

Short Note on the Involved Processing Techniques Used for Classifying Dataset I (BCI COMPETITION III)

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First of all the data were down sampled (from 1000Hz to 100Hz) and also filtered by a band pass filter (0.5-45Hz). In the next step several features (including: Statistical features, features related to Parametric Models, Coefficient of different Transforming functions and ...) were extracted from the raw data. Then by using a combination of different classifier-independent measures, the extracted features were ranked according to their possible ability in classification. By applying the Bayesian classifier and using Leave-One-Out-Method, we considered the percentage of correct classification as an evaluation measure and selected fewer features from the high ranked features. We did the same task for the v-SVM classifier too and effective features for the v-SVM classifier were also selected from high ranked features. Finally by combining both of the Bayesian and v-SVM classifiers with their selected effective features, the labels related to testing data were found.