***English Premier League Player Advanced Statistics Visualizer***

* **Purpose**
  + *To provide factual and comparable statistical data to support pre-existing information collected to analyze individuals competing in the EPL.*
* **Value**
  + To *deliver a more precise statistical* understanding of players overall abilities based on data in accordance with preexisting knowledge of players skill.
  + Compare players in various ways *while analyzing statistical and visual data* that can help give a *more comprehensive* understanding of the player.
* **Benefits** 
  + *Offers* additional statistical information about players in accordance with the “eye test”.
    - *Displaying* what type of player each player is in regard to the system that each team plays
  + *An additional benefit for* coaches, scouts, general managers etc *by providing* accurate depictions of players *for various areas of decision making*.
    - Can be used for selecting players in accordance with both team management and recruitment (finding players of good value)
* **Outcomes**
  + Inhibits an understanding that certain statistics are results of players style of play.
  + By being able to clearly identify player styles, best fits can be determined that provide the most value for team and player.
* **Detailed information**
* Data compiled for this project was from https://fbref.com/en/comps/9/Premier-League-Stats as well as a dataset from https://www.kaggle.com/datasets/stefanoleone992/fifa-22-complete-player-dataset .
* There were 20 different datasets taken from fbref that featured the basis for all stats shown in the radar charts and stat tables
* 5 different main categories: Shooting, Passing, Dribbling, Defending, and Possession.
* [How to read radar charts](https://www.data-to-viz.com/caveat/spider.html)
* Shape of the radar chart is dependent on the type of player that is being featured.
  + Some players will show lack of a stat just because of the position they play.
* Scaled Value
  + Gives and can be used for all of the ratings across the app.
  + Formula to get the value is:
    - value.scaled = (value - min(value)) / (max(value) - min(value))
  + This gives a rating between 0 and 1 where 0 represents the “worst” value in regard to that statistic and 1 represents the “best” value in regard to that statistic.
* Ranked Value
  + takes the ranking from all the players that the player is being compared to and taking the inverse of that fraction
  + Formula to get the value is:
    - Rank.scaled = (1 – (rank/number of players))
  + Gives a rating between 0 and 1 where 0 represents the “worst” value in regard to that statistic and 1 represents the “best” value in regard to that statistic
* **Example (Appendix)**