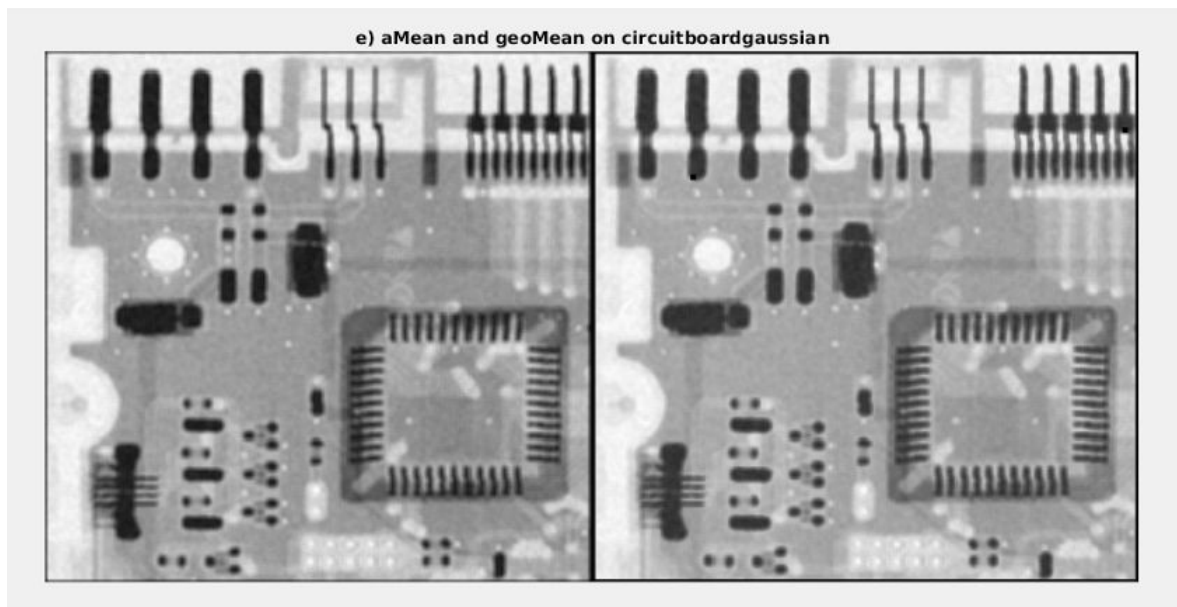Image Processing Computer Project 3
Aadu Pirn

Problem 3.1

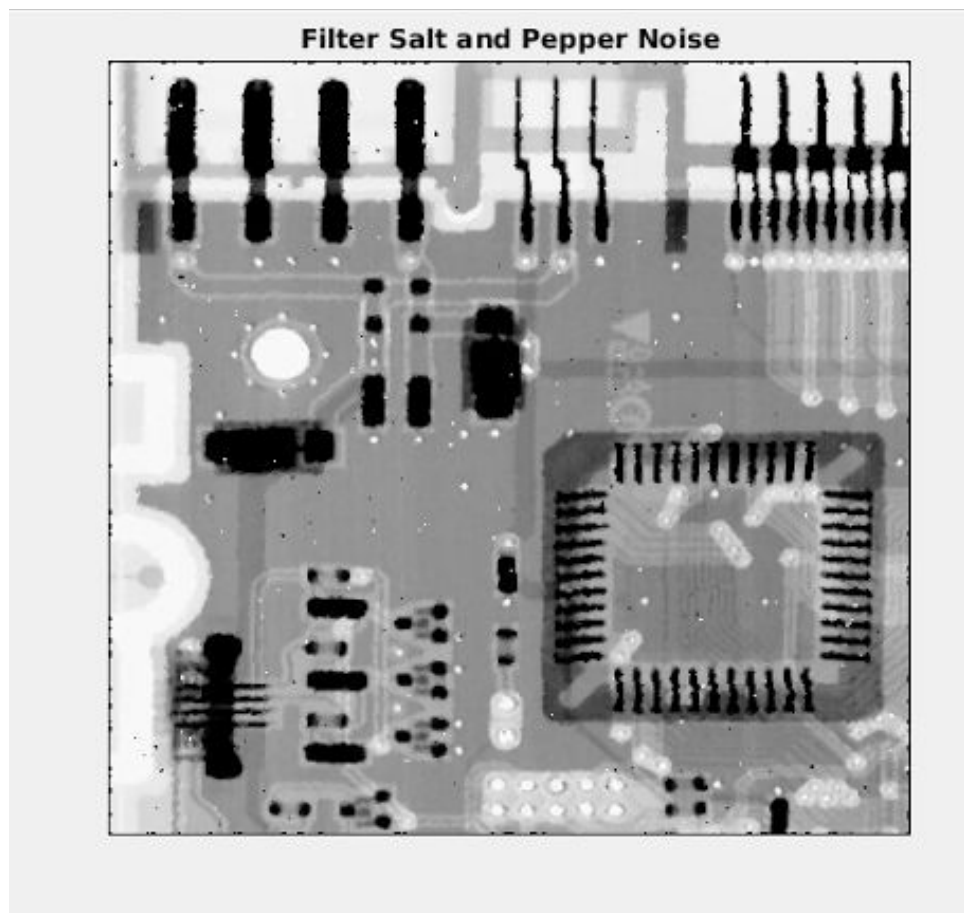The code for parts a-c can be found in p3_1.m The images generated for e-g can be seen below.

