

ABSTRACT

Human emotion is something that sometimes can only be estimated through the expression of a person alone , or of changes in her expression . But it turns out the human emotion can also be detected through the voice was saying . One's emotions in a state of calm , angry , sad or happy speech can be detected through the signal . The development of speech recognition system is still running for the time being . In general, speech recognition platform is divided into three types , namely Dynamic Time Warping (DTW) (Sakoe , 1978) which is the beginning of a speech recognition platform that uses variation in the time frame for its introduction . Then , Artificial Neural Network (ANN) replaces DTW . And in the end , Hidden Markov Model (HMM) was developed to adopt statistics to improve the performance of speech recognition . Therefore, the HMM used in this study as the speech recognition platform .

At the end of the task is done , designed the simulated detection of human emotion through speech signals by performing feature extraction of Mel Frequency cepstral Coefisien (MFCC) to obtain the basic characteristics of the speech signal . The detected emotional state will be a state that uses Hidden Markov Models and methods of feature extraction variable parameter determining who becomes a state . In previous studies the maximum accuracy achieved in the same scheme with the scheme at the end of this assignment is 70 %.

Parameters of the test scenarios and the Order Type Filters best parameters obtained are type -order Butterworth filter with a 5 . After testing the 4 -class emotion classification that is neutral , angry , sad , and happy , the highest accuracy was 90 % for the training data number 40 , number 20 test data , MFCC coefficient by 24 , the number 30 filterbank MFCC and HMM training iterations for 40.

Keywords : Emotion Detection , Voice conversations , MFCC , Hidden Markov Models .