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Analysis of Artificial Neural Network and Viola-Jones algorithm based moving object detection (Conference Paper)

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Abstract

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In recent years, the worrying rate of street crime has demanded more reliable and efficient public surveillance system. Analysis of moving object detection methods is presented in this paper, includes Artificial Neural Network (ANN) and Viola-Jones algorithm. Both methods are compared based on their precision of correctly classify the moving objects. The emphasis is on two major issues involve in the analysis of moving object detection, and object classification to two groups, pedestrian and motorcycle. Experiments are conducted to quantitatively evaluate the performance of the algorithms by using two types of dataset, which are different in term of complexity of the background. The utilization of cascade architecture to the extracted features, benefits the algorithm. The algorithms have been tested on simulated events, and the more suitable algorithm with high detection rate is expected to be presented in this paper. © 2014 IEEE.

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moving object detection object classification public surveillance

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