

TPA 5: Salient Event Detection from Video Shots

Problem Statement: This project is aiming at detecting a salient event in a given video shot. An event is salient in a video shots if it stands out in some way (a highlight event, sudden event) from all the other events happening within the entire duration of a video shot. One may assume that there is either one salient event in a video shot or there is none.

Input:

- A collection of video shots with at most one salient event in it.

Expected Output:

- Automatically detect the salient event
- Give the beginning and end time of the event and/or mark the salient event in the video

References

1. Hua Zhong, Jianbo Shi, Mirko Visontai. Detecting Unusual Activity in Video, CVPR 2004.
2. Oren Boiman, Michal Irani. Detecting Irregularities in Images and in Video, ICCV 2005.
3. Jia Li, Yonghong Tian, Tiejun Huang, Wen Gao¹. A Dataset and Evaluation methodology for Visual Saliency in Video, IEEE International Conference on Multimedia & Expo, 2009.
4. Konstantinos Rapantzikos, Yannis Avrithis, Stefanos Kollias. Spatiotemporal Features for Action Recognition and Salient Event Detection, Springer Cognitive Computation, March 2011
5. Bin Zhao, Li Fei-Fei, Eric P. Xing. Online Detection of Unusual Events in Videos via Dynamic Sparse Coding , CVPR 2011
6. Loy, C C. Salient motion detection in crowded scenes, International Symposium on Communications, Control and Signal Processing, 2012
7. Yuming Fang, Zhou Wang, Weisi Lin. Video Saliency Incorporating Spatiotemporal Cues and Uncertainty Weighting, IEEE International Conference on Multimedia & Expo, 2013
8. Yuming Fang, Weisi Lin, et al. A Video Saliency Detection Model in Compressed Domain, IEEE Transactions on Circuits and Systems for Video Technology, 2014