Revised Shiny Proposal

Group name: 3Lattes

Title: US Sports Statistics in 2019

Purpose

We want to explore the statistics of Basketball (NBA), Baseball (NBL) and Football (NFL) players during 2019. The question we hope to address is finding the relationship between general in-game statistics (e.g average free throw success, assists, etc) and Win% or Salary. However, we want to make the relationships between the statistics open to explore.

Data

Data sources:

- Basketball Game per Data Set (https://www.basketball-reference.com/leagues/NBA_2020_per_game.html#per_game_stats)
- Football Stats (https://www.pro-football-reference.com/years/2019/scrimmage.htm#receiving_and_rushing)

The following datasets is included in the Lehman package, so we will be accessing the data from there.

- Baseball Fielding Stats (https://www.baseball-reference.com/leagues/majors/2019-standard-fielding.shtml#players_players_standard_fielding_fielding)
- Baseball Batting Stats (https://www.baseball-reference.com/leagues/majors/2019-standard-batting.shtml#players_standard_batting)
- Baseball Pitching Stats (https://www.baseball-reference.com/leagues/majors/2019-standard-pitching.shtml#players_standard_pitching)

We expect challenges in data wrangling for the Basketball data when accounting for multiple observations for the same player. This is due to players being frequently traded within the same season and the dataset itself showing multiple observations for the same player. For the Football dataset, a challenge is standardizing all the variables based on a per-game basis. Lastly, we will have to join all 3 datasets for the Baseball statistics, making sure that we match players with all available statistics.

Shiny app

We will have 3 tabs that output a scatterplot for a specific sport. On the left side, we will have 3 widgets: one to select the x-axis variable, another to select the y-axis variable, and a search bar to select a player and highlight them on the scatterplot. We will add an interactive component of being able to hover over a point and see a player's information (name, age, team, etc).
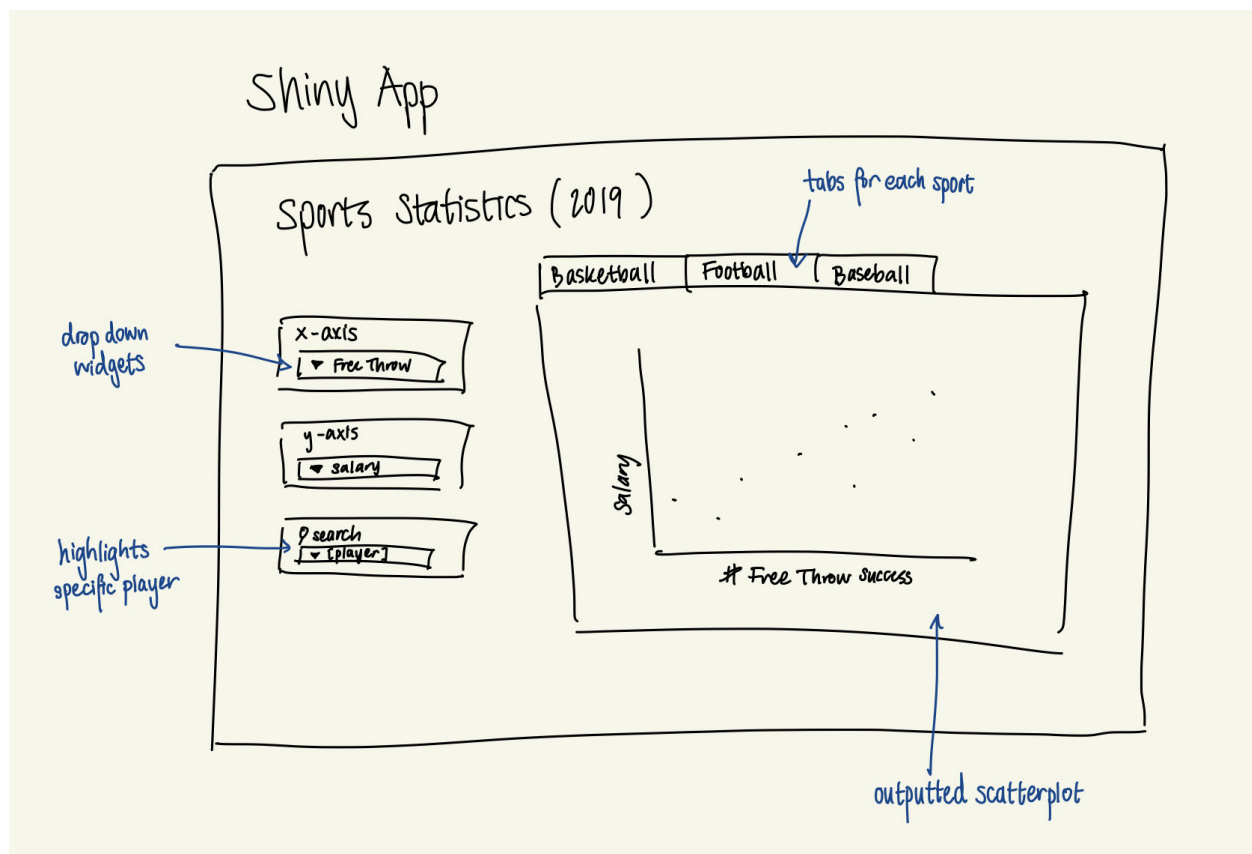
Figure 1: Shiny App Visual