Quiz 5, Stat3
Time allowed 90 mins

The submission should be in the form of a .Rmd file.

1. Download the German Credit data (partial) from the course website.
2. In the file

   `https://www.isibang.ac.in/~rsen/StatIII/seed.xlsx`

   you will find one four digit number against your name.
3. Using this as seed, select 100 rows without replacement from the German Credit data. Use this data for your analysis.
4. Create a 0-1 response variable (y) from Good-Bad
5. Fit a logistic regression of y on Credit amount (x) . Report the estimated regression coefficient and its standard error.
6. Plot the fitted probability of default agaist x along with 95% confidence intervals.
7. Repeat step 5 by replacing the credit amount with each of the other predictors, one at a time. Find the one that is the best single predictor based on deviance criterion.
8. Use stepwise variable selection to find the optimal model.
9. For the last optiomal model, carry out diagnostics of the residuals. [Hint: In R, plot(model) will do this, where model is where you store the optimal model.]
10. For the last optimal model, construct a misclassification table, when the classification is 1 for fitted probability greater than 0.5 and zero otherwise.
11. Free format: anything else you might want to do with this data. For eg, you might notice outliers or nonliner patterns in your diagnostic plots.