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Unsupervised fine-tuning of speaker diarisation pipelines using silhouette coefficients.

We investigate the use of silhouette coefficients in cluster analysis for speaker diarisation, with the dual purpose of unsupervised fine-tuning during domain adaptation and determining the number of speakers in an audio file. Our main contribution is to demonstrate the use of silhouette coefficients to perform per-file domain adaptation, which we show to deliver an improvement over per-corpus domain adaptation. Secondly, we show that this method of silhouette-based cluster analysis can be used to accurately determine more than one hyperparameter at the same time. Finally, we propose a novel method for calculating the silhouette coefficient of clusters using a PLDA score matrix as input.

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Yes

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