Abstract

There are several advantages for using gait-based identification. It is difficult to immitate, change, or manipulate. Gait can also be capture from distance, not like any other biometric identification which requires short-distance between the object and sensor.

This gait-based identification project implements data-reduced method, Principal Component Analysis (PCA), and classification method, K-Nearest Neighbor (KNN). PCA will create a new-data-set with low correlation between its variables. KNN is an instance-based classification method which use dissimilarity-measurement method. This project using Euclidean, Square Euclidean, and Manhattan distance as dissimilarity-measurement method.

In this project, all the third dissimilarity-measurement method produce the same accuration result. The use of PCA produces a decline in execution time for 26,67% and increase the accuration result for 41,67%. The highest accuration result is 75%.

Keywords : Identification, Gait, PCA, KNN