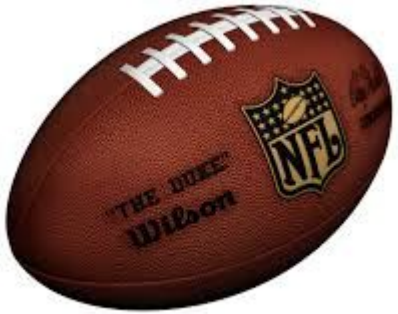
BET NFL
(Sponsored by DraftKings)

(*Not actually sponsored*)

NFL Project Overview



Data gathered contains

- Spreads
- Over/Under
- Weather Data
- Stadium Names
- Team Scores

A Few Things to consider with the NFL Data

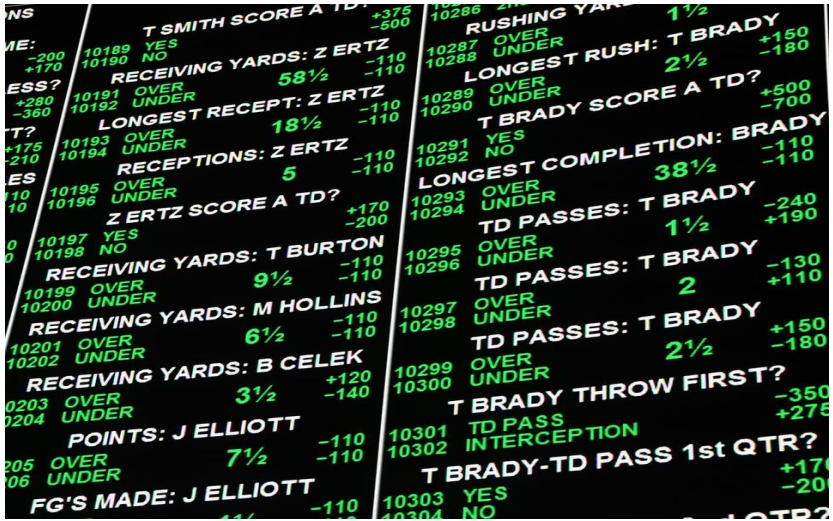
- Data that was gathered dated back to 1966
- Data before 1979 was removed due to incomplete data (prior superbowl incept.)
- Removed incomplete data for better accuracy
- NFL Raw Datasource : Kaggle

With data we want to ask ourselves this…..

- What is the over/under projection compared to total score of the game?
- How do different weather conditions impact the total score and accuracy of the over/under line prediction?

What Data is needed?

- Total Score (Home & Away scores)
- Over/Under spread
- Accuracy % (Total Score / over-under spreads)
- Temperature Feel
- Humidity Feel



Decades of Football….

