ABSTRACT

Transportation plays a major role in various aspects including economic, industrial, political, environmental and social aspects. Transportation is very important in the distribution process of goods or services and helps circulation to run optimally and quickly. Bus is one of the transportation that is often used by Indonesian people. In addition to providing travel facilities within and outside the city, buses are also widely used in the tourism sector, taking tourists around from one tourist spot to another. To increase public interest in using buses, a company needs to implement various strategies to be able to compete with other bus companies. To monitor the number of bus passengers getting on and off at certain locations, this system was created to help calculate passengers entering or leaving the bus with the help of object detection from cameras that have been programmed with Raspberry in order to detect passengers passing through the bus door by using two Virtual Lines red as an indication of entry and blue as an indication of exit which help the program count the objects that pass through it, by installing a camera above the bus entrance facing the floor so that it can take images of passenger objects passing through the door. This system can detect and count passengers with all colors of clothing that can be detected up to 100% with a camera height of 240 cm from the floor with a camera angle of 0 to 10 degrees to the floor.

Keywords: Passenger Counter, Transportation, Object Tracking, Image Processing, Virtual Lines.