Stat 215b (Spring 2004): Lab 0

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Introduction

The aim is to refresh and familiarize yourself with preparing a lab report for Stat 215B. This lab will not count as part of your grade, but please carry out the analysis and submit a brief write-up so that I might check that have no difficulty using the requisite software. For this lab you need not write more than 1-2 pages. For this Lab I'd like you to break your write-up into two sections. Remember to give a formal write-up (ie pages of computer output is not enough).

Section 1 - Statistical Background

Write one paragraph describing you background in statistics, your familiarity with computing and your aims for this class.

Section 2 - Basic Analysis of Automobile Mileage Data

Download the data file `auto-mpg.data` from class website `http://www.stat.berkeley.edu/~bolstad/Stat215b/`. An additional file `auto-mpg.names` gives information about the data file.

Fit the model
$$\log{(\text{Mileage})} = \beta_0 + \beta_1\text{weight} + \epsilon$$

To sure to report parameter and standard error estimates. Note that the weight is in pounds. I suggest you transform the weight to tonnes (note 1 tonne = 2204.62262 pounds).

Plot $\log{(\text{Mileage})}$ against weight and superimpose your fitted regression line.

Do you think that weight is significant in predicting mileage?