

ABSTRACT

Face recognition is easy for humans, but what about face recognition by machine or computer. We identify people by looking at their eyes and face. So also the same as with a computer. Human is capable of identifying people more quickly and accurately. This face recognition will be implemented on the door via a servo motor. Implemented on the door in the house because inside the house there are valuable items to protect. In order to make those items safe, the owner must add security system that only owner and their families can get into the house.

This face recognition method created with python programming language by using Raspberry Pi. Design of this system is in order to seek its own position of a face in an image. The algorithm is Eigenface or commonly called PCA (Principle Component Analysis).

The Expectation of this face recognition has to form the image more flexible and has an accuracy of up to 90% so that only people who are in a database that can be entered into the house. While the servo motor is designed in order to control the position to open the key slot.

Keywords : face recognition, PCA, eigenface, raspberry pi, motor servo