

Video-Based Detection, Counting and Classification of Vehicles Using OpenCV

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Abstract: *In this era people using vehicles is getting increased day by day. To plan, monitor and also controlling of these vehicles is becoming a big challenge. A system is to be implemented without altering the infrastructure, so a video- based vehicle capturing and analysis of that video without affecting the traffic is required, by which traffic accidents and congestion can be determined. In this paper, we have come up with a solution for the above problem using the video surveillance considering the video data from the traffic cameras. We have used adaptive thresholding method, Gaussian based background subtraction with tracking methods such as blob tracking and virtual detector. The implementation was done using OpenCV Python as a tool. Our proposed system can identify, track the congestion and help in counting the objects precisely.*

Keywords: Object detection and tracking, Background subtraction, Video analyser, Virtual object detector, Blob- based tracking

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