

**2020 Project 1**

**Analysis Summary**

# Background & Objectives

* To provide an assessment and statistical analysis of the effects the 2015 movie “Concussion” had on the amount of concussions experienced in the NFL.
* The scope and purpose of the homework were defined as follows:
  + Find a data source for the proposed question and use an API and Pandas to sort and clean.
  + Discuss and create 3 or more hypotheses and then produce graphs and data points to answer your Null or Alternate question.
  + Create a presentation for the class in PowerPoint discussing the hypothesis and findings.
  + Use Github and demonstrate proficiency in working together in a project.

# RESEARCH METHODOLOGY

* + - Project members for this project include Joel Cox, Kyle O’Malley, Bill Taylor
    - The data was pulled via API from SportsDataIO using their Injury data going back to 2011
    - The data was pulled into a local CSV file
    - Upon completion of the data collection process, the results were cleaned, and analyzed in accordance with classroom coding instructions

# FINDINGS & STRATEGIC IMPLICATIONS

**Question 1**

1. Did the movie decrease the amount of concussions?

\* Alt: If the movie concussion had an effect on the NFL, then concussion injuries would go down during the 2016 season.

\* Null: If the movie concussion had no effect on the NFL, then concussion injuries would not go down during the 2016 season.

A review of the data concluded the movie had little effect on the number of concussions experienced by players each season. While the number did drop after 2018, it started climbing climbed back up the following year.

**Question 2**

Did rule changes affect all injuries or just concussions?

\* Alt: If injuries were affected by rule changes, then injuries would go down.

\* Null: If injuries were not affected by rule changes, then injuries would not go down.

All injuries went up after the implementation of new rules meant to stem concussions such as targeting. The rule changes appear to have only have effected concussions.

**Question 3**

Is there a certain time of season when more concussions occur?

\* Alt: If the time of year affects concussions, then there will be more concussions during a certain part of the season.

\* Null: If the time of year does not affect concussions, then there will not be more concussions during a certain part of the season.

There appears to be no real difference in which week of the season concussions occur, just a slight upward trend towards the end of the season.