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SEGMENTATION OF PATHOLOGICAL AND HEALTHY TISSUES WITH REDUCED WEIGHTED VECTORS USING HYBRID INTELLIGENCE TECHNIQUE

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Abstract

A Method is proposed for automatic segmentation and detection of pathological tissues, normal tissues and CSF of human brain in Magnetic resonance image (MRI) is discussed in this paper. This method is implemented in two phases, (1) the MRI brain image is acquired from patient database, In that film artifact and noise are removed. (2) In second phase, hierarchal self organizing Map and Improved fuzzy 'C' means algorithms are used to classify the image layer by layer. The lowest lever weight vector is acquired by the abstraction level. We also achieved a high value of pathological tissue pixels by using Hybrid Intelligence Technique. Our method does not require specific expert definition for each structure or manual interactions during segmentation process. The performance of HSOM-IFCM performs more accurate and is compared with previous techniques.

Keywords : Image analysis, tissue Segmentation HSOM-IFCM, Segmentation, Hybrid intelligence.