

## ABSTRACT

Unconsciously, human being will often wants to communicate with the others in daily life, for example we can talk with the others by mouth to mouth. But this communication way is not effective ever last time, human being more likely use text as chatting, messaging, or e-mail in this modern era. This way also can be used by deaf people who can sees well.

In this final project, a method is developed to convert the acoustic signal into digital, then it is proceeded by doing frequency sampling. Next, it proceeded by Linear Predictive Coding (LPC) and Gabor Filter feature extraction. The output is a text form which required by proceeding digital signal input uses Artificial Neural Network method. The system try to recognize until 12 syllables combination with 240 numbers of training data syllables.

A testing will be executed by a volunteer to get the samples. It will said several words which consist of more than a syllable kept in the database. The analysis shows the maximum accuracy level is 50 % and the average is 20 % for syllable recognition. Matlab R2009a is used as a software to simulate these methods. In future development, this human speech recognition to text should match used in translator tools application where the input and output are in a same acoustic signal or human speech sound form.

*Keywords: Linear Predictive Coding, Gabor Filter, Artificial Neural Network, Matlab, Speech Recognition, Text*