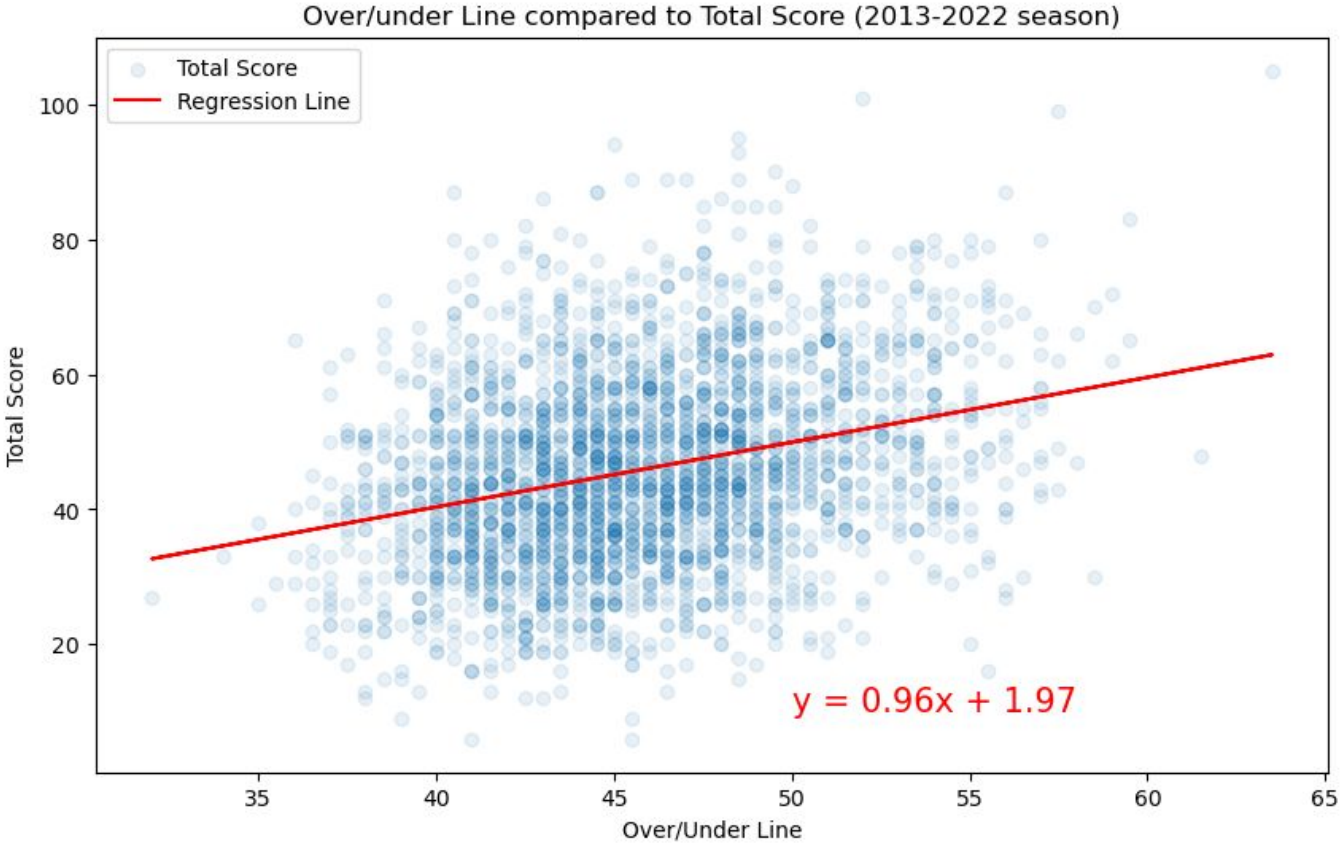
Breakdown generations of football

1993-2002

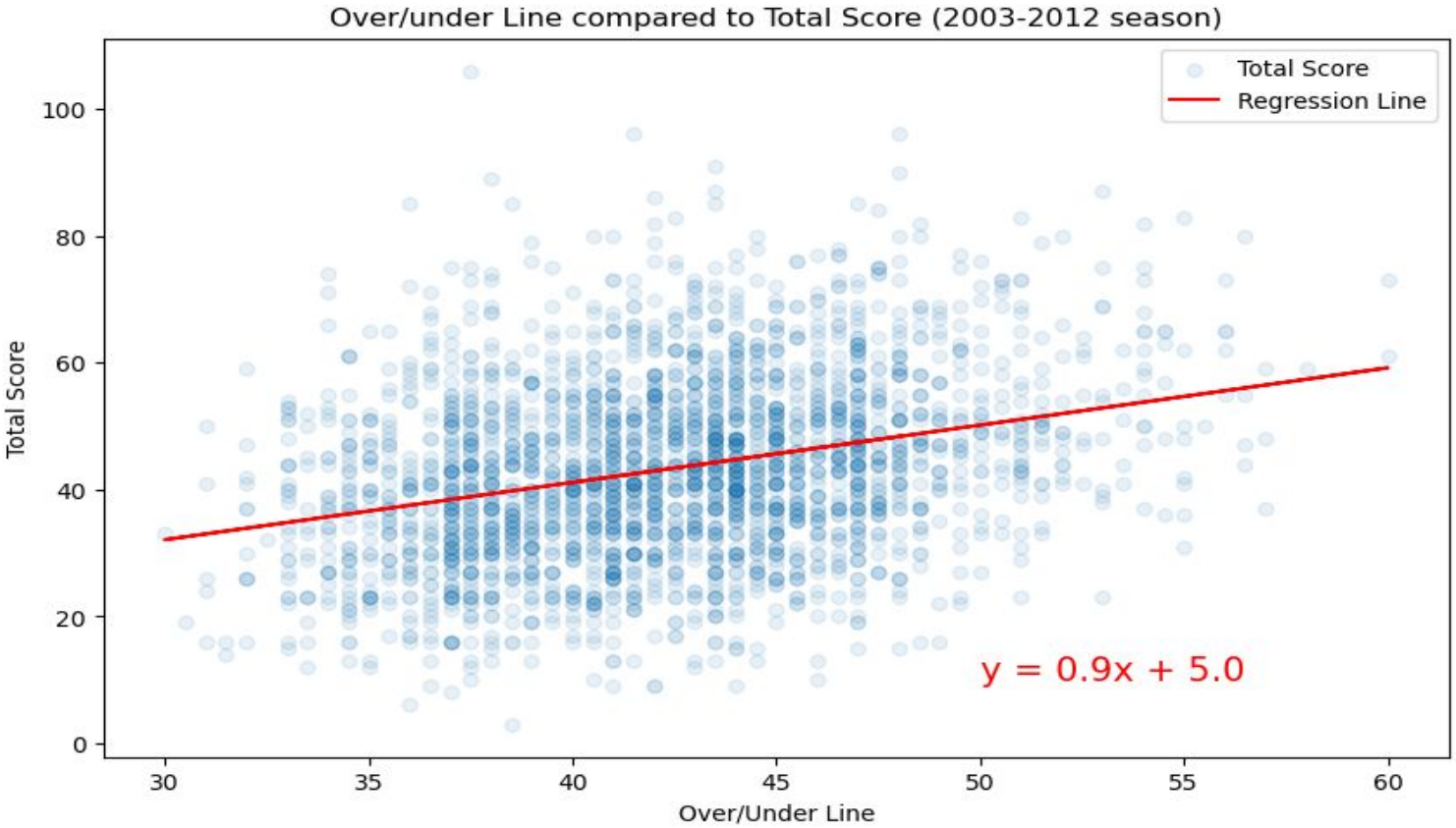
