IJDACR
International Journal Of Digital Application & Contemporary Research

MRI Image Segmentation Using Gradient Magnitude Based Fuzzy C Means Clustering In Level Set Method for a Medical Diagnosis System

Kusumlata Nagore

kusum.vermaq8@gmail.com

Prof. Papiya Dutta

papiyadutta01@gmail.com

Abstract: **In medical image investigation, one of the essential problems is segmentation of structural sections. In the literature survey of problem over the internet it is found that, no work is done on the image segmentation of brain tumor by means of fuzzy C-means clustering in MATLAB environment. In this paper, we present a new concept of tumor detection and validated segmentation of 2D MRI Data. This method on the appropriate setting of parameters can segment the tumor. This method unlike others do not require any initialization in the tumor. In addition, the effectiveness of this approach is demonstrated by quantitative evaluations and visualization of the segmentation results. First, the work was carried over to calculate the area of the tumor with single slice of MRI data set and then it is extended to calculate the area of tumor from multiple image MRI data sets. The fuzzy c-means clustering algorithm along with self-organizing MAP neural network and thresholding and morphology is used for proper classification of medical data.**

Keywords: **Brain Tumor, Image Segmentation, Neural Network, MRI, Fuzzy C-means.**