

TPA 3: Unusual event detection from surveillance video shots

Problem Statement: This project is aiming at detecting unusual events from surveillance videos. All the videos are shot using a single static camera. One example of such an event could be detection of events where a car is breaking the traffic rule.

Input:

- Videos shot using static camera with one event per shot.

Expected Output:

- Automatically detect the unusual activity
- Give the start and end time of the event

Hint for excellence: *Special Credit will be given if the designed system could able to handle videos with multiple objects.*

References

1. Project Page: <http://www.di.ens.fr/~laptev/download.html>
2. Project Page: <http://www.di.ens.fr/~laptev/actions/hollywood2/>
3. H. Wang, M. M. Ullah, A. Kläser, I. Laptev and C. Schmid, Space-Time Interest Points (STIP), BMVC 2009
4. Simon Hadfield Richard Bowden, Hollywood 3D: Recognizing Actions in 3D Natural Scenes, CVPR 2013
5. Juan Carlos Niebles, Hongcheng Wang and Li Fei-Fei, Unsupervised Learning of Human Action Categories Using Spatial-Temporal Words, IJCV 2008.
6. Yicong Tian, Rahul Sukthankar, Mubarak Shah, Spatiotemporal Deformable Part Models for Action Detection, CVPR, June 2013
7. Michalis Raptis and Leonid Sigal, Poselet Key-framing: A Model for Human Activity Recognition, CVPR 2013