Abstract

This paper deals with pitch estimation of spoken Devnagari vowels from the original speech signals. Devnagari vowels are playing the vital role in pronunciation of any word. Each vowel is classified as starting, middle and end according to the duration of occurrences in the word. The Devnagari script having 12-vowels and 34-consonants are used in some Indian language like Marathi. The Devnagari vowels are categorised into 5-types such as short vowels, long vowels, conjunct vowels, nasal vowel and visarg vowel. The Pitch frequency is estimated from the features of speech signals via pitch detection algorithm through autocorrelation and cepstral methods. These vowels are recorded through PRAAT tools with noisy environment. The pitch estimation of original pitch frequency has been calculated in statistical manner (Mean and standard deviation). The implementation, experiments and result discussions are also existence. These results which have been appropriate match with both techniques.
Pitch Estimation of Devnagari Vowels using Cepstral and Autocorrelation Techniques for Original Speech Signal


Index Terms

<table>
<thead>
<tr>
<th>Computer Science</th>
<th>Signal Processing</th>
</tr>
</thead>
</table>

Keywords

Short vowels  Long vowels  Conjunct vowels  Nasal and Visarg vowel  Feature extraction  Pitch Analysis  HCI  IPA

Speech Synthesis