Bullitt c, Sean Ho a, Guido Gerig, “A Brain Tumor Segmentation Framework Based on Outlier Detection” Medical Image Analysis, 1-9, 2004.
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**Index Terms**

Computer Science

Biomedical Applications
Key words

Feature extraction
Kernel F-score feature

selection

Gabor wavelets

artificial neural network

tumor detection

segmentation

MR images