2003-2012

2013-2022

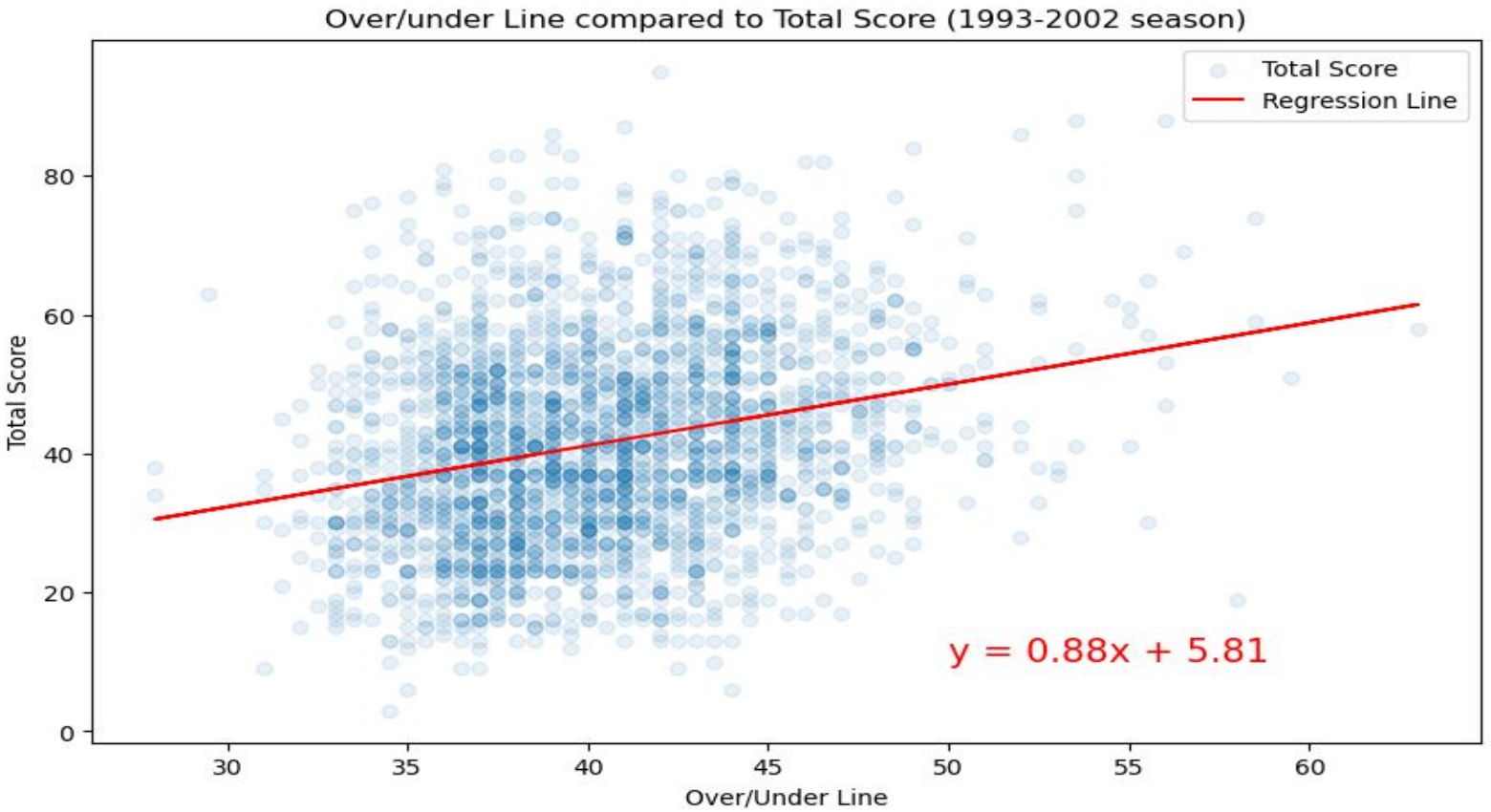
Over/Under Line vs Total Score (2013-2022 Seasons)



