Homework 6 – Due Mar 10th @ 11pm

1. Download Cleveland data set from Bruinlearn, and answer the following questions. Find the description of the variables from Bruinlearn.

(a) Write a fitted logistic regression model to predict exercise induced angina (exand) as a function of maximum heart rate.

(b) State the null hypothesis and alternative hypothesis to test the significance of maxhrrate predictor.

(c) Find the Wald test statistics and its corresponding p-value. Make a conclusion for the test for (b).

(d) Draw the plot of maxhrrate vs. the probability of exercise-induced angina to show that the logistic model is appropriate. Adjust the scale of the exand to see the scatter plot with the fitted logistic regression line.

(e) If we increase maximum heart rate by **five** units, what change do you expect to have on exercise induced angina(exand)?

(f) Using the difference in deviance G^2 's of the model, test the significance of the model.

(g) Report the R^2_{Dev} of the model. What does it suggest about the model fit?

2. Exercise 8.3.1