Abstract

This paper aims at designing and implementation of Hindi number recognition system using the microphone and mobile recorded speech. Spectral features known to represent phonetic information are used as the features to characterize different Hindi digits. Gaussian mixture models (GMM) are used to develop the digit recognition system. This paper focuses on the ten basic Hindi digits where '0' is pronounced as 'shunya' to '9' is pronounced as 'no'. Data has been collected separately from male, female and child speakers using microphone and mobile phone device. The experimental results show that the overall accuracy of digit recognition is 98.9% in the case of microphone recorded speech and 96.4% in the case of mobile phone recorded speech.
- Frederico Rodrigues and Isabel Trancoso. Digit recognition using the speechdat corpus.

**Index Terms**

Computer Science Speech Processing

**Keywords**

Gaussian mixture models (GMM) Mel frequency cepstral coefficients (MFCC)
Hindi digit microphone database (HDMD)

Hindi digit telephonic database (HDTD)