2d: bin size is based on the diagonal size of the original image, used evenly spaced bins of size 1, from negative diagonal to diagonal. I didn't choose a threshold, I just took the k highest values in the peaks array.

3c: the best I could do still wasn't very good, the best I could come up with was using a [3,3] kernel for the gaussian filtering

4c: used a gaussian kernel size of [7, 7], other than that I didn't have to do anything, results turned out better than the noisy photo