

YTU Department of Mathematical Engineering

MTM4552 Spring 2022

Homework

Due Date: June 10,2022 23:55

Research about color image equalization techniques such as RGB,CMY and HSI models and develop a suitable way for applying histogram equalization for Color Images.

Hint: Use color space conversion from RGB to HSI and RGB to YCbCr. Compare histogram equalized images using SNR/PSNR measures. A test image (mandrill.ppm) is packed with this file. Also, C /++functions to read and write ppm files are provided. Prepare your report about homework and deliver your source code(s) on the online system.

Notice: You can use opencv or any other programming languages.

You can refer the following web pages for more information.

- 1- <https://prateekvjoshi.com/2013/11/22/histogram-equalization-of-rgb-images/>
- 2- <http://opencv-srf.blogspot.com.tr/2013/08/histogram-equalization.html>
- 3- <http://www.sistenix.com/rgb2ycbcr.html>
- 4- <https://arxiv.org/ftp/arxiv/papers/1501/1501.00108.pdf>