

FEATURE EXTRACTION BY MFCC ALGORITHM FOR ACCENT NORMALIZATION

**KAVERI WAGHMARE¹, KALPANA BAPAT¹
AND PRASHEEL SURYAWANSHI²**

¹ MIT College of Engineering, Pune, India

² MIT Academy of Engineering, Alandi (D), Pune, India

Abstract

This paper discusses the implementation of feature extraction by MFCC algorithm for accent normalization. The work is concerned with implementing a system to convert American accent into Indian accent, using isolated word with a vocabulary of ten words (digits 0 to 9). An accent normalizer of accented speech modifies the characteristics of input signals that represent the digits 0 to 9 spoken in American accent to form output signals that represent the digits 0 to 9 spoken in Indian accent. It is often difficult for a listener to understand accented speech, that is, language spoken with an accent other than the “normal” accent. The “normal” accent is also referred to as “unaccented” or “standard” speech as spoken by a native speaker of the language. In contrast, accented speech is the language as spoken by a non-native speaker for whom this is a second language. It would therefore be a significant improvement to the intelligibility of the accented speech if the effect of the accent could be alleviated. The paper enhances telephone conversations, especially those between people from different countries or non-native speakers who are using a common language (English, for example). It also helps to normalize speech prior to additional speech processing in a multi-stage process.[3] In this work the Mel Frequency Cepstrum Coefficient (MFCC) Algorithm [4] has been used to extract valuable information from the speech signal, make decisions on the process, and obtain results, the data needs to be manipulated and analyzed. The performance is investigated for the designed control strategy. The simulation is tested in MATLAB – SIMULINK environment. The conception presented in this paper will be of assistance in the broad domain of speech and language processing.