CS 663: Assignment 3

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Notes and Observations

NOTE: Since none of our team members were able to register in Turnitin, we are attaching our code and (fast to generate images). The published part contains output for parts 1 and part 2. The tuned parameters can also be found in the main script of the published code.

Question 1 (Harris Corner Detection)

- For directional gradient calculation we used the imgradientxy function, and then smoothed them with a Gaussian Kernel of size {3*sigma_grad X 3*sigma_grad}
- We have used the patch size for similarity between 2 patches `{3*sigma_weights X 3*sigma_weights},` i.e. 3*sigma_weights square centred around the pixel
- While the corner-ness measure does show correct trends i.e. taking high positive values around the corners, it's not sharp because of no thresholding and non-maximum suppression.

Tuned Parameters :-

- K in cornerness measure -> 0.05
- Sigma for gradient smoothing (sigma_grad) -> 1
- Sigma for gaussian weights (sigma_weights) -> 3