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Poster Presentation

Detection of Epileptic Seizures Using EEG Signal Processing

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Abstract

Epilepsy is the most common brain diseases that cause many problems in the daily life of the patient. In most attempts to automatic detection, the attack used an EEG. In this paper, The complete data set consists of five sets recorded from normal and epileptic patients. Each set containing 100 single-channel EEG segments. Here we used first and las t sets (A and E). Set A consisted of segments recorded from healthy subjects while they were relaxed in an awake s tate with open eyes While set E contained seizure activity taken from patients whom had the resection of one of the hippocampal formations and were under seizure control the empirical mode decomposition method used to analyze the random signals better than previous methods. The feature used for classification have been obtained from EEG signal decomposition into frequency sub-bands by Discrete wavelet transform (DWT) for decreasing dimensions of DWT coefficients, some statistical features are calculated for each frequency sub-bands. we compared the classification results of using reduction technique, each frequency sub-bands. Experimental results show that the proposed method can serve as a promising alternative for Automatic diagnosis system in the future. In this paper, we designed a computer diagnostic system that helps experts to increase the accuracy of the diagnosis of the epilepsy.

Keywords: Epileptic Seizure, Discrete Wwavelet Transform (DWT), Computer Diagnostic System

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