

ABSTRACT

A theft event is something that is not desired by anyone with the development of technology in the present many security systems that have been made to reduce theft. This final project creates a security system where the Raspberry pi as the brain and uses the Python language system uses the Haar Cascade Classifier method to detect faces and use the Local Binary Pattern method to identify the face so that the security system can find out whether the face is registered in the database or no, then the results of the data will be sent to the owner of the house and the whole system is connected to the internet so than when the owner of the house is outside, he can find out the condition of the house. From the tests in this thesis, we get the highest accuracy of 100% and the lowest accuracy of 6.67%. The results of this test are still dependent on the light, distance, and angle of the face to the camera, the results of the identification process have a good accuracy value if the light conditions are good, the distance of the face is not too far from the camera and the angle is not too large for the camera. Besides that, the system can identify faces better if the database is filled with different facial positions

Keywords: Haar Cascade Classifier, Local Binary Pattern, Raspberry Pi, IoT