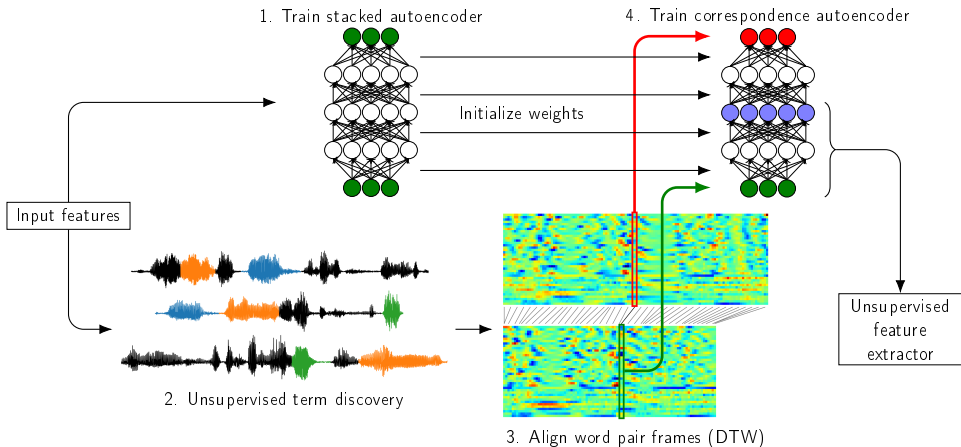


A Comparison of Neural Network Methods for Unsupervised Representation Learning

Daniel Renshaw*, Herman Kamper*, Aren Jansen^, Sharon Goldwater*
(*University of Edinburgh, ^Johns Hopkins University)



A Comparison of Neural Network Methods for Unsupervised Representation Learning

Daniel Renshaw*, Herman Kamper*, Aren Jansen^, Sharon Goldwater*
(*University of Edinburgh, ^Johns Hopkins University)

- ▶ Track 1: unsupervised subword modeling
- ▶ Xitsonga, across-speaker, ABX error rates
- ▶ MFCC baseline: **33.8**
- ▶ MFCC UTD + cAE: **19.3** (43% reduction)
- ▶ Supervised DNN, with bottleneck, trained on English, applied to Xitsonga *without adaptation*
- ▶ Bottleneck features UTD + cAE: **18.2** (46% reduction)