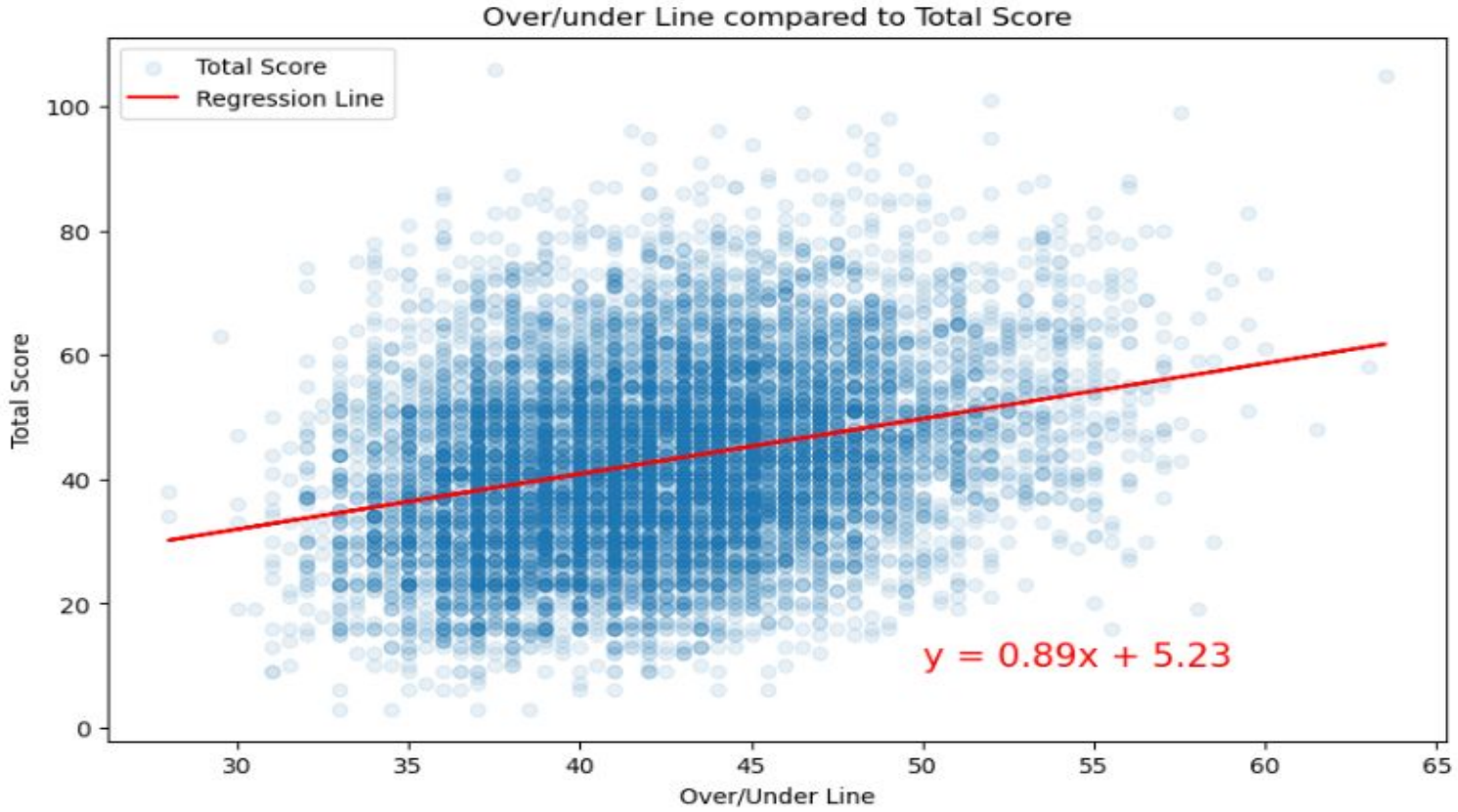
Over/Under Line vs Total Score (2003-2012 Seasons)



Over/Under Line vs Total Score (1993-2002 Seasons)



Over/Under Line vs Total Score (1979-2023)



Conclusions:

- The over/under line was the most accurate looking at the 2013-2022 decade of football and the least accurate during the 1993-2002 decade of football

- The over/under line has become more accurate with time. This makes sense as they have more data to predict the over/under line and ensure its accuracy.

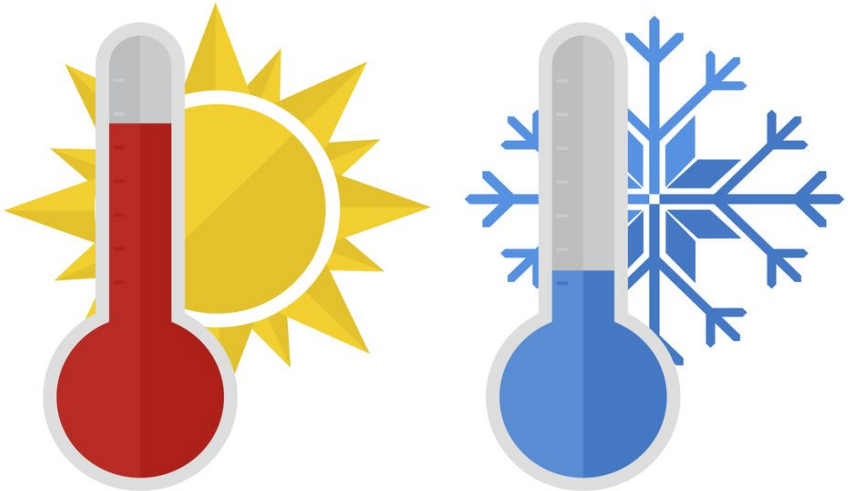
- The correlation coefficient was fairly consistent around .3 with the exception of the 1993-2002 decade where it was .26

Total Score & Accuracy vs Temperature…

Can Temperature impact the total score of the game?

Does temperature impact the accuracy of the over/under line prediction?

Let’s Find Out…..



