Abstract

An efficient approach to detect abandoned and stolen object in live videos based on background subtraction and foreground analysis has been presented in this paper. The motivation is to produce alerts spontaneously in the presence of abandoned or stolen objects. To detect the abandoned and stolen objects, the focus is to determine the static regions that have recently changed in the scene by performing background subtraction. The most commonly used algorithm for background subtraction is the Gaussian Mixture Model (GMM). In the proposed detection method, an improved Multi- Gaussian Adaptive background model is employed for background subtraction. A simple split and merge method is used to detect the static region from which the static objects are identified. The time and presence of static objects, which may be either abandoned or stolen, are informed to the security officials by triggering an alarm. The method proposed in this research work is tested to run in real time and have shown expected results.

References


**Index Terms**

Computer Science  Image Processing

**Keywords**

Abandoned object  Background subtraction  static region  stolen object