

## **ABSTRACT**

*Along with the development of technology and more people want a quick and practical search. Music is a collection of words that can be sung along with the rhythm of a tone, so that many people can enjoy it. But often constrained by the title of the song that will be sung, because only memorized some of the lyrics and did not know the title of the song, so it would make trouble if the song lovers will enjoy the songs they mean. Given these issues, researchers will create a solution that is in the form of voice recognition application identification through humming the title song or human'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.*

*In this thesis, the research done by entering a humming sound to identify the appropriate title track. The authors apply the method of feature extraction methods Discrete Cosine Transform (DCT) and using the classification of Dynamic Time Warping which serves to measure the similarity of tone patterns and comparing the value of feature extraction test results are captured microphone with a voice trainer that is used as a database. In the classification process length of the frame and track data on a database that has a more prominent vocal determine the suitability of chanting the tune.*

*Given this thesis produced by a simulated voice signal processing to classify the title track through humming tones as input and produce output in the form of the name of song titles that match the database after feature extraction Discrete Cosine Transform (DCT). Test data to test and train using the original song has the highest accuracy of 100%. And the accuracy of 80.06% with test data in the form of humming some song titles and 30 training data in the form of the original song number 50 song titles. While the 30 test data humming some song titles and 50 song' titles training data in the form of a song with the singing sound files without using the instrument (vocal) resulted accuracy of 92.3%.*

**Keywords : Human humming, DCT , Dynamic Time Warping**