Abstract

Speech Enhancement refered as to improve quality or intelligibility of speech signal. Speech signal is often degraded by additive background noise like babble noise, train noise, restaurant noise etc. Speech enhancement aims at improving the performance of speech communication systems in noisy environments. This paper proposes a segmental NMF (SNMF) speech enhancement scheme to improve the conventional frame-wise NMF-based method. In this two algorithms are derived to decompose the original nonnegative matrix associated with the magnitude spectrogram, the first algorithm is used in the spectral domain and the second algorithm is used in the temporal domain. In this paper Hidden macro model and SNMF(S) for subjective learning (SNMF-S). Then the SNMF for the objective learning (SNMF-O) will be implemented.

References

Speech Enhancement using Segmental Non-Negative Matrix Factorization (SNMF) and Hidden Markov Model (HMM)


Index Terms

Computer Science  Signal Processing

Keywords

Speech Enhancement  Non negative Matrix Factorization (NMF)  Segmental Nonnegative Matrix Factorization (SNMF)