Pairwise- Fuzzy Ordered Weighted Average-Gaussian Mixture Model for Feature Reduction

Abstract:

Feature Reduction is a kind of dimensionality reduction of feature space. There are a number of approaches are used to identify the significant features but they are not using the weighing approach. The weighing approach is quite useful for obtaining the significant features and removing the insignificant and irrelevant features using OWA formulation. The aim of this approach is to obtain the significant features and removing insignificant features by using the pairwise approach. This approach is helpful to find the weights of pairwise features at the same time, which leads to remove the insignificant features from the feature space using OWA. The significance of the OWA formulation is that the paired features are identified in Priori and their sum of weights are equal to 1. OWA criterion is introduced to obtain the significant features that are useful for predicting the accuracy of the cluster in GMM.