Basketball Plot Stars

https://github.com/Hoolahups/projectr5555

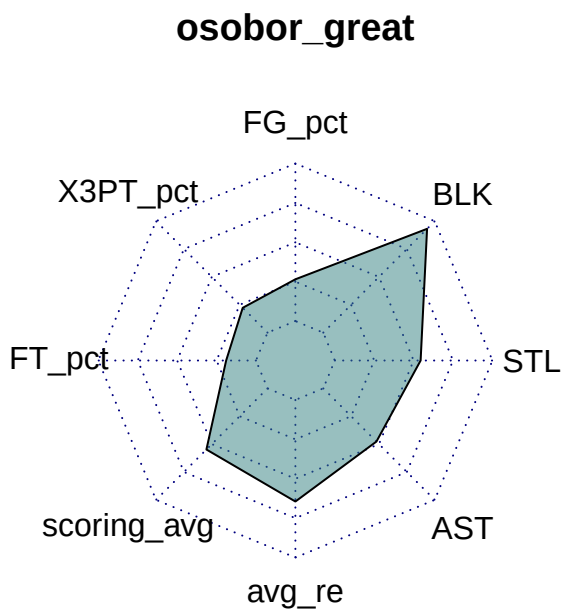
Our package scrapes player statistics for a university basketball team from the official team website and provides functions to create user-specified plots.

The get_data function takes a URL as an argument and scrapes the corresponding webpage. Many NCAA basketball teams use a format for their website identical to USU's, and so this function works for any team using that format. The function checks that the HTML scraped from the website matches an expected format, but the user should check to make sure that the desired team statistics page looks visually similar to USU's.

```
usu_t2023 <- get_data("https://utahstateaggies.com/sports/mens-basketball/stats/2023-24")
```

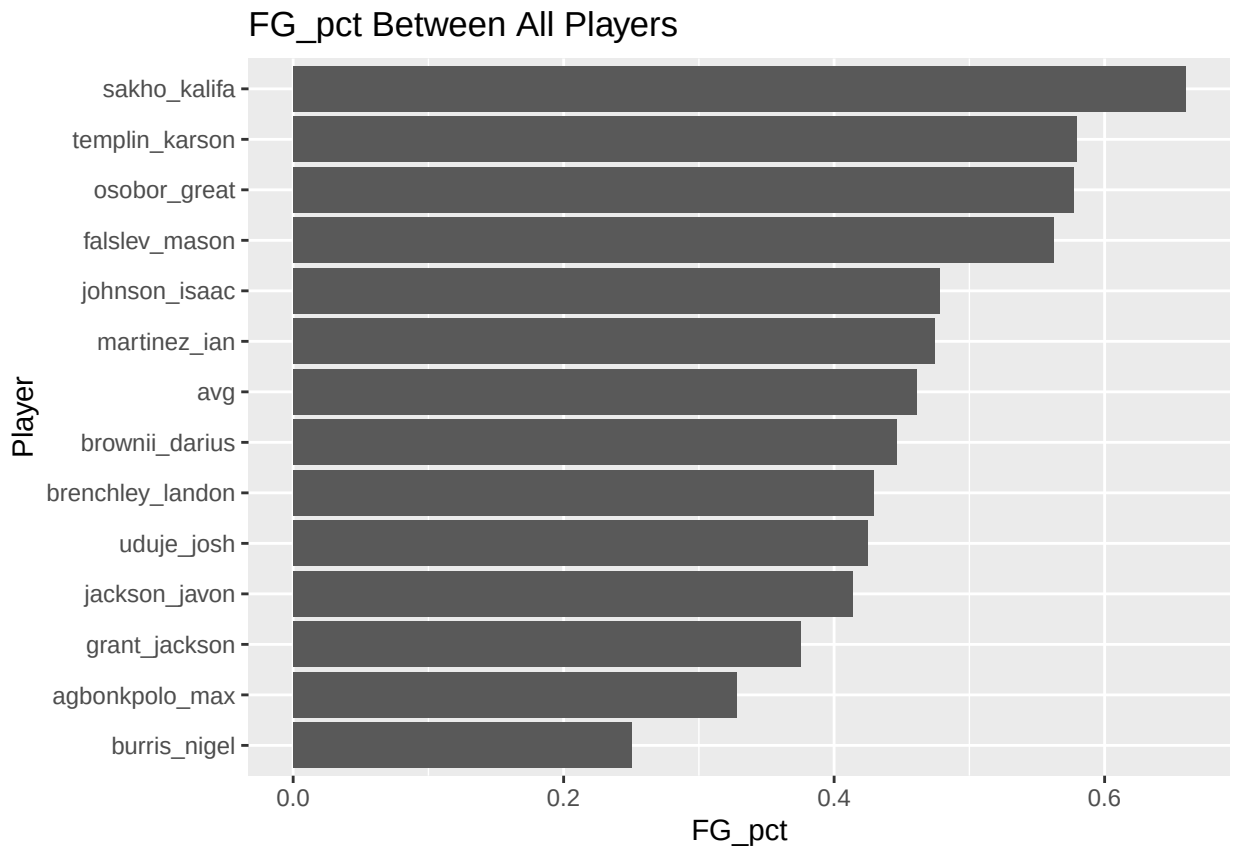
The player_star function takes the team as an argument, and one of the players from the team as an argument. The function creates a star plot of eight default statistics about the player.

```
player_star(usu_t2023, "osobor_great")
```



