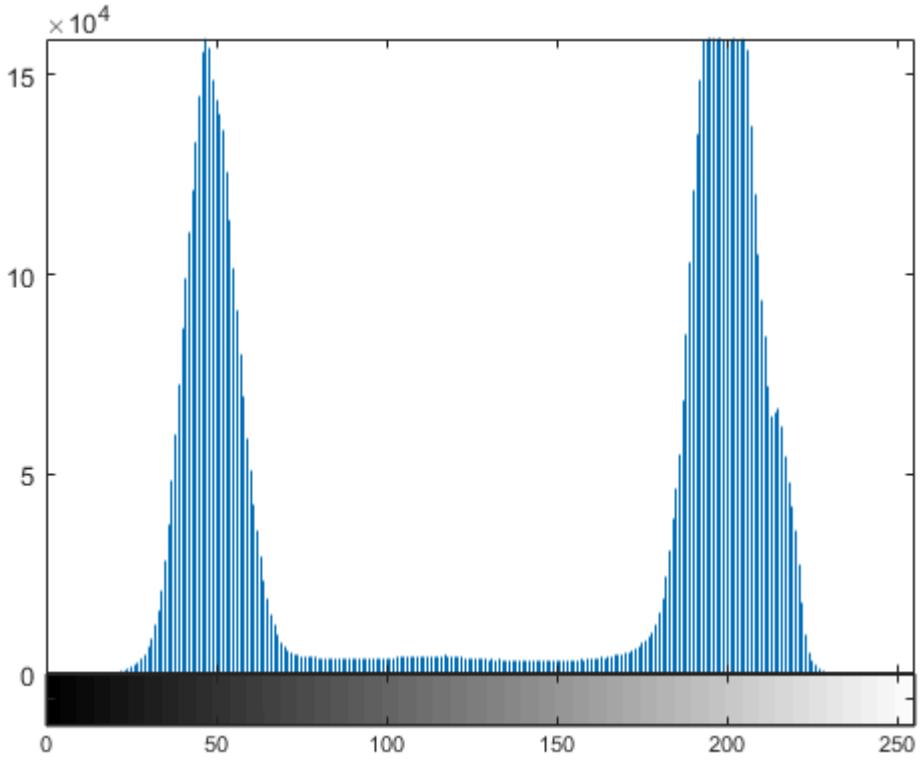
```
%2-A

im = imread('C:\Users\bengo\Downloads\test1.jpg')
```

```
im = 1831×1483×3 uint8 array
im(:,:,1) =

   210   209   208   208   209   210   211   211   208   209   210   209   208   208   210   211   210   210   211
   209   209   208   209   209   210   210   209   209   210   210   209   208   208   209   210   209   210   210
   209   209   209   209   210   210   209   208   209   210   210   209   209   208   208   209   209   210   210
   209   208   208   209   209   210   209   209   209   210   210   210   210   209   209   209   210   210   210
   209   208   207   207   208   209   210   210   209   209   210   210   211   211   211   210   211   211   211
   209   208   207   207   207   209   209   209   209   209   209   210   211   212   211   210   211   210   210
     ⋮
```

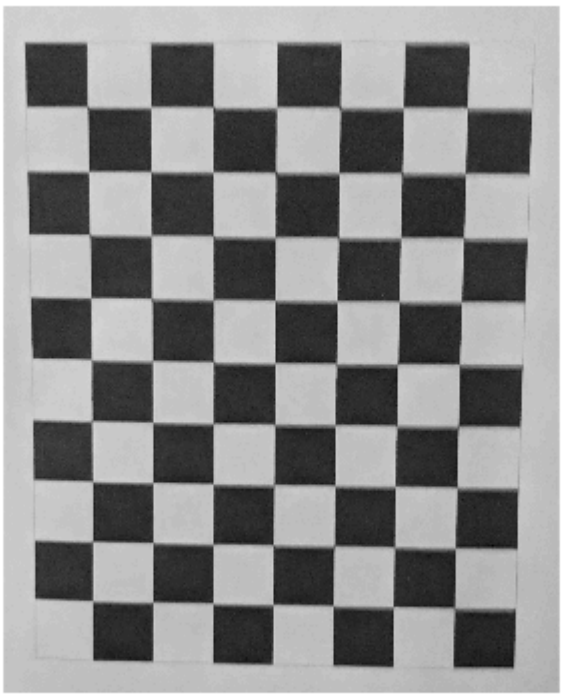
```
imhist(im)
```




```
%2-B
%So, we don't need the video reader stuff since we're
%reading in an image, not a video
se = strel('square', 3);
im1 = imcomplement(im)
im2 = imerode(im1,se)

filteredForeground = rgb2gray(imread('C:\Users\bengo\Downloads\test1.jpg'))
imshow(filteredForeground)
```

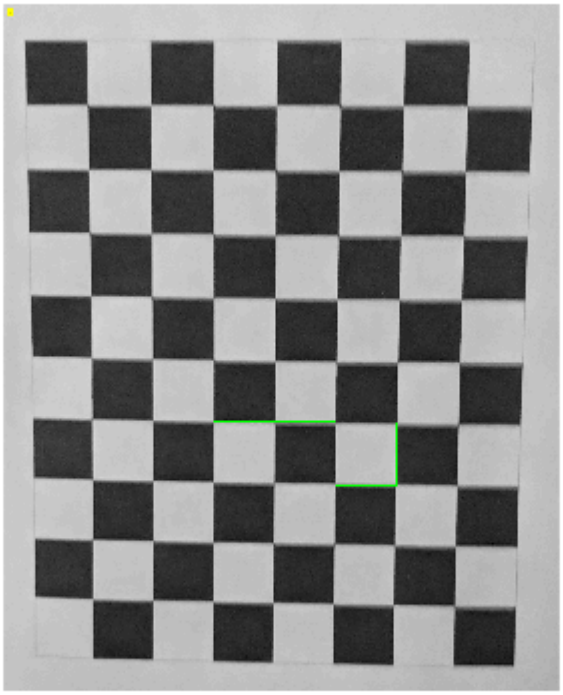
```
blobAnalysis = vision.BlobAnalysis('BoundingBoxOutputPort', true, ...
