ABSTRACT

Security is one of the very important needs for humans to face the new era of technology. Curiousity on the state or condition of the things possessed also become an important factor for humans to continue to develop building or home security system. With increasing crimes such theft and robbery would reuire a security system that can be applied or used to keep the building and home safety.

The system can detect object in the form of face from the input image. The system will require the input image from a security camera. Once the object detected, the system will do the matching faces with facial image contained in system database. After data processing, the system will produce logic that will be used in the next process in the overall system.

The system is an application of Computer Vision in the building or home security system. The system will take the image from video as input. Every frame from the video will be processed by the system. Image will be processed by using Haar Cascade method to detect object in form of face contained in the image. Then the system will used Fisherface method to match the face with the facial database in the system. From the test, optimal position for the camera to run the system well is ± 2 meter from the ground with 10 angle°.

Keywords : *security, Computer Vision, Haar Cascade, Fisherface*