e)

f)

g)

Filter Salt and Pepper Noise
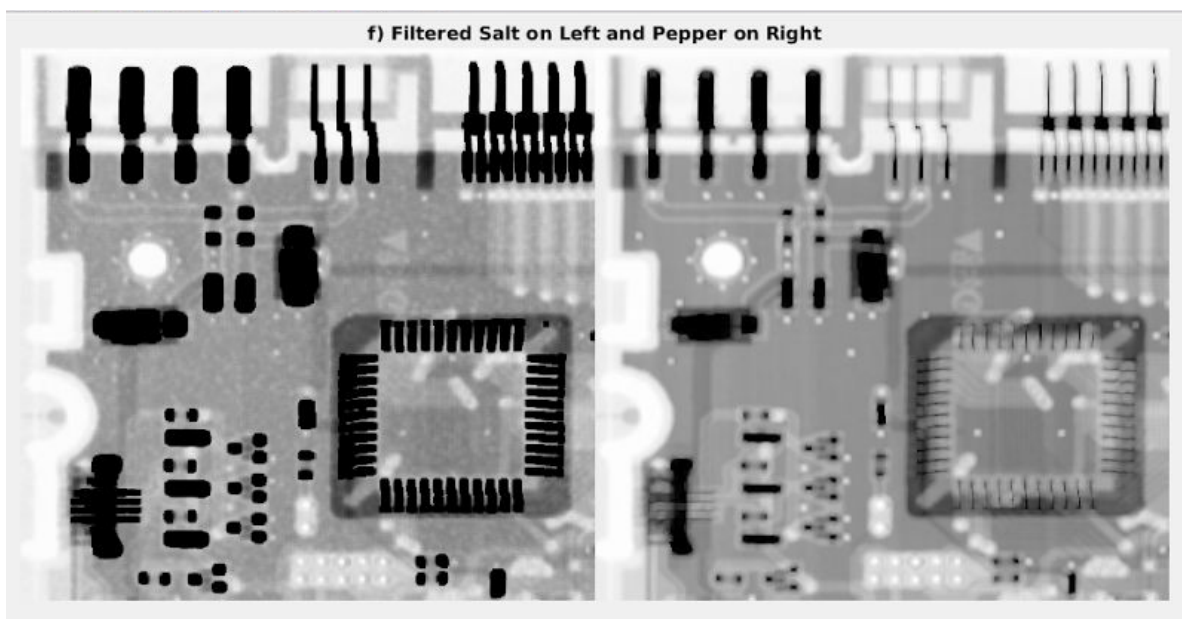
Problem 3.2

The code for parts a and b are in p3_2.m. The results of c and d are below.

Eroded 3x on left. Dialated 3x on right
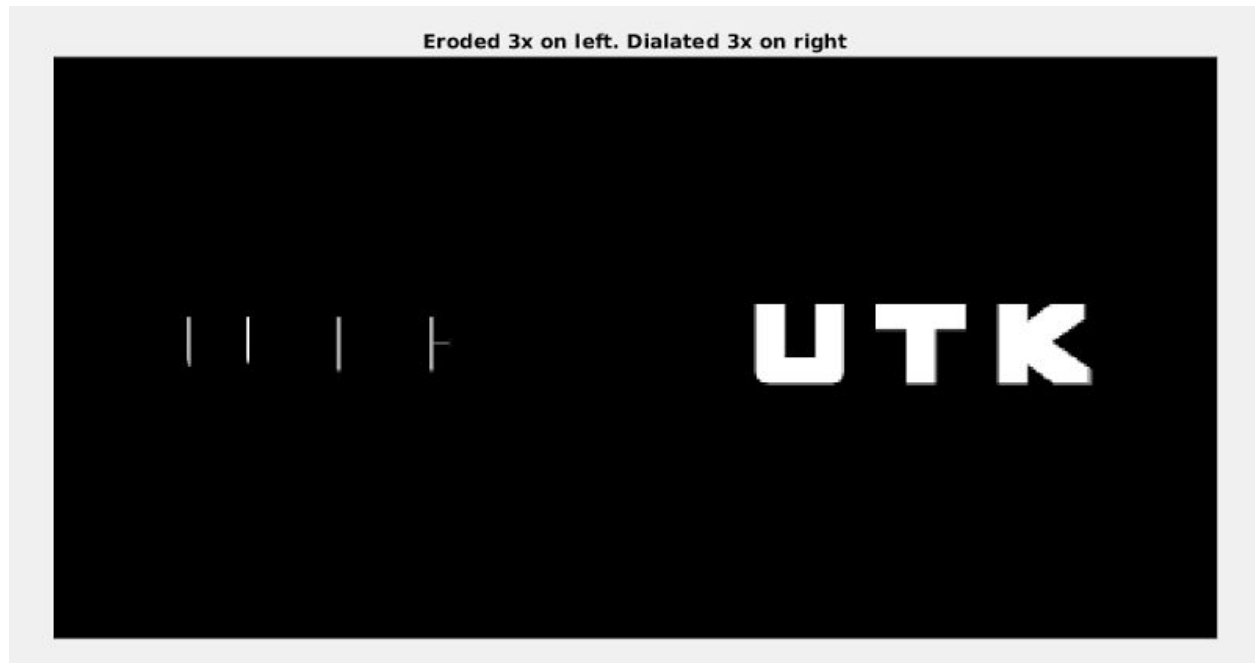
Problem 3.3