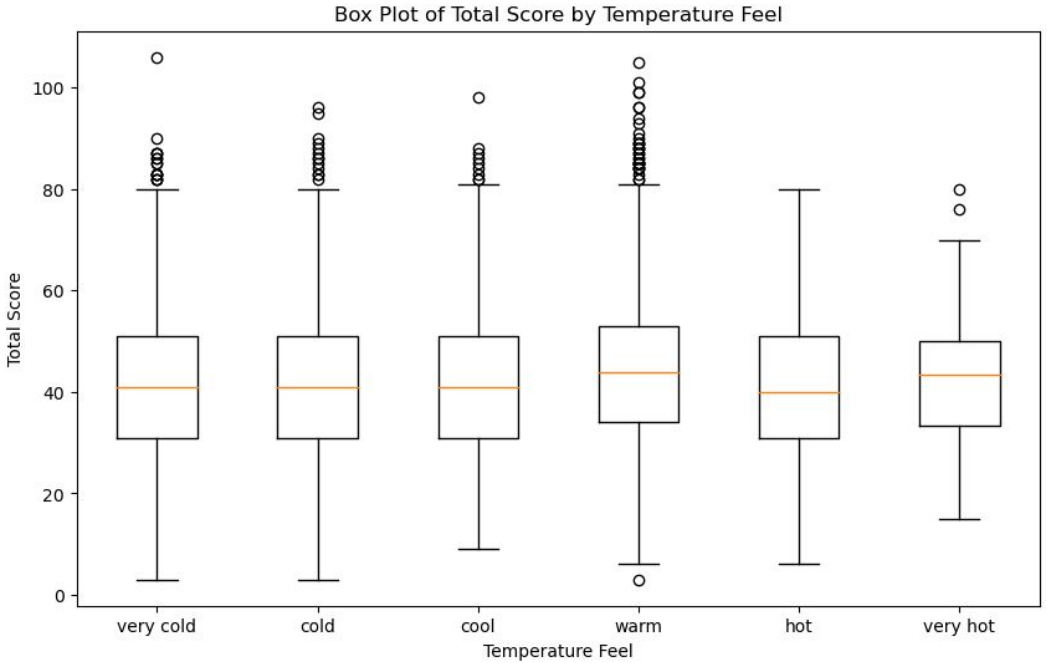
How was the total score of a game impacted by the temperatures?

On Scale from Burning Heat to Freezing Cold….

"Very Hot" (85°F or above)
"Hot" (75°F to 84°F)
"Warm" (65°F to 74°F)
"Cool" (55°F to 64°F)
"Cold" (45°F to 54°F)
"Very Cold" (44°F or below)

Anova Test Results:

- F-statistic: 14.189
- p-value: 7.31e-14
- The differences are statistically significant (reject the null hypothesis).

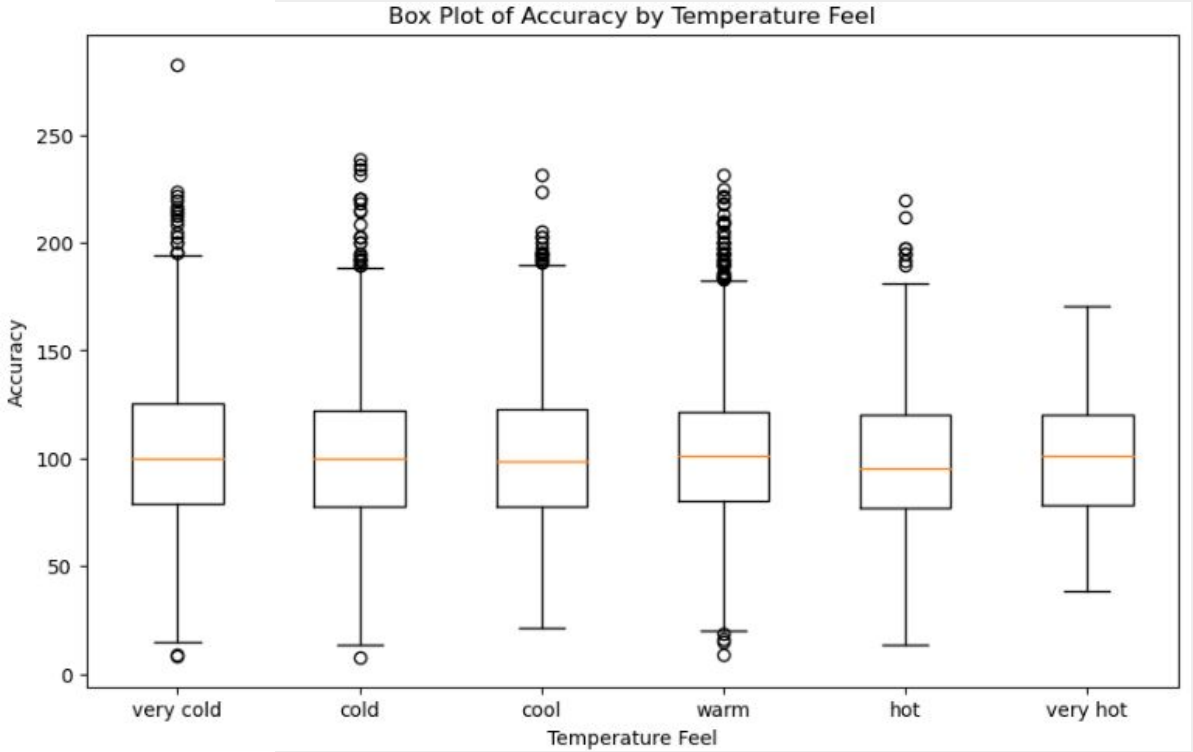


Did temperature impact the accuracy of the over/under line predictions?

