```
import numpy as np
import matplotlib.pyplot as plt
import cv2 as cv
#image loading
image = cv.imread("cat1.jpg",0).astype("float")
plt.figure(figsize=(20,5))
plt.subplot(1,2,1)
plt.title('input')
plt.imshow(image,cmap='gray')
plt.axis(False)
def formula(x):
    gamma = 1.8
    c = 255/np.log(1+255)
    return c*(x**gamma)
for i in range(image.shape[0]):
    for j in range(image.shape[1]):

        image[i][j] = float(image[i][j])/float(255)
        image[i][j] = formula(image[i][j])
plt.subplot(1,2,2)
plt.title('output')
plt.imshow(image,cmap="gray")
plt.axis(False)
plt.show()
```