Abstract

The statistical properties of seizure EEG are found to be different from that of the normal EEG. This paper ascertains the efficacy of inter quartile range (IQR), a median based measure of statistical dispersion, as a discriminating feature that can be used for the classification of EEG signals into normal, interictal and ictal classes. IQR along with variance and entropy are calculated for each frame of EEG. To reduce the feature vector size, standard statistical features such as mean, minimum, maximum and standard deviation were evaluated and were given as input to a linear classifier. Without resorting to any kind of transformation, the proposed method reduces the computational complexity and achieves a classification accuracy of 100%.

References

Automatic Seizure Detection using Inter Quartile Range

International IEEE EMBS Conference on Neural Engineering, Arlington, Virginia, 241-244.

**Index Terms**

Computer Science

Signal Processing

**Keywords**

Electroencephalogram  Epilepsy  Feature Extraction  Inter Quartile Range  Classification