

In this project I have compared the performance and visual output of two images. The two images are "jpeg.jpg" and "sailboat.jpg". The two main algorithms used in comparison is Averaging and Lightness. I also tested Luminous with different w1, w2,w3 values. I found that for sailboat which was a larger image, Luminous was ran more quickly than the other algorithms. Averaging was very close to the run time of Luminous. On the other hand, the jpeg.jpg image which is much smaller than the sailboat, had a better run time with the averaging algorithm.

Sailboat averaging:

Img Size: 244412

File: sailboat.jpg

Time taken to complete averaging was 1.2814421653748 seconds



Sailboat lightness:

Img Size: 244412

File: sailboat.jpg

Time taken to complete lightness was 1.59512591362 seconds



Jpeg averaging:

File: jpeg.jpg

Time taken to complete averaging was 0.38793206214905 seconds

Img Size: 83592



Jpeg Lightness:

File: jpeg.jpg

Time taken to complete lightness was 0.48760199546814 seconds

Img Size: 83592



Sailboat luminous  $W1 = 1$ ,  $w2 = 1$ ,  $w3 = 1$

W1

File: sailboat.jpg

Time taken to complete luminous was 1.2069280147552 seconds

Img Size: 83592



Sailboat Luminous  $w_1 = .3$ ,  $w_2 = .6$ ,  $w_3 = .1$

$w_1 = .3$ ,  $w_2 = .6$ ,  $w_3 = .1$

sailboatluminous-wchange-w1=0dot3-w2=0dot6-w3=0dot1.jpg

Img Size: 244412

File: sailboat.jpg

Time taken to complete luminous was 1.7091209888458 seconds





Sailboat Luminous  $w1 = .2, w2 = .2, w3 = .2$ :

sailboatluminous-wchange- $w1=0\text{dot}2$ - $w2=0\text{dot}2$ - $w3=0\text{dot}2$ .jpg

Img Size: 244412

File: sailboat.jpg

Time taken to complete luminous was 1.6823990345001 seconds

