

```
numPoints = 1E5;
numBins    = 1E1;

data=rand(numPoints,1);
binEdges=linspace(0,1,numBins+1);
subplot(2,2,1);
plot(binEdges,zeros(size(binEdges)), 'rx');
xlim([-0.1,1.1])
title('Centers and Edges')

binwidths = diff(binEdges);
binCenters=binwidths/2+binEdges(1:(end-1));
hold on;
plot(binCenters,zeros(size(binCenters)), 'r*');
hold off
xlim([-0.1,1.1])
grid on

h=hist(data,binCenters);
subplot(2,2,2);
bar(binCenters,h,1, 'y');
title('Frequency Histogram')
xlim([-0.1,1.1])

relFreq = h/sum(h);
subplot(2,2,3);
bar(binCenters,relFreq,1, 'y')
title('Relative Frequency Histogram')
xlim([-0.1,1.1])
```

```
rectHeight = relFreq./binwidths;  
subplot(2,2,4);  
bar(binCenters,rectHeight,1,'y');  
title('Modified Relative Frequency Histogram')  
xlim([-0.1,1.1])
```

