

Assignment 1: Getting to know R

Due: Thursday September 6

1. Find a place where you can use R. This can be own computer or somewhere on campus. Note: R is installed in the graduate computer lab (CBC-C323). If you are going to use you own computer, then make sure to download R from <http://www.r-project.org>.
 - (a) Install the library 'faraway'.
 - (b) Reproduce the data analysis for the 'pima' data set presented in chapter 1 of 'Practical Regression and Anova using R' by Julian Faraway. You do not need to make comments. I just want to get you used to using R if you haven't used it before.
2. From my website <http://faculty.unlv.edu/westveld> link to the course website and download the data 'mathmarks.txt'. Load this data into R and conduct a similar examination of the data as in (1) — except make sure to make comments. Remember to present your graphs, tables, and discussion in a clear manner. Every graph and table should be discussed. In particular do the following:
 - (a) Get a five number summary.
 - (b) Is there anything odd about the data? Missing values? Data entry mistakes?
 - (c) Plot histograms for each variable in the data set.
 - (d) Use the 'pairs' command to make all the pair-wise scatter plots.
 - (e) Conduct a regression analysis of the statistics scores against all the other variables. Interpret the results. Some useful commands are:

```
> math.marks <- read.table("mathmarks.txt")
> lm.a <- lm(statistics ~ mechanics + vectors + algebra + analysis,
data=math.marks)
> summary(lm.a)
```