Assignment10

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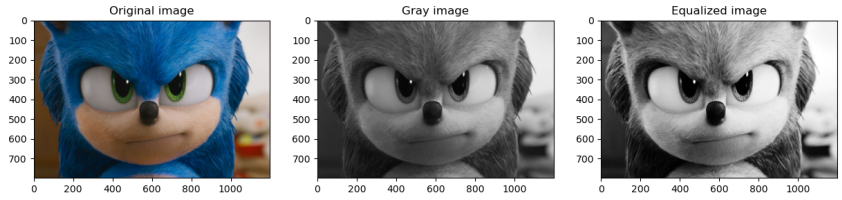
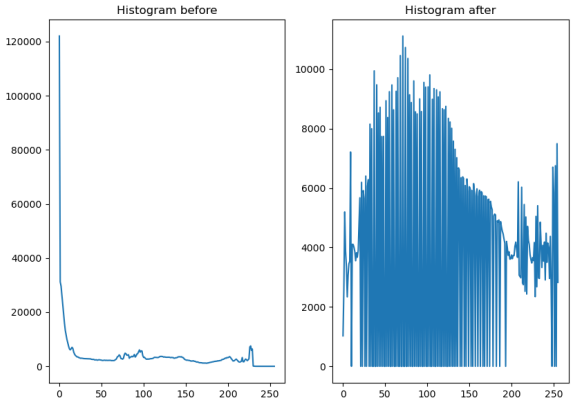
Contents

1 Histogram equalization

[1] Histogram equalization is used to enhance contrast. This method usually increases the global contrast of many images, especially when the image is represented by a narrow range of intensity values. Through this adjustment, the intensities can be better distributed on the histogram, utilizing the full range of intensities evenly. This allows for areas of lower local contrast to gain a higher contrast. Histogram equalization accomplishes this by effectively spreading out the highly populated intensity values, which are used to degrade image contrast.

OpenCV has built-in function "equalizeHist" for histogram equalization and "calcHist" for generating histogram of the image.
Below we can see the difference between non equalized histogram vs equalized histogram





Code we used,

```
equ = cv2.equalizeHist(img1)
hist_before = cv2.calcHist([img],[0],None,[256],[0,256])
hist_after = cv2.calcHist([equ],[0],None,[256],[0,256])
```

References

[1] Acharya and Ray. Histogram equalization. Last accessed 29 June 2022.