Abstract
Speech recognition is a vital part in medical transcription. The existing speech recognition systems, that run as standalone desktop applications, fall short in many cases due to low accuracy rates and high processing time. The bottleneck in these systems, is the lack of computation power (in terms of processing power and memory) made accessible to them. This paper proposes a mobile-cloud collaborative approach for the automation of speech to text conversion. The model proposed leverages the power of cloud computing and the ubiquitous nature of mobile computing. Computing resources can be scaled up/down in the cloud (Elastic Computing) depending on the usage of the system. This kind of speech recognition framework has many real time applications such as IVR systems, Medical Transcription systems, Railway Enquiries, Journalism, Interactive User Interfaces, etc. A generic framework is advantageous, because the speech models in the Automatic Speech Recognizer (ASR) could be trained according to the specific domain required, allowing wide usability. The proposed speech framework is used for medical transcription process. Medical transcription process involves a medical transcriptionist who listens to the recorded speech of a doctor and manually types a transcript file. This process is automated by using the proposed speech framework. With this system, the work of the medical transcriptionist is reduced to error checking in the auto generated transcript file. The entire model is developed for a mobile cloud environment considering the characteristics of cloud delivery models.

References

- Khaled M. Khan, Qutaibah M. Malluhi, "Establishing Trust in Cloud
Mediscript Mobile Cloud Collaborative Speech Recognition Framework


**Index Terms**

Computer Science  
Speech Recognition

**Keywords**

Framework  
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