"Very Hot" (85°F or above)
"Hot" (75°F to 84°F)
"Warm" (65°F to 74°F)
"Cool" (55°F to 64°F)
"Cold" (45°F to 54°F)
"Very Cold" (44°F or below)

Anova Test Results:

- F-statistic: 1.981
- p-value: 0.078
- The differences are not statistically significant (fail to reject the null hypothesis).

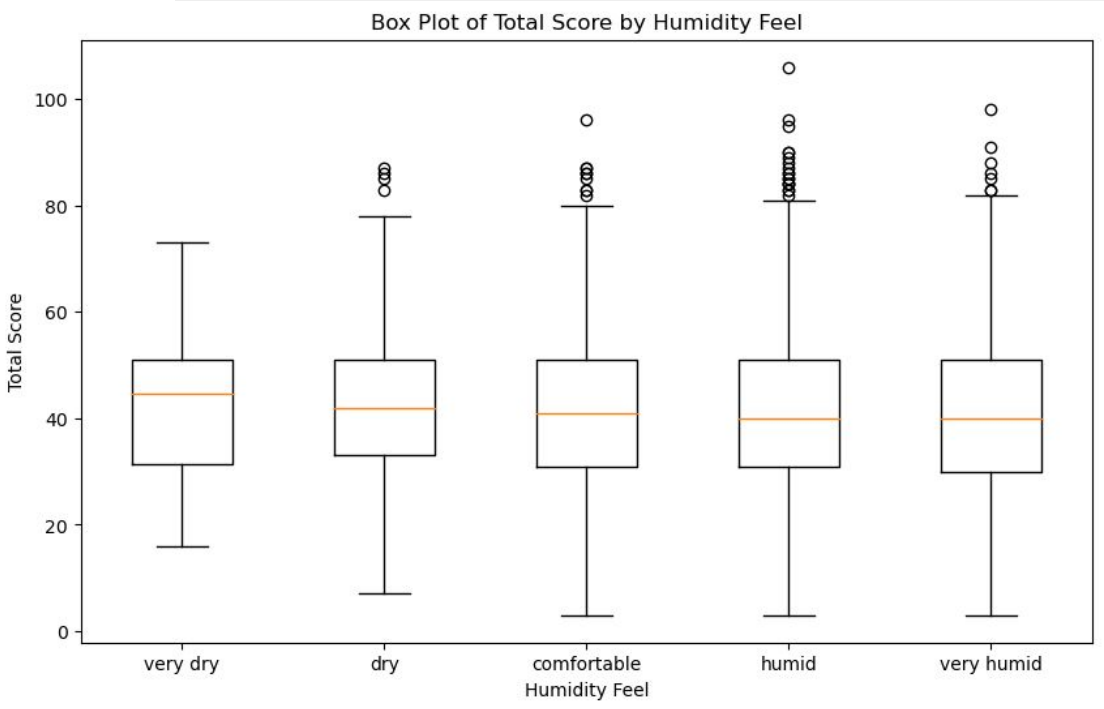


Humidity?....Can it affect the total score of a game?

"Very Humid" (80% to 100%)
"Humid" (60% to 79%)
"Comfortable" (40% to 59%)
"Dry" (20% to 39%)
"Very Dry" (0% to 19%)

Anova Test Results:

- F-statistic: 0.739
- p-value: 0.564
- The differences are not statistically significant (fail to reject the null hypothesis)

