Abstract

Automated classification of brain MRI is important for the analysis of tumor. In this paper brain MRI are taken for the classification and detection of tumor. It consists of four stages, discrete wavelet transform (DWT), texture feature extraction, Classification by support vector machine and last segmentation. Due to the structure of the tumor cells, its detection became a challenging problem. Segmentation is used to extract tumor region in brain, which is carried out by fuzzy c-means clustering algorithm. The features are extracted from horizontal (LH) and vertical (HL) sub bands of the wavelet transform. The system gives better performance as compared to LL sub band because LH and HL sub bands can effectively encode the selective features of normal and abnormal images. Based on standard methods the system was evaluated and validated.

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Index Terms

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Keywords
Classification of Brain MRI using Wavelet Decomposition and SVM

MRI, DWT, texture feature, SVM, segmentation