Abstract

In biomedical engineering, many attempts are being reported over the years for automated diagnosis of various brain disorders by classifying EEG (Electroencephalography) signals. Various machine learning algorithms are adopted to address different scenarios in EEG classifications. Feature engineering is playing a vital role in order to enhance the classification efficiency particularly in signal processing applications. This paper elucidates multi-resolution analysis (MRA) of feature engineering and demonstrates how the distinctive features are being engineered in wavelet domain. The implementation results are placed in the form of feature distribution diagrams and provide clear indications in feature selection for epilepsy seizure detection through classification.

References

2. Robert B. Daroff et al., Bradley’s Neurology in Clinical Practice, Elsevier Saunders, 2012, Ch.32A.


Multiresolution Analysis in EEG Signal Feature Engineering for Epileptic Seizure Detection


Index Terms

Computer Science  Signal Processing

Keywords

Wavelets, Feature Engineering, Electroencephalography, Discrete Wavelet Transform, Multiresolution Analysis.