Lecture – 4

Which of the following is NOT true?

Options

1. Harris detector is invariant to image scale
2. The derivative of Gaussian filter is dependent on ‘σ’ and thus to make the response ‘scale invariant’ it is multiplied by ‘σ’.
3. Smoothing of an image helps in detecting edges better.
4. Harris detector is partially invariant to image intensity change.

Answer:

Option a

Harris detector is not invariant to image scale.

Paper - 4

Repeatability(%) is defined as the percent of key point locations and scales that are repeatably detected for different variations of the image. Which of the following is true w.r.t the Repeatability?

Options

1. Repeatability(%) does not continue to improve as more scales are sampled as this results in many more local extrema being detected, but these extrema are on average less stable and therefore are less likely to be detected in the transformed image.
2. Repeatability(%) increases as the image noise is increased.
3. Repeatability(%) is found to be increasing as a function of affine distortion.
4. Repeatability(%) is found to be invariant to affine changes in illumination(assuming no non-linear illumination changes).

Answer:

Option b

Repeatability(%) decreases as the image noise is increased.