STA 101 Spring 2017 Discussion 02

Full Detail

1. The distance a driver can see clearly is expected to decrease with age. Thus, the explantory variable is age, and the response variable is distrance a driver can see. Age was measured in years, and distance in feet. The data can be found in the file `drivers.csv`.

   (a) Plot the scatter plot, and find the mean and standard deviation for each group. What trend is suggested by the scatter plot?

   (b) Find the estimated regression line and the estimated correlation between the response and explanatory variable.

   (c) Use the estimated regression line to predict the distance a driver can see at age 29.

   (d) For the driver at age 18, find the error based on our linear regression. Did we over or under estimate this value?

   (e) Interpret the slope, and the intercept (if it makes sense) in terms of the problem.

Appendix: R script