



IST 256 Final Project

Created by Emani Jones & Anthony Vasquez

Group 46

Our Project Summary

- ▶ For our project, we will web scrap basketball stats from sportsdata.io. Our project asks the user to input a player name to receive a player ID number. With that ID number, the user can see a comprehensive dashboard of their bio and/or season stats.
- ▶ Our program will give users a better understanding of the impact a player has on his team while also providing interesting biographical information.

Class Applications

- ▶ In order to successfully complete this project, we needed to apply the following from class:
 - ▶ Sorting through a python List of Dictionaries
 - ▶ Sorting through json files to retrieve the data we need
 - ▶ Creating our own API Key from a third party website (sportsdata.io)
 - ▶ Being able to call that API via code
 - ▶ Creating a function that is called multiple times throughout our code
 - ▶ Creating comprehensive dashboards (pandas) to give better visualizations of data

The coding process

- ▶ Overall, the coding process was detailed and interesting.
- ▶ Our project required us to link the player name with his ID, then link that player ID to his respective bio/stats page.
- ▶ The hardest part of the project linking every section together to work as one system rather than individual system.
 - ▶ Doing this enhanced the overall project by making it easier to navigate.

API Limitations

- ▶ Throughout the project, we figured out the sportsdata.io did have its shortcoming.
- ▶ The player stats are limited to only one season as opposed to a player's career stats
- ▶ Only gives us data for active players
- ▶ Because we signed up for the free trial, some of the data we got back was "scrambled".
 - ▶ The value that are randomly adjusted up or down between 5% and 20% from the actual value.
- ▶ According to their FAQ, this allows free trials to never expire, giving users a better idea of what the website can do.
- ▶ This is why some of the stats returned seem unrealistic.

'Scrambled Data

	player	G	Points	FGA	FGM	FG%	EFG%	FTA	FTM	FT%	ORB	DRB	TRB	AST	TOV	STL	BLK	PF	+/-	PER
0	LeBron James	55	2548.0	1853.8	944.7	86.3	95.0	707.7	470.7	112.6	96.5	690.7	787.2	768.6	333.5	121.9	55.9	159.1	194.7	52.2

- Shooting 86.3% is a ridiculous stat and as great as LeBron James is, he did not shoot 86.3% from the field
- Shooting 112.6% from the free throw line is impossible

Final Output Examples

	Last Name	First Name	Height	Team	Position	Number	College	Salary
0	Curry	Stephen	75	GS	PG	30	Davidson	40231758

	player	G	Points	FGA	FGM	FG%	EFG%	FTA	FT%	ORB	DRB	TRB	AST	TOV	STL	BLK	PF	+/-	PER
0	Trae Young	81	25.6	20.7	8.7	55.9	64.2	6.8	110.9	1.1	3.9	5.0	10.8	5.1	1.2	0.2	2.3	-449.6	28.5

	Name	Assists
231	Russell Westbrook	893.0
464	Trae Young	743.8
313	Ben Simmons	694.8
383	De'Aaron Fox	672.0
63	James Harden	667.5
280	Nikola Jokic	660.6
9	Kyle Lowry	642.4
291	D'Angelo Russell	641.3
104	Damian Lillard	627.6
20	Jrue Holiday	590.0
170	Kemba Walker	550.1

	Name	Points
63	James Harden	3209.7
164	Paul George	2459.1
170	Kemba Walker	2394.2
2	Bradley Beal	2390.8
104	Damian Lillard	2354.3
235	Kevin Durant	2308.8
32	Giannis Antetokounmpo	2271.2
27	Stephen Curry	2142.5
275	Karl-Anthony Towns	2141.3
128	Blake Griffin	2096.9
403	Donovan Mitchell	2083.2