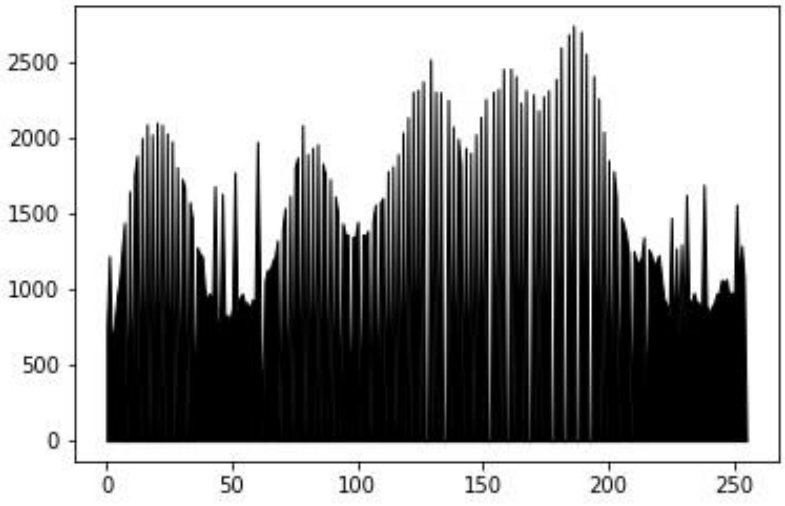
電腦視覺 CV Home Work 2 資研一 R07922003 劉濬慶

- Histogram Equalization:




```
def Histogram_Equalization(coulmn,row,pix):
    total=0
    hist = np.zeros(256)
    S_k = np.zeros(256)
    count = np.zeros(256)
    n = coulmn*row
    for i in range(coulmn):
        for j in range(row):
            hist[pix[i,j]]+=1
    for k in range(256): #使用 S_k 函數
```

```
        total+=hist[k]
        S_k[k] = (255*(total/n))
for i in range(coulmn):
        for j in range(row):
                k=int(S_k[pix[i,j]])
                lena.putpixel( (i,j),k )
for i in range(coulmn):
        for j in range(row):
                count[int(S_k[pix[i,j]])]+=1
#plt.fill(count,color='black')
plt.fill_between(np.arange(0,256,1), 0, count,color ='black')
plt.savefig('Histogram_Equalization.jpg')
plt.show()
lena.save('Histogram_Equalization_lena.bmp')
return lena
```