Automatic Vehicle Detection and Road Traffic Congestion Mapping with Image Processing Technique

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Authors:
Pradip Singh Maharjan
Ajay Kumar Shrestha

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Abstract

Road Traffic Congestion Mapping is a system that enables people find information about the traffic congestion in the city. One of the major problems in the city centers like Kathmandu is the traffic jam in the roads. This project provides a feasible solution to the users in finding less congested path on the road to their destination. The system collects traffic congestion data from the roads and makes it available to users via Openstreet map. The surveillance cameras installed at the roads give continuous input to our system which then counts the number of vehicles in the road in a span of time to determine the congestion in the road. The system implements Background subtraction and thresholding for detection of vehicles from the image input received from the cameras. The congestion is plotted in Openstreet map, for example red line for highly congested road, blue line for mildly congested road and green line for free flow of vehicles in the road. Once this information is obtained, one can easily find the alternate path to their destination.

References

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Vehicles at Nighttime”, University of Technology, Sydney, Faculty of Engineering, November, 2007.

Index Terms

Computer Science
Image Processing

Keywords
Road traffic congestion image processing thresholding vehicle detection