عنوان مقاله:

A modified FCM algorithm for MRI brainimage segmentation

محل انتشار:

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خلاصه مقاله:

Image segmentation is the first step in thecomputer aided medical image process, particularly duringthe clinical analysis of magnetic resonance(MR) brainimage. Fuzzy c-means clustering algorithm has been widelyused in many medical image segmentations. However, theconventionally standard FCM algorithm is sensitive to noisebecause of not taking into account the spatial information.To overcome this problem, a modified FCM algorithm forMRI brain image segmentation is presented in this paper.The proposed algorithm is formulated by modifying theobjective function of the standard fuzzy c-means algorithmto enhance the noise immunity. The Experimental results onboth synthetic and real image which degraded with noiseindicate that the proposed algorithm is more accurate androbust to noise than the standard FCM algorithm.

کلمات کلیدی:

image segmentation; Fuzzy c-means (FCM);spatial information; MRI