rgb = imread('C:\Users\chitra\Desktop\mat\EmotionDetect\lady.jpg');

imshow(rgb);

r = rgb(:,:,1);

g = rgb(:,:,2);

b = rgb(:,:,3);

histogram2(r,g,'DisplayStyle','tile','ShowEmptyBins','on', ...

'XBinLimits',[0 255],'YBinLimits',[0 255]);

axis equal

colorbar

xlabel('Red Values')

ylabel('Green Values')

title('Green vs. Red Pixel Components');

ax = gca;

ax.CLim = [0 500];

histogram2(g,b,'DisplayStyle','tile','ShowEmptyBins','on',...

'XBinLimits',[0 255],'YBinLimits',[0 255]);

axis equal

colorbar

xlabel('Green Values')

ylabel('Blue Values')

title('Green vs. Blue Pixel Components')

ax = gca;

ax.CLim = [0 500];

histogram(r,'BinMethod','integers','FaceColor','r','EdgeAlpha',0,'FaceAlpha',1)

hold on

histogram(g,'BinMethod','integers','FaceColor','g','EdgeAlpha',0,'FaceAlpha',0.7)

histogram(b,'BinMethod','integers','FaceColor','b','EdgeAlpha',0,'FaceAlpha',0.7)

xlabel('RGB value')

ylabel('Frequency')

title('Color histogram in RGB color space')

xlim([0 257]);