ABSTRACT

At present the patient registration system is still manual, with this system many patients who are often unsupervised because they must wait a long queue when they want to do data registration. The less effective this system is enhanced when the COVID-19 pandemic occurred in various areas, many patients were left unchecked as a result of large Numbers of patients and lengthy data registration. With the facial recognition devices the author makes, it is hoped that it will make it easier for the public to do the data registration process quickly and can be handled effectively. It is designed with Raspberry Pi and webcam. As for the method used for the hog (histogram of oriented gradients) to detect the patient's face when the patient had facial detection on the tool and algorithm used by haar cascade classifiers to extract the face on the picture. This device can be used for facial recognition which will eventually enter the created system, where further identification and a history of illness is required for registration. Finally, after a test, the results were obtained that only a range of 10 to 100 cm. Additionally, it detects a face in normal lighting conditions as well as an additional lighting device, a difference being made between a combination of time delay. Based on the results of the test, the most effective distance between 40 and 60 cm with the success of facial detection of about 80-90% could be caused by erratic quality of lighting depending on the condition.

Keywords: Registration, COVID-19, Raspberry Pi, Webcam