NFL Team Success versus QB Injuries

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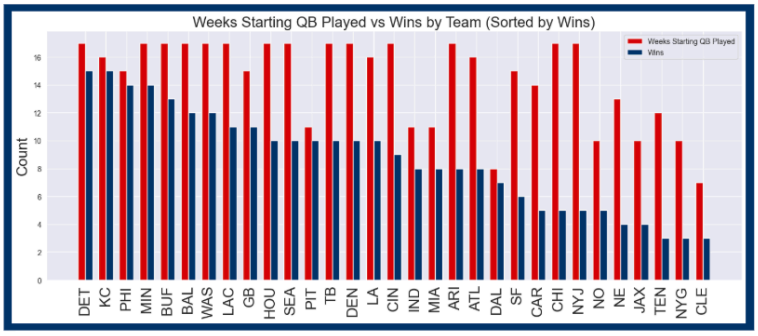
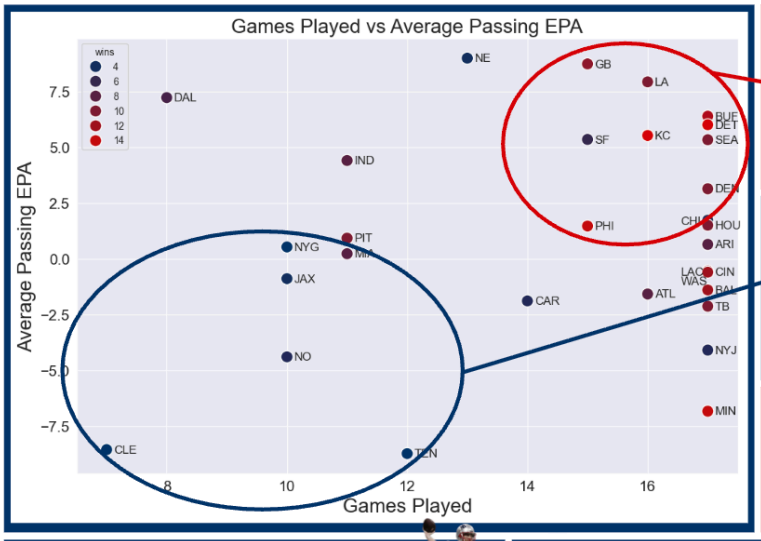


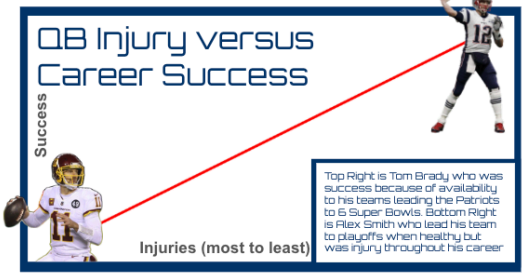
Weeks that the starting QBs played in comparison to the team wins. There is a large positive correlation between the team wins and the QBs availability throughout the season. Majority of the playoff teams had their quarterbacks available throughout the season

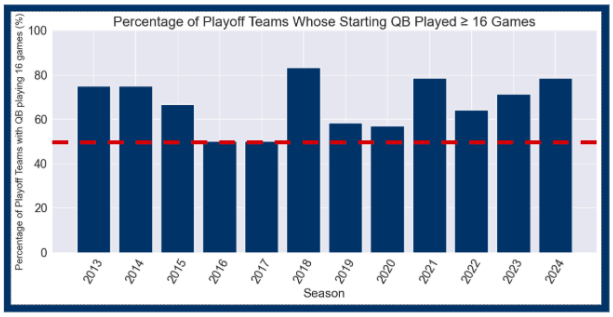


Durable Elite QBS & Health. This leads to team success and all these teams except for two made the playoffs

Injured QBS. This leads to team to a lack of success and all these teams struggled to win games

Note: EPA stands for Expect Points Added and it is a measure of how much passing is positively impact the offense





Final Conclusion - the availability of quarterback is essential to success. This is shown through playoff percentages but also throughout offensive metrics such as Passing EPA. Losing a QBs can make a good team significantly worse and maintaining QBs health is essential for long term success.

Above is the year to year graph of the percent of QBS that played 16 games for their teams. The red dotted line show the 50% of games played and this shows a majority of playoff teams have their QBS for the most of the season.

This is my final infographic on the analysis of the success of teams with respect to their Quarterback's injuries and availability. This project shows how teams perform when their quarterbacks are injured and how they perform when their quarterbacks are available. Teams with quarterbacks who are injured perform much worse than teams with quarterbacks who are available and this is shown through the data and analysis in this infographic. There are four plots above in the final product with annotations to explain the data and analysis. The first plot is a grouped count plot showing the counts of games played by the starting quarterback and their team's wins throughout the season. The second plot is a scatter plot comparing the games played by the starting quarterback and the quarterback's passing EPA (expect points added) with the color the points representing the team's wins. The third plot is a free form graphic created in google slides comparing specific quarterback's careers and the effect of their injuries on their teams performance. The final plot is bar chart displaying the percentage of starting quarterback in playoff teams that started 16+ games across years in the NFL. Across all these graphs and analysis it is clear that teams that have a injured quarterbacks perform much worse than teams with quarterbacks who are available and this is shown through the data and analysis in this infographic.

Contents of the final product

- Data Establishing Notebook - data_establishing.ipynb
- Data Exploration Notebook - data_exploration.ipynb
- Graphs and Visualizations - Graphs
- Data - All data is pulled using a python library see data_establishing.ipynb
- Created Tidy Data on EPA - EPA.csv
- Created Tidy Data on percentages of nfl statistics per year - percentages_per_year.csv
- Link Github Repository - Github