    'AreaOutputPort', false, 'CentroidOutputPort', false, ...
    'MinimumBlobArea', 150) %Based the minimum area to the 20x20 square area - 400 pixels
bbox = step(blobAnalysis, im2bw(im2))

result = insertShape(im2, 'Rectangle', bbox, 'Color', 'green')

numBlocks = size(bbox, 1)
result = insertText(result, [10 10], numBlocks, 'BoxOpacity', 1, ...
    'FontSize', 14)
%Not showing the detected regions for some odd reason
imshow(result)
```

```
filteredForeground = 1831×1483 uint8 matrix
   210   209   208   208   209   210   211   211   208   209   210   209   208 ···
   209   209   208   209   209   210   210   209   209   210   210   209   208
   209   209   209   209   210   210   209   208   209   210   210   209   209
   209   208   208   209   209   210   209   209   209   210   210   210   210
   209   208   207   207   208   209   210   210   209   209   210   210   211
   209   208   207   207   207   209   209   209   209   209   209   210   211
   210   209   208   207   208   208   208   207   208   208   208   210   211
   210   210   209   209   208   207   206   205   208   208   208   209   210
   206   207   209   210   210   208   207   206   208   209   210   210   209
   205   206   208   209   209   209   208   208   208   209   211   211   209
     ⋮
```



```
blobAnalysis =
  vision.BlobAnalysis with properties:

                     AreaOutputPort: false
```

```
                  CentroidOutputPort: false
                BoundingBoxOutputPort: true
            MajorAxisLengthOutputPort: false
            MinorAxisLengthOutputPort: false
                OrientationOutputPort: false
              EccentricityOutputPort: false
    EquivalentDiameterSquaredOutputPort: false
                    ExtentOutputPort: false
                PerimeterOutputPort: false
                     OutputDataType: 'double'
                       Connectivity: 8
                LabelMatrixOutputPort: false
                       MaximumCount: 50
                   MinimumBlobArea: 150
                   MaximumBlobArea: 4.2950e+09
                ExcludeBorderBlobs: false
bbox = 6×4 int32 matrix
      1      1   1483   1831
    401   1272    162    166
    562   1114    323    329
    885   1118    165    167
   1045   1281    167    168
   1050    955    169    171
result = 1831×1483×3 uint8 array
result(:,:,1) =

     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
     0   209   208   209   209   210   210   209   209   210   210   209   208   208   209   210   209   210   210
     0   209   209   209   210   210   209   208   209   210   210   209   209   208   208   209   209   210   210
     0   208   208   209   209   210   209   209   209   210   210   210   210   209   209   209   210   210   210
     0   208   207   207   208   209   210   210   209   209   210   210   211   211   211   210   211   211   211
     0   208   207   207   207   209   209   209   209   209   209   210   211   212   211   210   211   210   210
     ⋮
numBlocks = 6
result = 1831×1483×3 uint8 array
result(:,:,1) =

     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0     0
     0   209   208   209   209   210   210   209   209   210   210   209   208   208   209   210   209   210   210
     0   209   209   209   210   210   209   208   209   210   210   209   209   208   208   209   209   210   210
     0   208   208   209   209   210   209   209   209   210   210   210   210   209   209   209   210   210   210
     0   208   207   207   208   209   210   210   209   209   210   210   211   211   211   210   211   211   211
     0   208   207   207   207   209   209   209   209   209   209   210   211   212   211   210   211   210   210
     ⋮
```



```
%So, there are a few things I would like to conclude from this assignment
%1- The number of ID'd block is going to variable with images and image quality
%for some pictures I get 6 ID's blocks while for others I get much more
%2- In Part I of the MatLab documentation, it seems that training data
%is needed in order to proper identification to start; the results we
%get for this particular experiment are highly unoptimized and are taken
%into regard with a large margin of error
%3- The only other way that I can think to do this is that there might be a probable use for ir
%in this case, but I just can't say for sure. I have a strong feeling
%that he wants us to go that route, but I'm not sure how I want to plan/
%implement that within the preexisting bit of code.
```