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Abstract

This article presents a new approach using the discrimination power of Support Vectors Machines (SVM) in combination with Gaussian Mixture Models (GMM) for Automatic Speaker Verification (ASV). In this combination SVMs are applied in the GMM model space. Each point of this space represents a GMM speaker model. The kernel which is used for the SVM allows the computation of a similarity between GMM models. It was calculated using the Kullback-Leibler (KL) divergence. The results of this new approach show a clear improvement compared to a simple GMM system on the NIST2005 Speaker Recognition Evaluation primary task.