

Note: I am Using Scipy v1.1.0. In case of any errors you can install scipy 1.1.0 by the following command: `pip install scipy==1.1.0`

```
In [26]: import scipy  
         scipy.__version__
```

```
Out[26]: '1.1.0'
```

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(https://drive.google.com/drive/folders/1pcaTwofZGfoCxZ3Hv2X6vW6xf_1i88eb?usp=sharing)

Import Libraries

```
In [27]: from skimage import data  
         from scipy.misc import imread, imresize  
         import numpy as np  
         from scipy import ndimage  
         import matplotlib.pyplot as plt
```

Auto Contrast Transformation

Formula of Linear Point Transformation is: $s = (L-1)(r-rmin)/(rmax-rmin)$

Original Image

```
In [37]: original_image = imread('salzburg_before.png', True, 'L')    #read image as grey scale image
```

C:\ProgramData\Anaconda3\lib\site-packages\ipykernel_launcher.py:1: DeprecationWarning: `imread` is deprecated!

`imread` is deprecated in SciPy 1.0.0, and will be removed in 1.2.0.

Use ``imageio.imread`` instead.

"""Entry point for launching an IPython kernel.

Processed Image

```
In [38]: processed_image = original_image.copy()
```

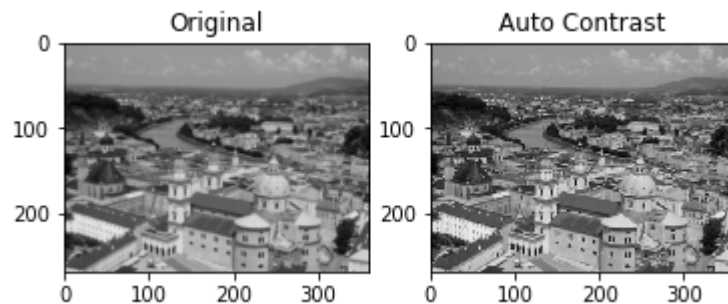
```
In [39]: #s = (L-1)(r-rmin)/(rmax-rmin)
img=processed_image.copy()
rmin=np.amin(processed_image)
rmax=np.amax(processed_image)
processed_img=img.astype(np.uint8)
processed_img=(255)*(img-rmin)/(rmax-rmin)
```

```
In [40]: #Normalizing Intensity Levels
processed_image[processed_image<0]=0
processed_image[processed_image>255]=255
```

```
In [41]: fig, axes = plt.subplots(1, 2)
ax = axes.ravel()

ax[0].imshow(original_image, cmap=plt.cm.gray, interpolation='bilinear')
ax[0].set_title("Original")
ax[1].imshow(processed_img, cmap=plt.cm.gray, interpolation='bilinear')
ax[1].set_title("Auto Contrast")
plt.imshow(processed_image, cmap=plt.cm.gray)
```

```
Out[41]: <matplotlib.image.AxesImage at 0x18260466ec8>
```



```
In [ ]:
```

