

ABSTRACT

Quran is the holy book of Islam. The letters were written in the quran is the letter hijaiyah, then who want to read Quran must be able to read the hijaiyah letters. But problem faced today is difficult to find a mentor. That is why we need a system that can replace mentor. To deal with this problem we can use computer technology.

Speech recognition is a method that can convert voice signals into digital data form that can be understood by computer. Voice recognition system consists of two main parts: feature extraction and classification. In this study the authors use the method Cepstral Mel Frequency Coefficient (MFCC) in the feature extraction process aims to obtain important information contained in the voice signal, the information will represent the specific characteristics of a letter or a word spoken. For the process of classification and modeling of the author using Hidden Markov Model (HMM), any data modeled using this method will produce a model of HMM, then the number of models will be equal to the amount of data in the training. Speech recognition system can also be applied to speech recognition systems hijaiyah letter. After the authors tested the system using a codebook 128 and 7 states to recognize 168 different letters obtained the highest accuracy rate of 41%. And when testing to identify 28 letters highest accuracy reaches 57%.

Keywords: Speech Recognition, Mel Frequency Coefficient Ceptral, Hidden Markov Model, Hijaiyah Letter.