Abstract

This paper deals with the implementation of a simple algorithm for automatic brain tumor segmentation. Brain tumor is commonly diagnosed by Computer tomography and Magnetic Resonance Imaging in clinical treatment. The paper uses Simple Linear Iterative Clustering (SLIC) to segment brain images according to their spatial and color proximities. The ratio of the mean and variance of the image pixels are determined in order to obtain an optimum threshold value. Region merging after thresholding was carried out. The final output image was an image with tumor sections circled out. The segmentation adheres to boundaries and the procedure is fast and reproducible.

References


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Brain Tumor Segmentation using SLIC Superpixels and Optimized Thresholding Algorithm


Index Terms

Computer Science
Algorithms

Keywords

SLIC, brain tumour, region merging, image thresholding