Abstract

It always takes a skilled neurologist to detect a tumor in the MRI scans, which the numerologist does with the naked eye. Doctors have had only 2D cross sectional images for viewing the tumor in the MRI scans. This research presents a method for automatic tumor detection with an added feature of reconstructing its 3D image. The research involves implementation of various steps of detecting and extracting the tumor from the 2D slices of MRI brain images by Seeded region growing technique along with automatic seed selection and designing software for reconstructing 3D image from a set of 2D tumor images. The seeded region growing method is very attractive method for semantic image segmentation which involves high level knowledge of image components during the seed selection procedure. The volume of the tumor is also estimated based on the computation of these images to assist the radiologist.

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Index Terms

Computer Science

Image Processing

Keywords

Brain Tumor  Segmentation and 3D visualization.