ABSTRACT

Many kind imitations of identity both of our real and digital worlds insist the identification technology goes further and more reliable. Identification technology has many things to identify. There are eyes, finger print, face, and the one that needs to develop is identification based on heart beat. Human's heart beat has many differences as we can see in the signal produced by Electrocardiogram (EKG).

In this final project, the systems consist of 3 parts, pre-processing, feature extraction, and classification. The beginning process produces sample data of humans' heart beat. feature extraction uses data reduction method that is Principal Component Analysis (PCA). PCA gets important information from heart beat signal, then the value's picked as an input in classification process. The classification uses LDA method which maximizes the discrimination interclass and minimizes spread in a class.

This final project explains PCA method as EKG signal analysis which extract EKG signal. The PCA transformation results are used as input for classification which used LDA method to determine class of every EKG signal. In the last result, the systems get 72,41% of accuracy using 10 training data.

Keywords: preprocessing, ECG, PCA, LDA