ABSTRACT

The covid-19 virus outbreak in Indonesia is increasing significantly, every day there are approximately 20,587 confirmed cases of Covid-19. Currently, the use of masks is one of the means of self-protection from exposure to the corona virus or commonly referred to as covid-19 and to check the use of masks requires a lot of human power in checking one by one. If done at night in a public place is not possible because the officers have limited energy and time. With the rule that requires everyone to use a mask and do physical distancing while outside the house or room. In order to get the habit to discipline using masks outside the room, therefore, made the application of detecting the use of masks using a webcam with viola-jones method based on small single-board computers. In this study the method I use is the viola-jones method which is a method of detection of a face object proposed in 2001 by Paul Viola and Michael Jones. The Viola-Jones method is the most commonly used algorithm for detecting faces. This application was created using raspberry pi as the main brain in managing data and python as a programming language. Python has a scripting feature that allows the code created can be directly executed as a program dynamically. The Library used to create the application is OpenCV which is a library used to manage images and videos in real-time. This application will detect the use of masks which will then be monitored through the monitor screen and will provide sound notifications when someone is detected not using a mask. After testing, it was found that the application can detect the use of masks using the viola-jones method by reading the facial landmarks of the use of masks on each object in the video Frame.

Keywords: Viola-Jones Method, Covid-19, Face Detection, Python, OpenCV