

Abstract

The development of communication technology allows each person to access a lot of things from a long distance, so security system is needed to access that thing. One of communication technology which is often used is voice communication or telephone. Nowadays people can access a service by phone but the security system to access the service only by pin which is can be stolen by other person.

That's why we need to apply speech recognition for the security system. Yet, voice is the feature from a person that can be extract that the accuracy is the worst. So it needs a more reliable and specific system to identify it, such as sex of speaker, age range the speaker, and also the dialect used by the speaker.

This final project has researched how to detect the dialect types that is spoken by a person by extracting the feature of a dialect used by a person through the Mel Frequency Cepstral Coefficient (MFCC) process. MFCC is a method that is often used based on human auditory perception. And the method used to classify is K-Nearest Neighbor (KNN), which the classifying is done by searching the nearest distance from the evaluating data (unknown class) againts the datas which have been grouped into classes in a database system.

This final project has successfully made a system which can recognize a dialect used by a person based on his/her origin. Dialect which is detected is consisted of 5 dialect class that is Balinese, Batak, Javanese, Sundanese, and Makassar. Accuracy rate that has been reached is 82% where the input voice comes from recorded telephone conversation.

Keywords : *dialect, telephone. Mel-Frequency Cepstral Coefficient, K-Nearest Neighbor.*