Computer Vision (Spring 2019) Problem Set #1

Andrew Parmar

aparmar@gatech.edu

1a. Interesting Images

Image 1 - ps1-1-a-1

Image 2 - ps1-1-a-2

2a. Swapped Green and Blue

ps1-2-a-1

2b: Monochrome Green

ps1-2-b-1

2c: Monochrome Red

ps1-2-c-1

3a: Replacement of Pixels

ps1-3-a-1

4a: Image Stats

Min: 0
Max: 255
Mean: 154.0235882352941
Standard Deviation: 67.16410036794716

4b: Arithmetic Operation

ps1-4-b-1

4c: Shifted Image

ps1-4-c-1

4d: Difference Image

ps1-4-d-1

5a: Noisy Green Channel

ps1-5-a-1

5b: Noisy Blue Channel

ps1-5-b-1

6a. Discussion

Between all color channels, which channel, in your opinion, most resembles a gray-scale conversion of the original. Why do you think this? Does it matter for each respective image? (For this problem, you will have to read a bit on how the eye works/cameras to discover which channel is more prevalent and widely used)

I think
my answer
is ...

6b. Discussion

What does it mean when an image has negative pixel values stored? Why is it important to maintain negative pixel values?

I think
my answer
is ...

6c. Discussion

In question 5, noise was added to the green channel and also to the blue channel. Which looks better to you? Why? What sigma was used to detect any discernible difference?

I think
my answer
is ...