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BLG453E – Computer Vision Assignment 1

1) Histogram Matching

In this part of the assignment, we are asked to implement a histogram matching function, which will transform the CDF of input image so that the distance to CDF of target image will decrease. In order to calculate CDF of an image, firstly, we need create histograms of each channel. Then, we calculate the CDFs for each image/channel and construct look-up table for each channel in target image. Finally, by using the look-up table, we replace the values in input image according to the look-up table.

In order to run program:
$ python main.py

This program only works on PNG images hence JPG images have different ordering for RGB channels.