Improvement of Brain Tumors Detection Using Markers and Boundaries Transform

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Abstract : This was experimental study conducted to study segmentation of brain in MRI images using edge detection and morphology filters. For brain MRI images each film scanned using digitizer scanner then treated by using image processing program (MatLab), where the segmentation was studied. The scanned image was saved in a TIFF file format to preserve the quality of the image. Brain tissue can be easily detected in MRI image if the object has sufficient contrast from the background. We use edge detection and basic morphology tools to detect a brain. The segmentation of MRI images steps using detection and morphology filters were image reading, detection entire brain, Dilation of the image, filling interior gaps inside the image, removal connected objects on borders and smoothen the object (brain). The results of this study were that it showed an alternate method for displaying the segmented object would be to place an outline around the segmented brain. Those filters approaches can help in removal of unwanted background information and increase diagnostic information of Brain MRI.
Keywords : improvement, brain, matlab, markers, boundaries