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Abstract

Segmentation of images aims at dividing areas corresponding to different objects. There are two approaches for image segmentation, one is based on discontinuities and other is based on similarities. These approaches can be used for enhancing and extracting the tumor area in MRI/CT images. In this paper Sobel and Extended Sobel edge operators are applied on the MRI / CT images containing tumors. It is noticed that the MR/CT images contain unwanted portions that make segmentation difficult. If such images are segmented without any preprocessing for removal of the unwanted portions, it results into over segmentation. In this paper, we propose to use Preprocessed MRI/CT image for the segmentation by using Sobel

and extended Sobel operators. Results of both the methods on original and preprocessed images are displayed. The results of Watershed segmentation algorithm on original and preprocessed images are also displayed. It is observed that, the appropriate preprocessing of MR/CT images helps to significantly reduce the problem of over segmentation of these images still retaining the tumors.

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