I was unable to figure out how to implement morphoPrun and morphoThin without the built in matlab functions so that's what I ended up using. I thinned five times and used spur applied 7 times to prune. The code can be found in p3_3.m. The results of c and d are below.

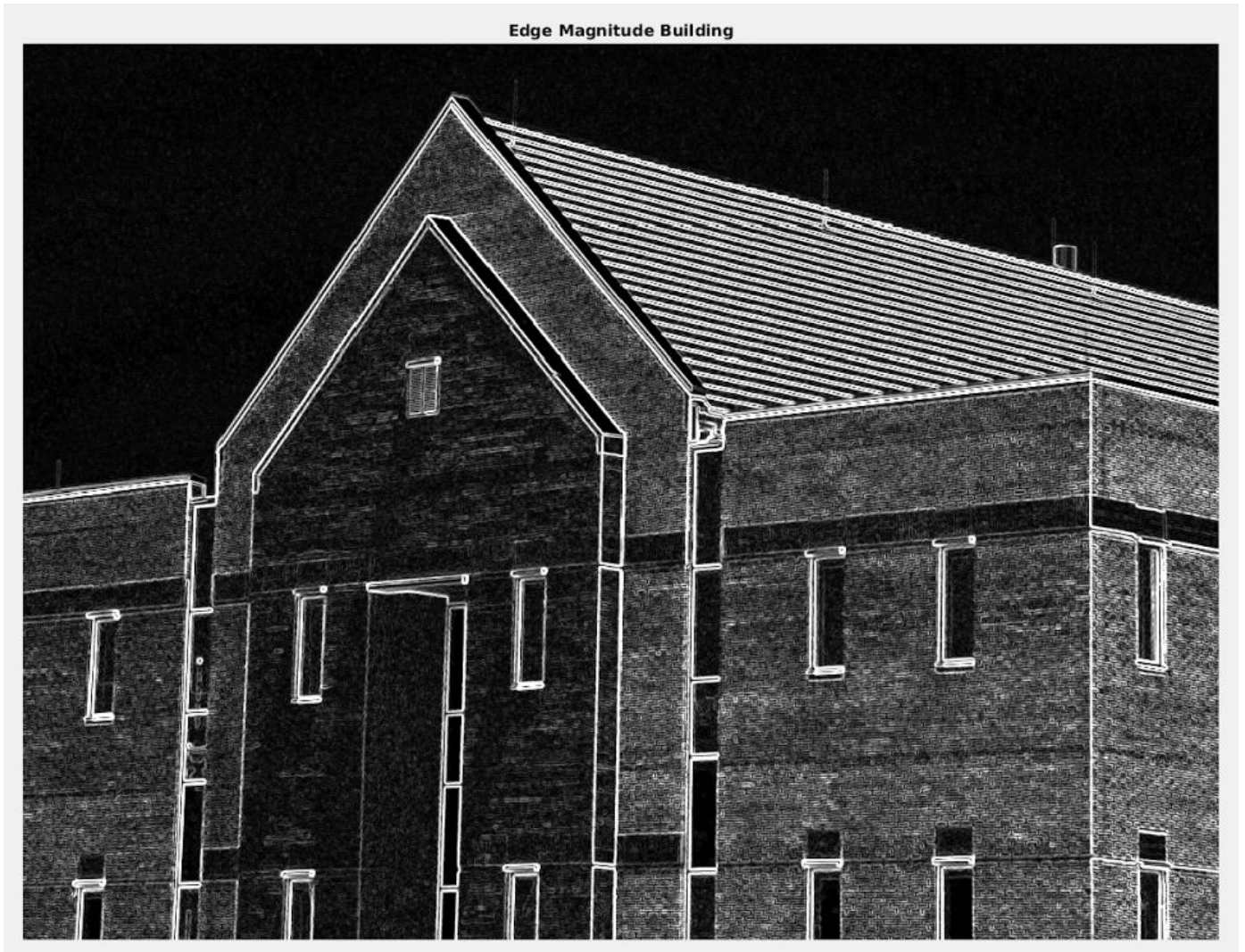c) Thinned UTK   d) Pruned UTK

Problem 3.4

The code I implemented for 3.4 turned out not working as intended. You can find in in p3_4.m but the images are generated using the built in matlab functions. The results for c and d are below.

c)

Edge Magnitude Building

d)

Angle Image Building

Problem 3.5

The code of otsuThresh(f) is in p3_5.m. The results for part b are as follows.

Thresholded using OTSU, sep: 9.541352e-01, kstar: 182