Least Sqaures Assignment (*20 points*)

Linear Algebra

Create a reproducible document containing your analysis for the following problem and submit your R markdown and html files on Canvas.

Now that football season is upon us, let's put Linear Algebra to good use! *Rating.csv* file posted on Canvas presents quarterback ratings for the 2008 NFL season (The Sports Network).

a. Create a Least Square model to relate the dependent variable quarterback rating to the percentage of completions (Pct Comp).

b. Create a Least Square model to relate the dependent variable quarterback rating to the percentage of Completions (Pct Comp) and interceptions. (Pct Int)

c. Determine the least square error (square root of sum of square errors) for models in part a and b. Does using an extra variable, namely percentage of interceptions, improve the accuracy of the model for this data set? Comment.

d. Use your models in part a and b to predict the rating for a quarterback with percentage of completions of 60%, and percentage of interceptions of 3%.

e. Go Seahawks!