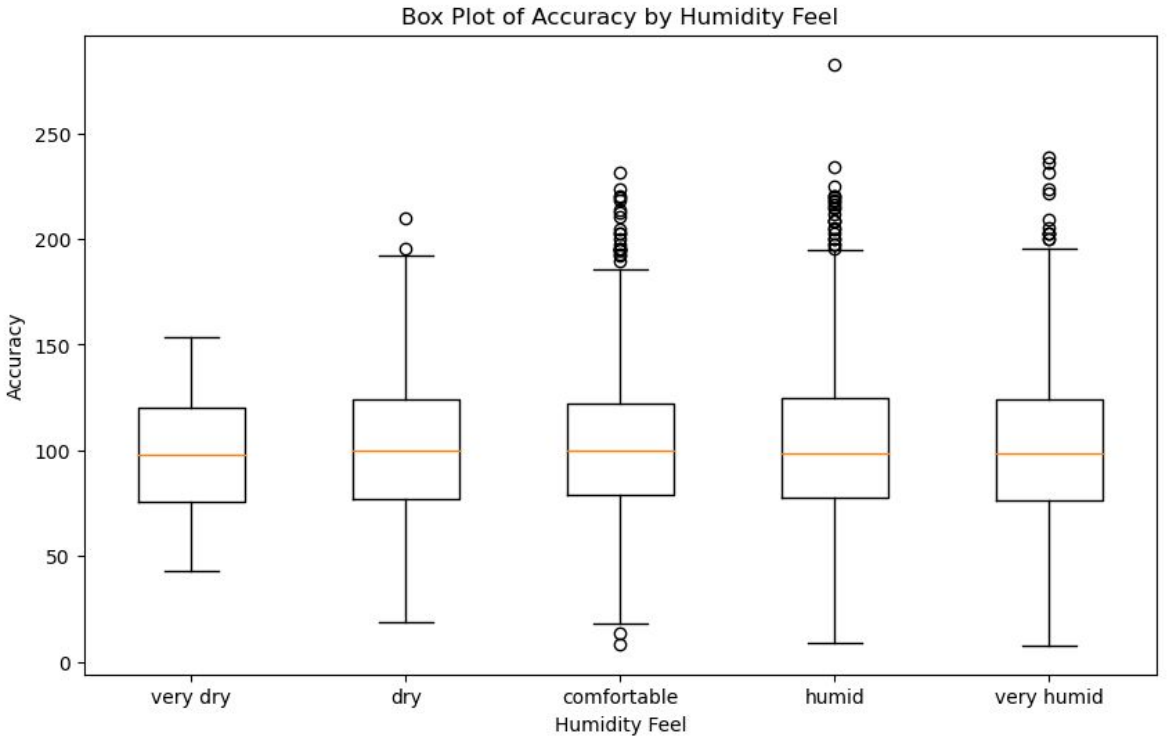


Does humidity seem to have any relationship with the over/under line prediction?

"Very Humid" (80% to 100%)
"Humid" (60% to 79%)
"Comfortable" (40% to 59%)
"Dry" (20% to 39%)
"Very Dry" (0% to 19%)

Anova Test Results:

- F-statistic: 0.126
- p-value: 0.973
- The differences are not statistically significant (fail to reject the null hypothesis).



Do the weather conditions impact the total score of a game?

Snow & Fog

Retractable (open roof)

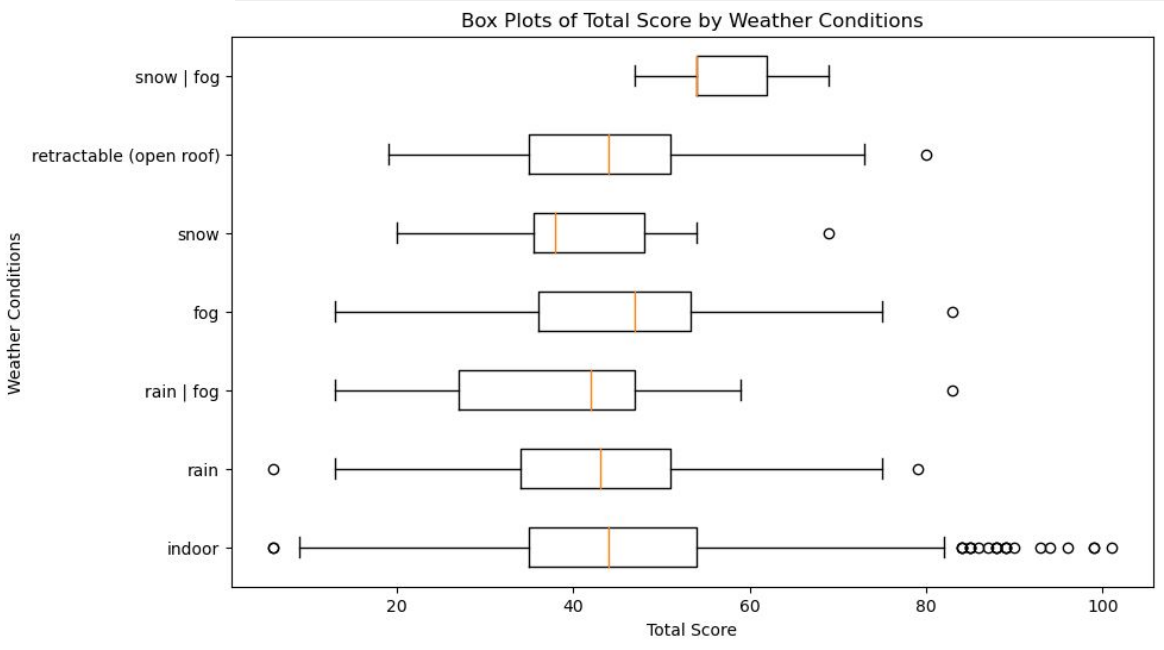
Snow

Fog

Rain & Fog

Rain

Indoor



Anova Test Results:

- F-statistic: 1.954
- p-value: 0.069
- The differences are not statistically significant (fail to reject the null hypothesis).

Do the weather predictions impact the accuracy of the over/under line prediction?

