Abstract

Brain Computer Interface (BCI) has become a hot spot in recent years. The goal of proposed method is the development of a fractal dimension method that can be used to increase accuracy and computation time in harmony search model (HMM) during motor imagery tasks. The HMMs were originally applied to speech recognition; they have proven to be highly successful in the modeling of dynamic data sequences. However, the success of HMMs is highly related to their ability to encode electroencephalography (EEG) in their parameters while allowing many unknown quantities to be learned through the optimization of their emission and transition probabilities. The optimized approach for the HMM in the training phase of time
Fractal Dimension Methods for Feature Extraction in Optimized Harmony Search-based Hidden Markov Model during Motor Imagery series electroencephalography data during motor imagery-related mental tasks is used. In this paper Differential Signal method (DS) and Time Dependent Fractal Dimension (TDFD) are used to achieve more computation time and accuracy. TDFD method gives better result than other two methods. In this method Optimized HMM method and Fractal dimension method are combined to achieve better performance.

References


Index Terms

Computer Science

Algorithms
Keywords
Brain Computer Interface  Motor Imagery  Eeg