

ABSTRACT

Hijaiyah letter is the letter of constituent words in the Qur'an. Hijaiyah letter consists of 28 letters, with the letters symbolize consonant to vowel sounds while denoted by harokat / punctuation. Hijaiyah letter is part of the Arabic language that has characteristics both in writing and speech.

Speech recognition system or voice recognition system is a system used to process voice signals into data that can be recognized by the computer [1]. To be able to do the voice recognition are needed feature extraction methods and classifier. Sound signal that has been extracted character then generate information that can be analyzed for each variation existing voice signal. Of the characteristics that exist in each phoneme try to recognize it and convert it into text [2]. Methods of extraction of the characteristics used in this final project is Linear Predictive Coding (LPC), then the feature generated from LPC quantized of each vector using the K-Means Clustering and for the classifier used when training and testing is the method of Hidden Markov Model (HMM).

After several test scenarios obtained the best accuracy for testing 168 class is 40.18% and training is 96.10% then for testing 84 class is 48.21% and training is 98.54% and for testing 28 class is 58.93% and training is 99.60%.

Keywords: Hijaiyah Letter, Hidden Markov Model, Linear Predictive Coding, Speech Recognition System