

## Abstract

*Counting people in the video is one of the topics in the field of computer vision that became important in the present study. Many uses that will be obtained from the application of the calculation, such as for video surveillance, estimated the crowd somewhere, customer counters in shops etc. With such a background it is necessary for the research about counting people.*

*People come and go at any place would be through a certain door. On that basis, the final project will be implemented in a counting people's system through a virtual line as an analogy of the entrance called LOI. To find directions in and out, used the current direction of people's movement through the line that called optical flow.*

*First - all what system do is to detect foreground pixels. Furthermore, features of each foreground pixel on LOI will be counted. The first feature is the weight of pixels that determine how severe the pixel. The second feature is the form of optical flow, they are magnitude and direction of movement of pixels. Features that are obtained will be multiplied and accumulated over. The accumulation is the estimated number of people. The system is able to provide direction and calculate people fine for no occlusion's cases with 100% accuracy. But if there is occlusion, accuracy can be reduced to 40% -50%.*

**Keywords:** *counting people, foreground, optical flow, LOI, occlusion, weight*