عنوان مقاله:

A New Vehicle Detect Method Based on Image Processing a Long with Estimate Moment Velocity

محل انتشار:

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خلاصه مقاله:

This paper presents a complete system for analyzing a vehicle's traffic behaviorin the context of real-time traffic video surveillance applications. Receiving theimages through video surveillance camera in the first phase, we get use ofGaussian mixture model for each frame to achieve a precise background image.This process will be repeated as long as we seize accurate background images.This phase is called training phase. An initial training step is performed thatinvolves estimating the geometrical structure of the road. In the second phase, thereceived images will be analyzed along with the trained images to extract thevehicles (moving objects) based on this analysis. In third phase, a green blockwill surround each vehicles to enable the researches count them. Eitherinaccurate training of the background images or the shadow of moving vehiclesmight cause problems in detecting vehicles in motion in the second phase. Tosolve these problems, we get of merging the blocks which overlap the otherblocks to compute the volume and density of traffic accuracy. In four phase, theoptical flow is used for computing moment velocity of each vehicle based onimproved Lucas-Kanade and Horn-Schunck methods. Finally, the report oftraffic can be presented by post processing. Our approach is demonstrated to bemore adaptive, accurate and robust than some existing similar pixel modelingapproaches through experimental results. Results show that the proposed methodobtains better results for moving objects detection than the previous counterpartmethods and can be easily assembled to current automated video surveillancesystems it also reduces the running time.

کلمات کلیدی:

Image Processing, Intelligent Transportation Systems, Gaussian MixtureModel, Optical Flow