ABSTRACT

Commonly human emotion is predicted by expression from our face, that will change based on our mood or feeling. There is also many research about human detection by face. Beside face, someone's emotion can be detected by her or his voice too. We can know someone feels sad, angry, happy or neutral based on his or her acoustic feature that we take from his or her voice.

This final project try to simulate how we can detect human emotion based on acoustic feature of human speech. The acoustic feature like pitch, intensity of energy, spectrum energy, and duration of speech will be got by feature extraction. Those feature will be variable for classification that will be used later.

Human emotion like sad, happy, angry , and neutral will become the state for Hidden Markov Model method that will be used for the classification of this final project, and acoustic feature of human speech will become parameter to determine which state that will be detected.

The output of this final project is condition of human emotion. That are sad, angry, happy, or neutral with accurate of data 70 % for all of testing data that used in this project. However the maximum accurate of data for each emotion is 100 % from 5 data in each emotion. Those result are gotten by pitch feature and energy feature with silence removal process in pre-processing.

Keywords : *hmm, pitch, energy, duration , state*.