Abstract

This paper attempts to describe a literature review of Automatic Speech Recognition. It discusses past years advances made so as to provide progress that has been accomplished in this area of research. One of the important challenges for researchers is ASR accuracy. The Speech recognition System focuses on difficulties with ASR, basic building blocks of speech processing, feature extraction, speech recognition and performance evaluation. The main objective of the review paper is to bring to light the progress made for ASRs of different languages and the technological viewpoint of ASR in different countries and to compare and contrast the techniques used in various stages of Speech recognition and identify research topic in this challenging field. We are not presenting exhaustive descriptions of systems or mathematical formulations but rather, we are presenting distinctive and novel features of selected systems and their relative merits and demerits.

References

No. 2.
  ,28(6):1072-1081.
- J. W. Forgie and C. D. Forgie, 1959, Results obtained from a vowel recognition computer
- D. B. Fry, 1959, Theoretical Aspects of Mechanical speech Recognition, and P. Denes,
  The design and Operation of the Mechanical Speech Recognizer at Universtiy College London,
- T. Sakai and S. Doshita, 1962 The phonetic typewriter, information processing 1962,
  Proc. IFIP Congress.
- L. R. Rabiner, S. E. Levinson, A. E. Rosenberg, and J. G. Wilpon, August 1979, Speaker
- B. Lowrre, 1990, The HARPY speech understanding system, Trends in Speech
- R. K. Moore, 1994, Twenty things we still don't know about speech, Proc. CRIM/
  FORWISS Workshop on Progress and Prospects of speech Research an Technology.
- L. R. Rabiner, February 1989, A Tutorial on Hidden Markov Models and Selected
- B. H. Juang and S. Furui, 2000, Automatic speech recognition and understanding: A first
- K. P. Li and G. W. Hughes, 1974, Talker differences as they appear in correlation
- Ananth Sankar, May 1996, "A maximum likelihood approach to stochastic
  matching for Robust Speech recognition", IEEE Transactions on Audio, Speech and
  Language processing Vol. 4, No. 3.
- Gerhard Rigoll, Jan. 1994, "Maximum Mutual Information Neural Networks for
  Hybrid connectionist-HMM speech Recognition Systems", IEEE Transactions on Audio,
  Speech and Language processing Vol. 2, No. 1, Part II.
- Nam Soo Kim et. al., July 1995, On estimating Robust probability Distribution in HMM in
  HMM based speech recognition, IEEE Transactions on Audio, Speech and Language
  processing Vol. 3, No. 4.
- Jean Francois, Jan. 1997, Automatic Word Recognition Based on Second Order Hidden
- Mohamed Afify and Olivier Siohan, January 2004, Sequential Estimation With Optimal
  Forgetting for Robust Speech Recognition, IEEE Transactions On Speech And Audio
  Processing, Vol. 12, No. 1.
- Giuseppe Riccardi, July 2005, Active Learning: Theory and Applications to Automatic
Large Vocabulary Continuous Speech Recognition, IEEE Transactions On Speech And Audio Processing, Vol. 13, No. 4.

Index Terms
- Computer Science
- Speech Recognition

Keywords
- Automatic speech recognition
- Language Model
- Speech Processing
- Database
- Pattern Recognition
- Hidden Markov Model