A SEQUENTIAL FEATURE SELECTION ALGORITHM FOR GMM−BASED SPEECH QUALITY ESTIMATION (WedPmOR1)

Author(s) :

Tiago Falk (Queen's University, Canada)
Wai−Yip Chan (Queen's University, Canada)

Abstract :

We propose a sequential feature selection algorithm for designing Gaussian mixture model (GMM) based estimators. Feature selection is performed progressively to minimize estimation errors. The algorithm is applied to design estimators of subjective speech quality. Simulation shows that estimators designed using the proposed algorithm outperform two benchmark algorithms by as much as 39% in correlation and 24% in root−mean−squared error. Furthermore, features selected by the proposed algorithm are suitable for diagonal GMM estimators, which incur lower computational complexity.

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