ABSTRACT

Human emotions can be easily estimated through the look on one's face, or from changes in facial expressions. In addition to the face, human emotions can also be detected through the sound they say or the speech signal. A person's emotions are angry, sad, shocked or excited, these emotions are usually called archetypal emotions. In this study, a system was created where we could represent human voice emotions through speech signals using extraction features of the Linear Predictive Coding (LPC), which would later become a state that could use the fuzzy logic method.

In the classification of speech signals, through analysis of human voice frequency, a person is included in normal, risky or high levels. The method used is fuzzy logic, the selection of the method is shown to handle the type of uncertainty to make it clearer and classify it.

The purpose of this study is to classify emotions happy, sadness, shocked, and angry in humans. The test results showed that the highest test obtained was 85% using the LPC statistical features of average, variant, standard deviation, skewness, kurtosis, entrophy and using the gbellmf membership function on ANFIS from 107 training data and 20 test data. The best parameter is obtained matrix length 14, cepstral window 12.

Keywords: Fuzzy logic, Linear Predictive Coding (LPC)