Jon Organ

CS677

Homework 9, Density

**Question 1:**

Gaussian Naive Bayesian, df = 0.5, year 2 accuracy: 78.0%

Gaussian Naive Bayesian, df = 1, year 2 accuracy: 76.0%

Gaussian Naive Bayesian, df = 5, year 2 accuracy: 46.0%

**Question 2:**

Confusion matrices:

0.5 degree confusion matrix

Predicted Green Red

Actual

Green 18 11

Red 0 21

1 degree confusion matrix

Predicted Green Red

Actual

Green 17 12

Red 0 21

5 degree confusion matrix

Predicted Green Red

Actual

Green 2 27

Red 0 21

**Question 3:**

0.5 degree TPR and TNR

True positive rate: 62.07%

True negative rate: 100.0%

1 degree TPR and TNR

True positive rate: 58.62%

True negative rate: 100.0%

5 degree TPR and TNR

True positive rate: 6.9%

True negative rate: 100.0%

**Question 4:**

The best value of df is 0.5, it is 2% more accurate than normal Naive Bayesian

**Question 5:**

Buy-and-hold retrieved from previous assignment...

Gaussian Naive Bayes with df = 0.5 ($330.7) was more effective than Buy-and-hold ($125.70) for year 2