Term Project: Summary
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For my statistical question, I wanted to determine if home court advantage was a real thing in the NBA. The dataset I found is from Kaggle and has 1,216 observations from the years 1950-2010. The variables include the year, team name, number of home wins, number of away wins, total season wins, as well as the percentages of home wins, away wins and overall season wins.

Through my initial exploration of the data, all variables seemed to be distributed normally and there wasn't any missing or incomplete data. My null hypothesis was that there is no difference in winning percentages based on playing at home or away. My alternative hypothesis was that there is a difference in winning percentages based on playing at home or away. I obtained a p-value of 0.0 while running my hypothesis test which meant we could reject the null hypothesis and accept the alternative hypothesis. So, as you will see in the presentation, home court advantage is definitely a real thing when it comes to playing games in the NBA.

When it came down to running a regression model, I began to struggle. I chose to perform a simple linear regression model because the data was distributed normally and the correlation between variables was high. However, the dataset limited me in this scenario, which is why I struggled. I believe I could have created a linear regression model that would have had much more impact if there were more variables included. Crowd attendance, crowd noise levels, whether or not it is a conference game, time of day, number of turnovers, etc. could give us a much more telling story and help determine what the true contributing factors of winning in the NBA consists of.

Due to the current pandemic, it would be interesting to get data from this season since all teams are playing in Florida to finish out the season. The question that comes to mind since they cannot physically play in their home gyms is does wearing their home jersey make a difference? Just a thought as I wrap my head around the NBA bubble scenario going on. It sure is a once in a lifetime situation!

In conclusion, I feel like I learned a lot from this course and am excited to continue my learning and apply all of this knowledge to future projects. Thanks for a great semester!