ABSTRACT

Indoor Person Count Monitoring System Utilizing Image Processing Based On Android.

Technology that uses intelligent and automated systems can simplify human work that are usually done manually to be more effectively and efficiently. One of the manual jobs in question is to monitor the number of people in a room, for example in calculating the number of students who in and out the classroom.

In this final project, In this final project, the shooting for the input using a webcam that connected to the microcomputer. In microcomputer input will be processed using image processing and counting process. The use of image processing is needed so it can know how many people are in the room. The method that can be used for technological road monitoring system based on image processing is by background substraction algorithm. Background Substraction Algorithm is used to separate between the objects with backgrounds so that the system can run the Counting People. As a display output using the android based mobile device system.

The system in this final project will count the number of people passing in and out within camera range that is above the object and counting it. The results obtained from the analysis and testing that people are well detected if the threshold divisor value of 250 for a distance of 150cm with an accuracy of 90%, the threshold divisor value of 350 for a distance of 100cm with an accuracy of 90%, and the threshold divisor value of 500 for a distance of 50cm with an accuracy of 80%. As well as calculating the number of people better when people cross the line of determinants on the camera one by one with delay > 5 seconds between every incoming and outgoing person.

Keywords: Image Processing, Background Substraction, Webcam, Mobile Device.