Snow & Fog

Retractable (open roof)

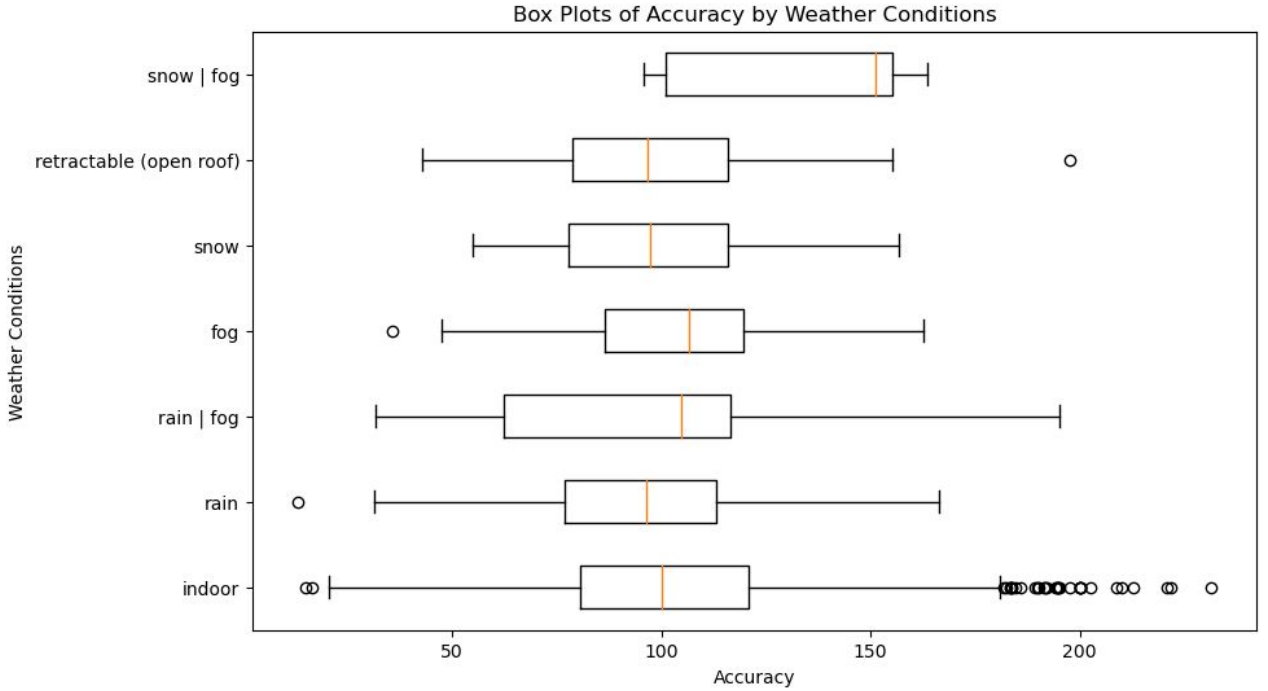
Snow

Fog

Rain & Fog

Rain

Indoor



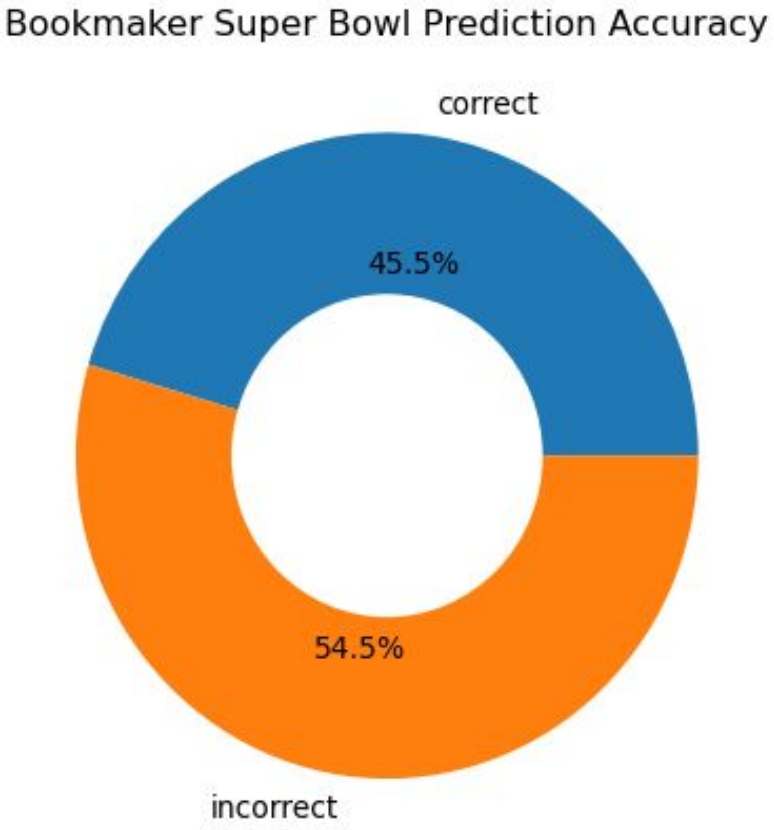
Anova Test Results:

- F-statistic: 1.675
- p-value: 0.123
- The differences are not statistically significant (fail to reject the null hypothesis).

Conclusions:

- The only variables that we found to show a statistically significant relationship were the temperature and the total score. So of the variables we looked at… temperature seems to have the highest impact on the total score of the game
- All other variables we tested came up not statistically significant, meaning they had little to no impact on the total score of a game or the accuracy of the over/under line prediction.

How accurate are bookmakers at predicting Super Bowl winners?



Questions?

In Memoriam of Nick Chubb

(get well soon)