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Poster Presentation

Segmentation Brain Tumors of FMRI Images by Gabor Wavelet Transform and Fuzzy Clustering

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Abstract

Today, high mortality rates due to brain tumors require early diagnosis in the early stages to treat and reduce mortality. Therefore, the use of automatic methods will be very useful for accurate examination of tumors. In recent years, the use of FMRI images has been considered for clarity and high quality for the diagnosis of tumor and the exact location of the tumor. In this study, a completely automated method for the partitioning of T1, T2, and MR images of tumors is presented using T1 and T2 gamma-ray wavelets, which has acceptable results in the presence of data noise. After applying the SWT wavelet, the Gabor filters are applied to the wavelet approximation at all levels; the texture features such as entropy, second-to-fourth-moment moments, and coefficient of variation are obtained. The outputs of this filter are compared with each other and have a maximum localization in the size of these vectors. And finally these images are referred to as pixel-specific attributes, and to obtain an image with a minimum pixel value, it is given to the Fuzzy clustering algorithm, which generates the finalized output. This algorithm appears. It takes the attributes of the corresponding level and generates an optimal segmentation. Goal This design reduces the error in diagnosing a benign tumor from malignant FMRI in medical science.

Keyword: FMRI Images, Gabor, Wavelet Transform, Fuzzy Clustering

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