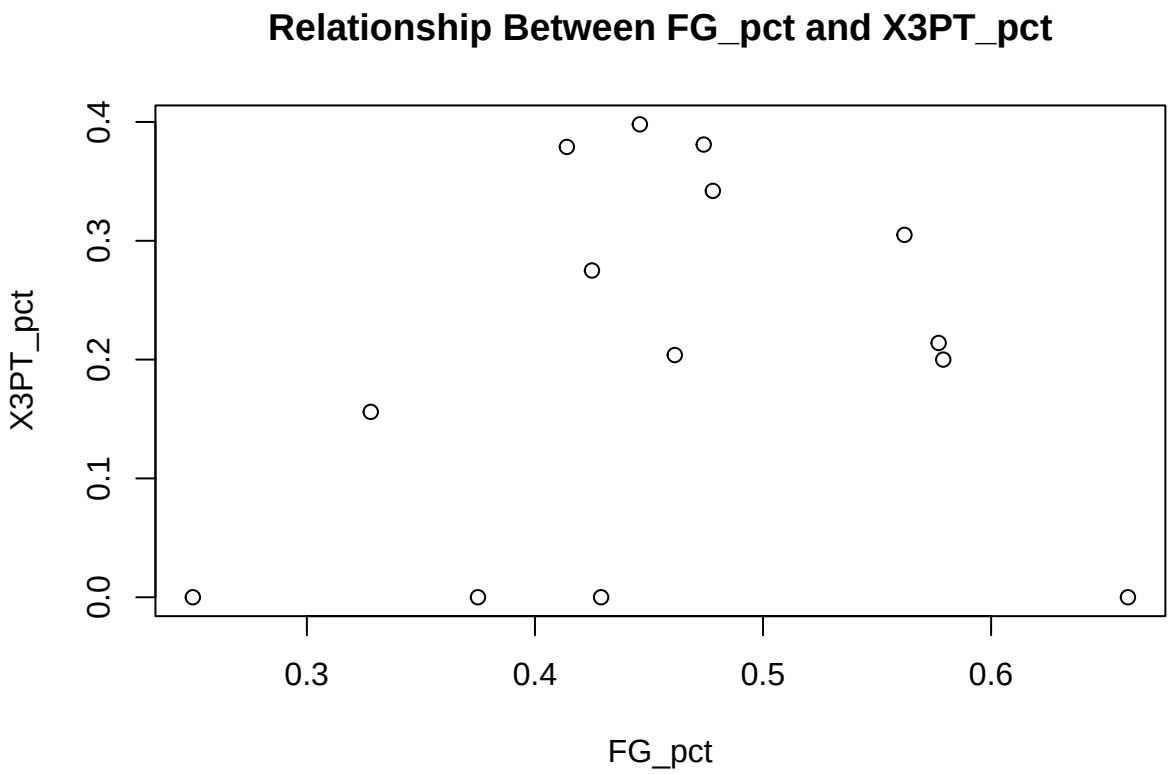
The team_bar function creates a horizontal bar plot. It takes the team and a stat as arguments, and it compares who has the highest and lowest of these statistics.

```
team_bar(usu_t2023, 'FG_pct')
```



The compare_stats function creates a scatterplot of two statistics from the team. It takes a team argument, and two stats must be chosen to compare.

```
compare_stats(usu_t2023, 'FG_pct', 'X3PT_pct')
```

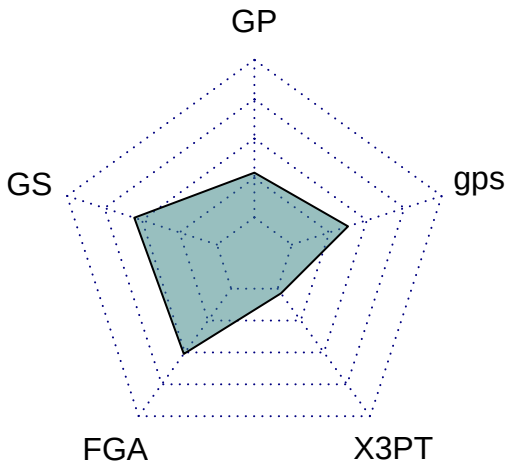


The variable_maker function takes 2 existing variables and combines them in a way that the user defines, it then returns the entire list with the variables and average added to it.

```
usu_t2023 <- variable_maker(usu_t2023, "GP", "GS", "sum", "gps")
```

Once you have your new variable, you can use it to make your own plots. Whether or not its useful is up to you, but make sure to have fun with it!

```
player_star(usu_t2023, "osobor_great", vars = c("GP", "GS", "FGA", "X3PT", "gps"))
```


osobor_great
GP
gps
X3PT
FGA
GS