عنوان مقاله:

REGION MERGING STRATEGY FOR BRAIN MRI SEGMENTATION USING DEMPSTER-SHAFER THEORY

محل انتشار:

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نویسندگان:

Jamal Ghasemi - *Faculty of Engineering and Technology, University of Mazan- daran, Babolsar, Iran*

Mohamad Reza Karami Mollaei - *Faculty of Electrical and Computer Engeniering, Babol University of Technology, P.O.Box ۴۸۴, Babol, Iran*

Reza Ghaderi - *Shahid Beheshti University, Tehran, Iran*

Ali Hojjatoleslami Hojjatoleslami - *School of computing, University of Kent, Canterbury,CT۲ ۷PT UK*

خلاصه مقاله:

Detection of brain tissues using magnetic resonance imaging (MRI) is an active and challenging research area in computational neuroscience. Brain MRI artifacts lead to an uncertainty in pixel values. Therefore, brain MRI segmentation is a complicated concern which is tackled by a novel data fusion approach. The proposed algorithm has two main steps. In the first step the brain MRI is divided to some main and ancillary cluster which is done using Fuzzy c-mean (FCM). In the second step, the considering ancillary clusters are merged with main clusters employing Dempster-Shafer Theory. The proposed method was validated on simulated brain images from the commonly used BrainWeb dataset. The results of the proposed method are evaluated by using Dice and Tanimoto coefficients which .demonstrate well performance and robustness of this algorithm

کلمات کلیدی:

MRI, Fuzzy c-mean, Brain MRI Segmentation, Dempster-Shafer Theory