TPA 11: Comparative study of various feature extractors for matching/recognition, under degradation (SIFT, SURF, HOG, Top points)

August 21, 2012

Problem Statement: Given a test image taken in ideal condition, do the following:-

- Generate different images by blurring, rotating, scaling, changing the illumination and adding the noise to a given image for different parameters.
- For all set of images generated by above methods, do the following :-
 - Compare the performance of various interest point detectors (DOG, Hessian, Harris etc.).
 - Compare the performance of various interest point descriptors (SIFT, SURF, HOG, Top points etc.)
 - Compare the performance of various combinations of detectors and descriptors.

Input: Input to the system are the following

• Test Image taken in ideal condition.

Expected Output: The expected output is as follows-

• Performance graph for all detectors and descriptors.

Hint for excellence: Special Credit will be given for the number of descriptor and detectors studied. Combination of transformation and degradation to be looked (blur, scale, noise or combination).

References

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