**[FUNDAMENTALS OF IMAGE PROCESSING](https://classroom.google.com/u/1/c/NDU5NjcxMTU2NDc4" \t "_self)**

**Homework2**

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1) Histogram is not a unique representation of an image. Histogram is a graph of gray value vs frequency of occurrence of gray value.It depends on the probability or frequency of gray value. So no matter how the gray values are distributed over the image,if the frequency of occurrence of gray value is not changed, the histogram will not change .Therefore, Histogram is not unique representation of images. That means it is possible that two or more different images can have same histogram.

2) A histogram provides no information regarding the spatial distribution of an image’s pixel values. Thus, we can have multiple different images that share the same histogram and we can’t reconstruct an image from its histogram.

3) Yes, a second pass of histogram equalization will produce exactly the same result as the first pass.

6) A histogram is a graphical representation of the tonal values of your image. In other words, it shows the amount of tones present in your photo at a given brightness, from darkness to brightness. If there is sun in the image, it is natural that it is so bright that it is actually completely white, highlight clipping occurs.