**Abstract**

Speech is the most natural communication mode for human beings. The task of speech recognition is to convert speech into a sequence of words by a computer program. Speech recognition applications enable people to use speech as another input mode to interact with applications with ease and effectively. Speech recognition interfaces in native language will enable the illiterate/semi-literate people to use the technology to greater extent without the knowledge of operating with computer keyboard or stylus. For more than three decades, a great amount of research was carried out on various aspects of speech recognition and its applications. Today many products have been developed that successfully utilize automatic speech recognition for communication between human and machines. Performance of speech recognition applications deteriorates in the presence of reverberation and even low levels of ambient noise. Robustness to noise, reverberation and characteristics of the transducer is still an unsolved problem that makes the research in the area of speech recognition still very active. A detailed study on automatic speech recognition is carried out and presented in this paper that covers the architecture, speech parameterization, methodologies, characteristics, issues, databases, tools and applications