In this paper an effective approach for detecting the abandoned object/ luggage for video surveillance is present. Here the long-term and short-term background models are combined to extract foreground objects, where each pixel in an input is classified as two bit code. To identify the static foreground regions, a framework is used based on the temporal transition of code pattern and it also determines whether the candidate regions contain the abandoned object by analyzing the back traced trajectories of luggage owner. This paper also introduces the real-time application of proposed method. The real-time application is performed by using raspberry-pi processor and the raspberry-pi camera. The experimental results show that, the proposed approach is effective for detecting abandoned object/ luggage.
Abandoned Object Detection using Temporal Consistency Modeling

2. Int. Workshop PETS,
13. 1370 IEEE TRANSACTIONS ON INFORMATION FORENSICS AND SECURITY, VOL. 10, NO. 7, JULY 2015
21. S. Agarwal, A. Awan, and D. Roth, “Learning to detect objects in images via a sparse,

**Index Terms**

Computer Science  
Image Processing

**Keywords**

Abandoned object detection, long-term background model, short-term background model, visual surveillance, pixel based finite state machine, image processing.