Abstract

This paper deals with an efficient background subtraction of image/frames of video by improving the execution speed, accuracy and reduce the usage of memory. Three important techniques are applied to improve the efficiency: superpixel extraction, canny edge detection and fuzzy c means. On applying the above three methods sequentially, the background of image/video can be segmented from foreground object accurately. The first method reduces the processing data more than 75%. Canny edge detection is an optimized method to detect edges. Fuzzy c means works well and good to segment the overlapped objects in an image/video.

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**Index Terms**

Computer Science  
Pattern Recognition

**Keywords**

Centroid  Edge Pixel  Superpixel  Subpixel  Suppression  Thresholding