+ Code + Text

```
import numpy as np
import cv2
from google.colab.patches import cv2_imshow
img=cv2.imread("/content/puupy.jpg")
cv2_imshow(img)
```

Resizing

```
r_img=cv2.resize(img,(100,100))
cv2_imshow(r_img)
```

Grey

```
img_gr= cv2.cvtColor(img,cv2.COLOR_BGR2GRAY)
cv2_imshow(img_gr)
```

Lower Lightening

```
im= 255.0*(img_gr/255.0)**2
cv2_imshow(im)
```

Brigtening

```
im1= (100/255)*img_gr+100
cv2_imshow(im1)
```

Inverse Image


```
im_in =255- img_gr
cv2_imshow(im_in)
```

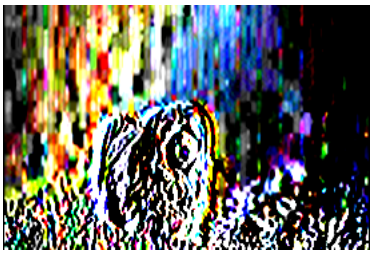
Blur Image

```
img_blr= cv2.GaussianBlur(img_gr,(3,3),0)
cv2_imshow(img_blr)
```

Edge of Image

```
laplacian=cv2.Laplacian(img_blr,cv2.CV_64F)
cv2_imshow(laplacian)
```

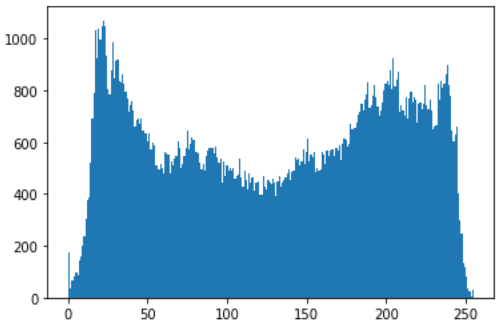
```
sobelx =cv2.Sobel(img,cv2.CV_64F,1,0,ksize=5) #x
cv2_imshow(sobelx)
```



```
sobely=cv2.Sobel(img,cv2.CV_64F,0,1,ksize=5) #y
cv2_imshow(sobely)
```

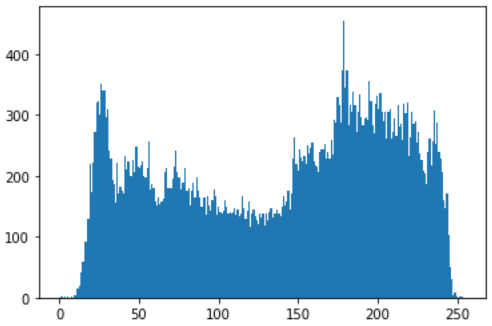
Histogram (Normal image)

```
import matplotlib.pyplot as plt
#Histogram
plt.hist(img.ravel(),bins=256,range=[0,255])
plt.show()
```



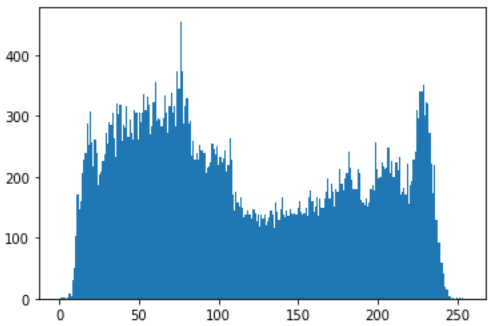
Histogram (Grey image)

```
plt.hist(img_gr.ravel(),bins=256,range=[0,255])
plt.show()
```



Histogram (Inverse image)

```
plt.hist(im_in.ravel(),bins=256,range=[0,255])
plt.show()
```



Histogram (Low-lighter image)

```
plt.hist(im.ravel(),bins=256,range=[0,255])
plt.show()
```

Histogram (Brighter image)

```
plt.hist(im1.ravel(),bins=256,range=[0,255])
plt.show()
```