Accepted Manuscript

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PII: S0923-5965(17)30169-8
DOI: https://doi.org/10.1016/j.image.2017.09.009
Reference: IMAGE 15282

To appear in: *Signal Processing: Image Communication*

Received date : 22 May 2017
Revised date : 16 September 2017
Accepted date : 17 September 2017

Please cite this article as: K. Ahmad, N. Conci, F.G.B. De Natale, A saliency-based approach to event recognition, *Signal Processing: Image Communication* (2017), https://doi.org/10.1016/j.image.2017.09.009

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ACCEPTED MANUSCRIPT

A Saliency-based Approach to Event Recognition

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Abstract

Over the last few years, a number of interesting solutions covering different aspects of event recognition have been proposed for event-based multimedia analysis. Existing approaches mostly focus on an efficient representation of the image and advanced classification schemes. However, it would be desirable to focus on the event-specific information available in the image, namely the so-called event saliency. In this paper, we propose a novel approach based on multiple instance learning (MIL) to learn the visual features contained in event-salient regions, extracted through a crowd-sourcing study. In total, we collect the salient regions for 76 different events from 4 large-scale datasets. The experimental results demonstrate the efficacy of using only event-related regions by achieving a significant gain in performance over the state-of-the-art.

Keywords: Event Recognition, MIL, Event Saliency, Multimedia Indexing and Retrieval

1. Introduction

The availability of low-cost hand-held devices, together with the increasing popularity of social networks, has contributed to the proliferation of shared multimedia contents, drastically changing the way in which people consume and communicate through social media. According to a recent report[1] based on an analysis conducted on Flickr, in 2016, a total of 612 millions public pictures

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[1] https://www.flickr.com/photos/franckmichel/6855169886/

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