

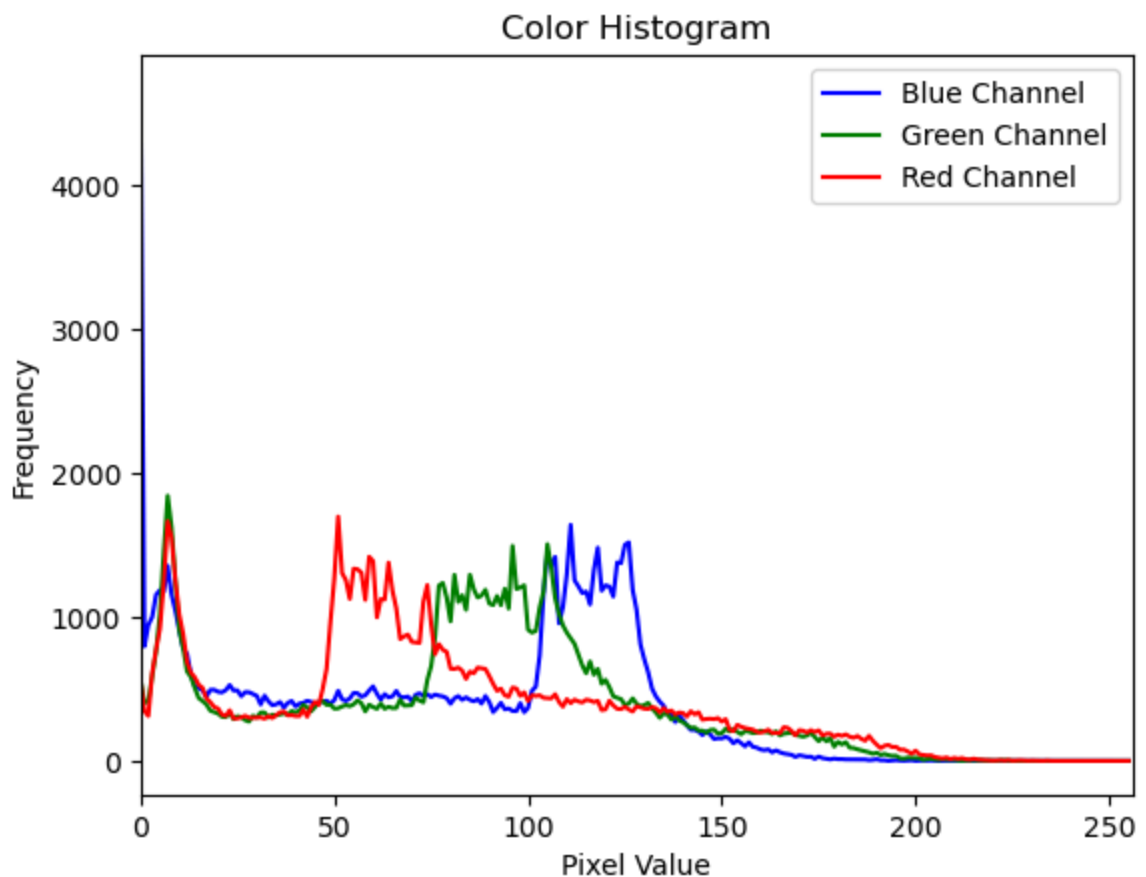
Calculate the histogram

```
In [7]: import cv2
import matplotlib.pyplot as plt

# Load the image from file
image = cv2.imread('200.jpg')    #D:/_SHA/CV/Sec 20-21

# Calculate the histograms for each channel
hist_b = cv2.calcHist([image], [0], None, [256], [0, 256]) #b
hist_g = cv2.calcHist([image], [1], None, [256], [0, 256]) #g
hist_r = cv2.calcHist([image], [2], None, [256], [0, 256]) #r

# Plot the histograms
plt.figure()
plt.title("Color Histogram")
plt.xlabel("Pixel Value")
plt.ylabel("Frequency")
plt.plot(hist_b, color='blue', label='Blue Channel')
plt.plot(hist_g, color='green', label='Green Channel')
plt.plot(hist_r, color='red', label='Red Channel')
plt.xlim([0, 256])
plt.legend()
plt.show()
```



```
In [2]: import cv2
import matplotlib.pyplot as plt
```

```
# Load the image from file
image = cv2.imread('200.jpg', 0) # 0 means grayscale mode

# Calculate the histogram
histogram = cv2.calcHist([image], [0], None, [256], [0, 256])

# Plot the histogram
plt.figure()
plt.title("Grayscale Histogram")
plt.xlabel("Pixel Value")
plt.ylabel("Frequency")
plt.plot(histogram, color='black')
plt.xlim([0, 256])
plt.show()
```

