



Speech Emotion Recognition In Marathi Language Using Deep Belief Network For Robotics Application

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Abstract : For a **Robot** to Plan their actions autonomously and interact with people, recognizing their emotion is crucial & required. Emotions have always been known to play a very important and complex part in human behavior. For affective human-robot interaction, In the proposed method, emotion will be classified into Common or Basic classes: Angry, sad, happy, & neutral .Some **uncommon classes** are: Antipathy (feeling of intense dislike), approved, attention, prohibition. There are some important Research concern in Speech Emotion Recognitions are the term Emotion itself is Uncertain and subjective, Emotion is an individual mental state that arises spontaneously rather than through unaware efforts .there are no standard speech corpora for comparing performance of research approaches used to recognize emotions. Ideally SER should be robust to process real life & noise speeches. Feature extraction from speech and processing are possible in many different ways. Here we will use particular feature which will be suitable for one particular language .ideally speech feature should be independent of language and personality. But various researches show that different people have different way to show reactions. The speech processing involves three main steps i.e. pre-processing, feature extraction and pattern recognition. Speech emotion recognition is nothing but an application of the pattern recognition system in which patterns of derived speech features such as Pitch, Energy, MFCC are mapped using classifier.

IndexTerms - Speech Emotion Recognitions, Communication, Mood.

I. INTRODUCTION

Speech is most important mode of communication in human being. Apart from information sharing speech also convey information about human emotional state. Mood and emotion are two different words in psychology .As per literatures more than 140 emotions are available and out of this count researchers have work only on few common class or basic emotions such as Happy, Angry, sad, neutral etc. The speech signal is the fastest and the most natural method of communication between humans. This fact has motivated researchers to think of speech as a fast and efficient method of interaction between human and machine. The task of speech emotion recognition is very challenging for the following reasons. First, it is not clear which speech features are most powerful in distinguishing between emotions. The acoustic variability introduced by the existence of different sentences, speakers, speaking styles, and speaking rates adds another obstacle because these properties directly affect most of the common extracted speech features such as pitch, and energy contours [1].

People have been speaking to each other for thousands of years. In recent time, Human -machine interaction (HMI) has become a growing area of innovation in industry as well as academic field [2]. Speech is one of the fundamental ways of communication known to mankind. A speech signal is a logical arrangement of sounds. Our brain performs a complex set of analyses of auditory