

Abstract

Ear recognition is one of many methods in biometric recognition. Ear biometric has advantage in its permanent, unique, and unchangeable.

Many methods has been used in ear recognition, such as PCA, ICP, edge detection-based, etc. This final project will try to do implementation PCA+LDA method in ear recognition. While in LDA process, will process projection between-class scatter matrix and within-class scatter matrix on PCA eigen vector so can reduce computational in calculate LDA eigen vector and eigen value. Compared to PCA, computational in LDA is more complex but will provide more better data classification. Highest accuracy on normal test imagae reach 100%, test image with brightness variation reach 95,883%, and test image with noise variation reach 91,667%.

Keywords: Ear recognition, biometric, PCA, LDA