

# CS542 Machine Learning

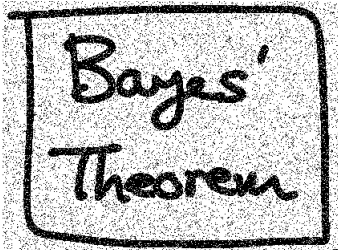
## Homework 5

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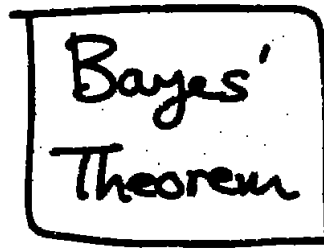
### Programming

- a. First change the image to gray scale, then do the calculation.

Before:



After:



When  $h = -.01$ ,  $\beta = 5$  and  $\eta = 3$ , the accuracy I got is 99.38%

- b. For this part, I incremented the pixel, decremented the pixel, or left the pixel the same. And from the pictures below, it's obvious that the picture of the after one is much more better.

Before:



After:

