```
import cv2 as cv
import numpy as np
import matplotlib.pyplot as plt

image = cv.imread("cat1.jpg")
img = cv.cvtColor(image, cv.COLOR_BGR2GRAY)
plt.figure(figsize=(20,5))
plt.subplot(1,2,1)
plt.imshow(img, cmap='gray')
plt.axis('off')
img2 = np.copy(img)
row = img2.shape[0]
column = img2.shape[1]
img2 = np.reshape(img2,img2.shape[0]*img2.shape[1])
img2
img2=np.sort(img2)
img2.shape
hist = np.zeros(256)
for i in img2:
    hist[i] = hist[i]+1
hist = hist/(row*column)
hist_difference = np.array([x if i%5 == 0 else 0 for i,x in
enumerate(hist)])
plt.subplot(1,2,2)
plt.bar(np.arange(256),hist_difference)
plt.show()
```