

ABSTRACT

Visual identification is the most applied methods in security systems. Another commonly used biometric is Face recognition or facial recognition. Attendance system with face, recognize the perpetrators of crime with CCTV are some applications of face recognition, efficiency and accuracy to be the main facial recognition factors are widely applied.

Processing of facial image sample in this research will be implemented in 3 dimension, to get Template Matching used face recognition with Iterative Closest Point (ICP) method and Support Vector Machine (SVM) classification. Iterative Closest Point (ICP) in general, is for add dimension to information by minimizing Mean Square Error (MSE) between points in one view and the closest point. While SVM is a method to classify objects by determining the classes that is displayed from extraction process.

The final result of this project is a program that can help introduce 3D face patterns. Based on this research, the calculation of the Confusion Matrix was obtained, in taking 48 image frames, 49 iterations, partition 12, and using SVM OAA. Then, this known system works with Precision 97,30%, Recall 100,00%, Accuracy 97,56%.

Keywords : 3D Face, Biometric, ICP, SVM.