Problem Set № 6

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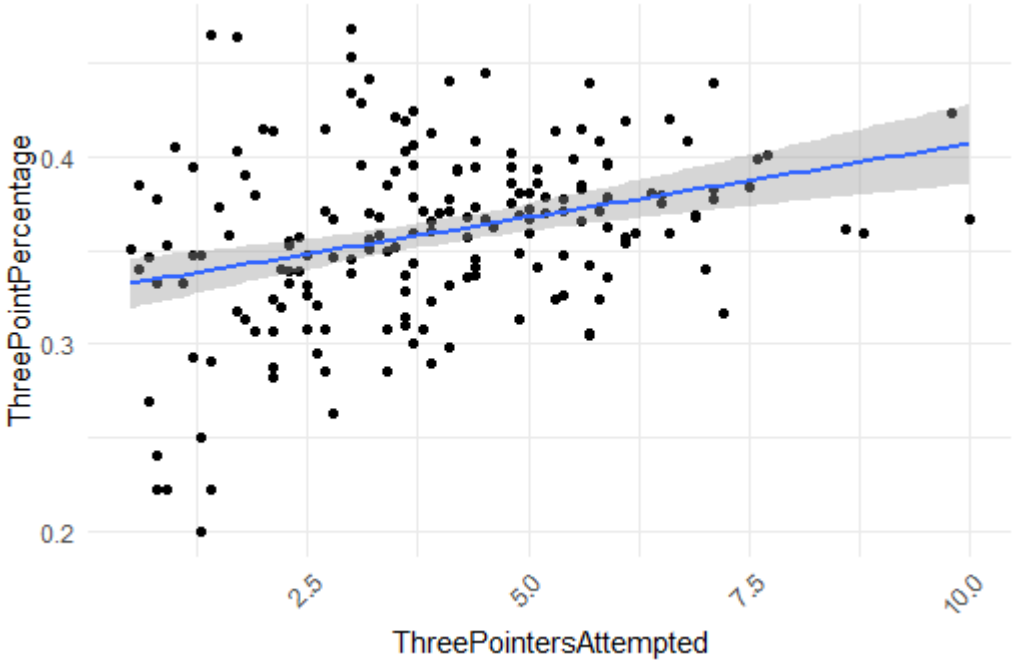
Cleaning the Data

The data I used was NBA player data for the 2018 season from the ballr package. I looked at relationships between three point shots attempted and three point percentage, age and minutes played, and free throw shots attempted and free throw percentage. To clean the data, I filtered for players who played at least 15 games and averaged over 10 minutes per game. For the free throw plot, I filtered so that only players who averaged more than one free throw per game were shown. For the three point plot, I filtered the data so only players who averaged more than 0.1 three pointers were shown, so players who did not attempt three pointers would not be included.

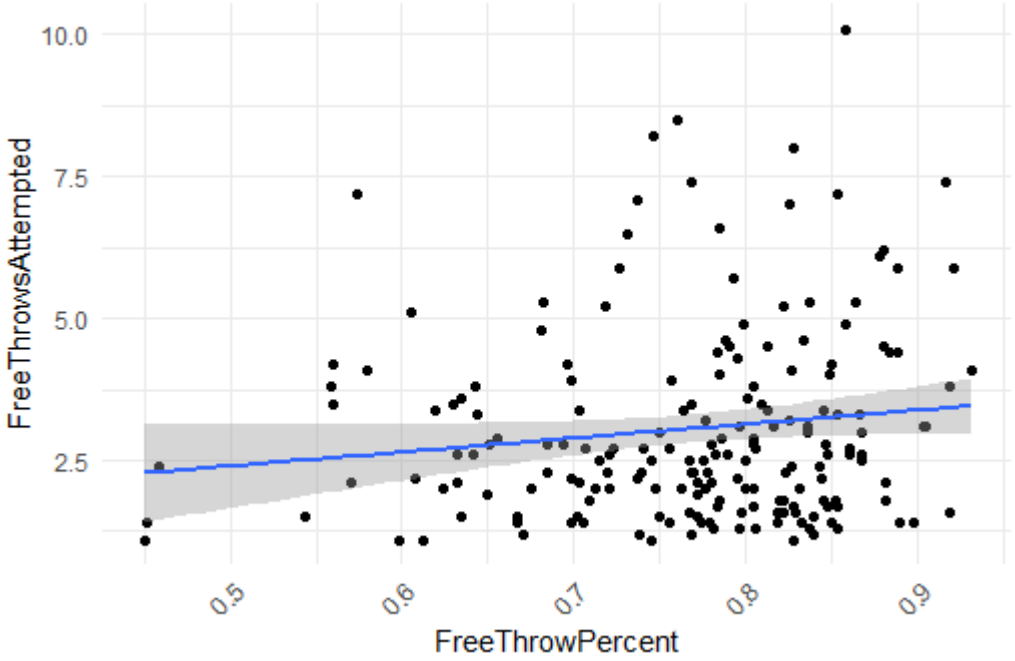
The Plots

The graph below depicts three pointers attempted and three point percentage. The graph shows that those players who attempt more three pointers make the shot at a higher rate. Additionally, it can be used for identifying players who should perhaps take more three pointers per game (or those who need to take less or more efficient threes). The variables are plotted this way to illustrate the idea that although players who are attempting a high volume of threes could be more selective with their shots, resulting in a higher percentage, players tend to take more shots, resulting in a lower percentage, but overall more made threes.



The plot below shows free throw percentage and free throw attempts. The idea of this re-

lationship was that those players who have a higher percentage should be attempting to get fouled and go to the line. Although this relationship appears slightly true, it is much less than anticipated.



This plot below shows the relationship between age and minutes played. The expectation was that there would be a negative relationship between the two. The result was as expected, but since only the players who played more than 10 minutes were included, there were not many players over the age of 33 included in the plot.