CS518

Assignment – 1

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Blur Detection

Inspired from Canny Edge Detector

- To detect whether an image is blurred I have taken the count of those pixels which were not local maxima and are removed in the non maximal suppression step of Canny Edge Detector.
- This count is divided by the total number of edge pixels in the final canny edge detected image.
- The more is this ratio(called **score**, which maybe > 1, as edge like pixels are less), more likely it is to be a blurred image, as we will have more pixels which had some pixel values higher in their neighbourhood and were removed
- I have used sigmoid function to convert this **score** into a probability, with argument of sigmoid being difference from score 10, i.e. (score - 10).
- Score was subtracted from 10 as it was observed usually all images with >10 score were blurred and <10 were sharp
- This score parameter may be determined on an image by image case probably by comparing different gauss blurred versions of the image
- Also the probabilities are squeezed more towards 0 due to the score '**10**' not being image specific in my approach. For this I have made a manual adjustment to inflate the probabilities when they are between 0.3 and 0.6 by factor of 1.5