

ABSTRACT

Smart Home is today's technology with the intelligence of increasingly advanced technology that aims to facilitate human work, automatic door locks are one of them ". In designing the system to produce an automatic open door lock output. The face recognition using a webcam will make people more comfortable and safe in their daily lives, with this system, the house will be safe from theft.

In this Final Project the Haar Feature-Based Cascade Classifier method is often used because it is able to get rid of unnecessary background when recording facial patterns. So this method is able to save time to find facial patterns in images captured on the camera. The system will succeed if the face data is correct so the door lock is open. Database will be sent to the user's telegram.

In this research, using Raspberry PI microcontroller with Internet-based of Thing. Different parameters and test data that must be performed and calculated in this study, such as parameters delay, throughput, packet loss. The output of this study with the results of a confident value of 70% - 75%, the door lock can be open with users already registered in the database and sending data on telegram applications with the delay results on all users tend to be stable with an average value between 0.06- 0.01 ms, the highest throughput value is 72 k bits / s, and packet loss is categorized very well, because 3 face data is 0% of 4 face data in the database, the smaller the number of lost data packets the more intact packets sent .

Keywords: Face Recognition, Internet Of Thing and Haar Feature-Based Cascade Classifier