

Abstract

At the present time the development of the technological advances in the field of digital signal processing has been growing rapidly. One of the development in this field is in voice recognition. One of the application of speech recognition are as identification of the title song by humans's humming. In the previous research, has been designed voice recognition system using human's humming based on neural network back-propagation. So in this research the authors will make an identification of song's title from human's humming and compare that with the previous research.

To implement the idea of this research, we need a voice feature extraction method and method of classification. This study will use the voice feature extraction method called Linear Predictive Coding and classification method is Dynamic Time Warping (DTW). These methods will be applied to the programming software Matlab. This system is designed to identify the title of a song by humming with the output of the song title information.

After testing with different scenarios on the system, so there been several result of accuracy. For testing the original song data as training data and the original song data as the test data has the highest accuracy of 100%. Testing the vocal track data as training data and vocal song data as test data has the highest accuracy of 81.67%. Testing humming song data as training data and humming song data as test data has the highest accuracy of 61.67%. Testing the vocal track data as training data and humming song data as test data has the highest accuracy of 78.33%. Testing of the original song data as training data and humming song data as test data has the highest accuracy of 80%.

Keyword: Humming, Linear Predictive Coding, Dynamic Time Warping (DTW)