Abstract

Speech is one of the form of human-computer or human-machine interaction. Speech consist of words that pronounced with specific manner. There are two types of information in speech, lingustic information and paralinguistic information. Paralinguistic information refers to the implicit message such as emotional state of the speaker. Emotions that will be identified in this research are happy, sad, anger, disgust, and neutral. They are often refered to archetypal emotion.

Speech signal will be represented with several features, such as: Linear Predictive Coding (LPC) feature, first derivation of cepstral coefficients, fundamental frequency, and energy. Hidden Markov Model (HMM) will be used as an emotion classifier. Performance of the system is measured by accuracy in emotion detection.

Result showed that average recognition rate of the proposed system is 60.65% and the best rate is 70.70% in recognize 5 types of emotions. Result also showed that LPC feature combined with fundamental frequency and energy will result to greater recognition rate in speech emotion detection.

Keywords: speech, emotion, archetypal, LPC, HMM.