

ABSTRACT

Buses are widely used by the Indonesian people as a means of transportation. Therefore, a detection system is needed to count the number of passengers getting on and off at a location, support the monitoring of passenger and driver behavior, and digitally reconstruct accidents on buses. To overcome this, in this study a detection system was designed with the Background subtraction method which was processed using raspberry pi. Background subtraction is a process used to detect moving objects in a video from a static camera. To detect a moving object from the difference between the current frame and the reference frame, it is often called a "background image" or "background model". In this test, the light intensity is very influential, the better the light intensity, the smaller the error in the detection process. The system can detect passengers when they get enough light, which is around 400-800 Lux while the system detects less well if it is close to 100 Lux.

Keywords: background subtraction, raspberry pi, detection system, bus, object.