AN ADAPTIVE BACKGROUND SUBTRACTION FOR VIDEO SURVEILLANCE BASED ON GAUSSIAN MIXTURE MODEL

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ABSTRACT

In video surveillance, detection of moving objects from an image sequence is very important for goal tracing, action recognition, and behavior understanding. Background subtraction is a very widespread approach for foreground segmentation in a quiet still image. In order to reimburse for illumination changes, a background model apprising process is generally adopted, and leads to additional computation time. In this paper, we propose an adaptive background subtraction scheme. Background subtraction is one of the key techniques for spontaneous video analysis, especially in the field of video surveillance. Although its significance, evaluations of recent background subtraction methods with respect to the tests of video surveillance suffer from various limitations. Gaussian mixture model is one of most popular background subtraction methods. Model the values of a particular pixel as a mixture of Gaussians. We determine which Gaussians may relate to background colors- Based on the resolution and the variance of each of the Gaussians. Adaptive background subtraction is chosen for more video surveillance applications, because of the restriction of non-adaptive methods.

KEY WORDS: adaptive background subtraction, Gaussian mixture model, video surveillance, foreground segmentation.

REFERENCES:


