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A Review on Speech Recognition technique in Identification process of Voice

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ABSTRACT

The speech recognition is most important and earliest manner of transmission among of human person .The transmission between human computer interactions is known as computer interface. Presentation has capacity of person main mode of interaction with system. this paper summarize the major technologies process and respect of the basic advances of speech recognition and also gives summary technique start in individual phase of speech recognition. Writing paper helps in pick the technique along with their corresponding quality and demerits. This paper is close with the choice on article moves for expanding technique in human computer interface system using Marathi Language.

Keywords: Automatic Speech Recognition, speech recognition techniques, Feature Extraction, word recognition.

I. INTRODUCTION

The speech recognition is main process of transmission between human being and also the most native and advantageous from of interchange information between human in speech. The speech recognition is process of transmitting among persons and system [1].speech methodology is one the powerful region of single processing. Main objective of speech recognition region is to build strategy and system to develop for speech recognition input to machine. Speech recognition is also called as ASR (Automation Speech Recognition).this is mostly decided on the usage of the statistical models. these statistical models transform speech into understandable form inversely[2].

In 1960s computer scientist has been studying ways and means to make system able to record difficult and understood by the human sound.

II. DEFINITION OF SPEECH RECOGNITION:

Speech recognition is the process of transform the speech signals into understandable format or(Text format). This is also called as automatic speech recognition.

TYPES OF SPEECH

Speech recognition system can be divided into following three types. They are

1. Isolated speech
2. Connected word
3. Continuous speech

1. Isolated Speech:

It is used to identify achieve normally need each notification to have soundless on both side of sample windows. It allows single word or single notification at a time. It contains “listen and NON Listen state”[4].

2. Connected word:

It is same to isolated words but allow different notifications to be run together minimum pause between them.[1]

3. Continuous speech :

Continuous speech recognition where sentence are produced continuously in a natural manner; and continuous speech understanding where the aim is not transcription but understanding the in the sense that the system responds correctly to a spoken instruction or request.

III. SPEECH RECOGNITION TECHIQUES:

The first speech recognition techniques were tried in the advance 1950 at Bell Laboratories by Davis, Biddulph and Balashek had produced a remote digit recognition technique for a single speaker[1].

The main objective of speech recognition is able understanding the human's spoken data. The self-activating sound recognition is to categorized and identifying data about the speaker identity. The speaker recognition technique can be classified into four stages. They are

1) Analysis
2) Feature extraction
3) Modeling
4) Testing

1) ANALYSIS:

Speech data accommodate various type of information that displays a speaker recognition. This involves speaker particular information due to articulated area, pep talk evidence and manner feature. In this the stage deals with acceptable empanel size for divide speech signal for additional analysis and extracting [3]. The analysis technique can be categorized into following three types.

1) Segmentation analysis
2) Sub segmental analysis
3) Supra segmental analysis

1) Segmentation analysis:

In this case speech is examined using the setting size and the range of the speech 10-30ms to extract the sound information.

2) Sub segmental analysis:

In this case also speech is examined using the frame size and the range 3-5 ms is called as sub segmentation analysis. This technique is also used to study and extract the normal of the exhortation state [5].

3) Supra segmentation analysis:

Speech is used to analyze the frame size. This is used to analyze and normal due to behavior or character of the speaker.

2) FEATURE EXTRACTION:

The speech feature extraction in a classified problem is about decreasing the capacity of the input vector while supporting the differentiating power of the signal. As we know from basic formation of speaker recognition and conformation system[1].

3) MODELING:

The goal of modeling technique is to produce speaker models using speaker particular feature vector. This modeling technique classified into two types speaker recognition and speaker identification. The speaker identification technique automatically identify who is speaking on The basis of single data combined in speech signal.[1] the speech recognition is also classified into two types. They are speaker dependent and speaker independent. In the speaker independent way of the speech recognition the system should remove the speaker specific feature of the speech signal and essence the intended message.

The objective of speaker sign is differentiating a speech signal from unaware speaker to a database of known speaker. The system can identify the speaker, it has been instructed with a number of speakers.[1]

4) TESTING TECHNIQUE:

It is used to test the find word to recognized word using the following two techniques. They are

i) Whole-word matching
ii) Sub-word matching

i) **Whole-word matching:**

This matching technique is used to differentiate the arriving digital audio signals opposed a prerecorded patterns of the word. This technique takes much low processing than sub-word matching. Whole word patterns also need large amount of storage among the 50 to 512 bytes each word and effective only if the identification command of language is called when the application developed. [6]

ii) **Sub-word matching:**

This matching technique looks for sub-words normal phonemes and then conducts further pattern recognition on those. This technique take large processing than whole-word matching, but it needs less memory space among 5 and 20 bytes each word.

IV. CONCLUSION

Speech is the elementary, and the most suitable appliances of transmission among people. Whether due to technological interest to constructing machines that impersonator humans or want to automatic work with machines, and speaker recognition, as a prime step prospective normal human-machine transmission, has attracted much passion over the past five decades. We have also faced a number of specific limitations which obstruct a global deployment of application and services. Speech Recognition is a demanding and absorbing problem in and of itself.

V. REFERENCES

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