Feature Selection using Binary Simulated Kalman Filter for Peak Classification of EEG Signals

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Abstract—Previously, an angle modulated simulated Kalman filter (AMSKF) algorithm has been implemented for feature selection in peak classification of electroencephalogram (EEG) signals. The AMSKF is an extension of simulated Kalman filter (SKF) algorithm for combinatorial optimization problems. In this paper, another extension of SKF algorithm, which is called binary SKF (BSKF) algorithm, is applied for the same feature selection problem. It is found that the BSKF algorithm performed slightly better than the AMSKF algorithm.

Keywords—simulated Kalman filter; electroencephalogram; feature selection