

In [1]: `# Import necessary libraries
import pandas as pd # Pandas for data manipulation
import matplotlib.pyplot as plt # Matplotlib for basic plotting
import seaborn as sns # Seaborn for statistical data visualization`

In [2]: `# Read the CSV file into a DataFrame
df = pd.read_csv("all_seasons.csv")`

In [3]: `# Rename selected columns for better readability
df.rename(columns = {'player_name':'name', 'team_abbreviation':'team', 'player_height':'height', 'player_weight':'weight',
 'pts':'avg_pts', 'reb':'avg_reb', 'ast':'avg_ast'}, inplace = True)`

In [4]: `# Display the first few rows of the DataFrame
df.head()`

Out[4]:

	Unnamed: 0	name	team	age	height	weight	college	country	draft_year	draft_round	...	avg_pts	avg_reb	avg_ast	net_rating	oreb_pct	dreb_pct	usg_pct	ts_pct	ast_pct	season
0	0	Randy Livingston	HOU	22.0	193.04	94.800728	Louisiana State	USA	1996	2	...	3.9	1.5	2.4	0.3	0.042	0.071	0.169	0.487	0.248	1996-97
1	1	Gaylon Nickerson	WAS	28.0	190.50	86.182480	Northwestern Oklahoma	USA	1994	2	...	3.8	1.3	0.3	8.9	0.030	0.111	0.174	0.497	0.043	1996-97
2	2	George Lynch	VAN	26.0	203.20	103.418976	North Carolina	USA	1993	1	...	8.3	6.4	1.9	-8.2	0.106	0.185	0.175	0.512	0.125	1996-97
3	3	George McCloud	LAL	30.0	203.20	102.058200	Florida State	USA	1989	1	...	10.2	2.8	1.7	-2.7	0.027	0.111	0.206	0.527	0.125	1996-97
4	4	George Zidek	DEN	23.0	213.36	119.748288	UCLA	USA	1995	1	...	2.8	1.7	0.3	-14.1	0.102	0.169	0.195	0.500	0.064	1996-97

5 rows × 22 columns

In [6]: `# Calculate cumulative sums for points, rebounds, and assists
df['total_pts'] = df.groupby('name')['pts'].cumsum()
df['total_reb'] = df.groupby('name')['reb'].cumsum()
df['total_ast'] = df.groupby('name')['ast'].cumsum()`

In [7]: `# Display the first few rows of the DataFrame for Kyrie Irving
df[df['name']=='Kyrie Irving'].head()`

Out[7]:

	Unnamed: 0	name	team	age	height	weight	college	country	draft_year	draft_round	...	usg_pct	ts_pct	ast_pct	season	pts	reb	ast	total_pts	total_reb	total_ast
6734	6734	Kyrie Irving	CLE	20.0	190.5	86.636072	Duke	Australia	2011	1	...	0.281	0.566	0.324	2011-12	943	188	275	943	188	275
7594	7594	Kyrie Irving	CLE	21.0	190.5	86.636072	Duke	Australia	2011	1	...	0.298	0.553	0.315	2012-13	1327	218	348	2270	406	623
8027	8027	Kyrie Irving	CLE	22.0	190.5	87.543256	Duke	Australia	2011	1	...	0.280	0.533	0.311	2013-14	1476	255	433	3746	661	1056
8508	8508	Kyrie Irving	CLE	23.0	190.5	87.543256	Duke	Australia	2011	1	...	0.260	0.583	0.236	2014-15	1627	240	390	5373	901	1446
8984	8984	Kyrie Irving	CLE	24.0	190.5	87.543256	Duke	Australia	2011	1	...	0.293	0.540	0.253	2015-16	1038	159	249	6411	1060	1695

5 rows × 28 columns

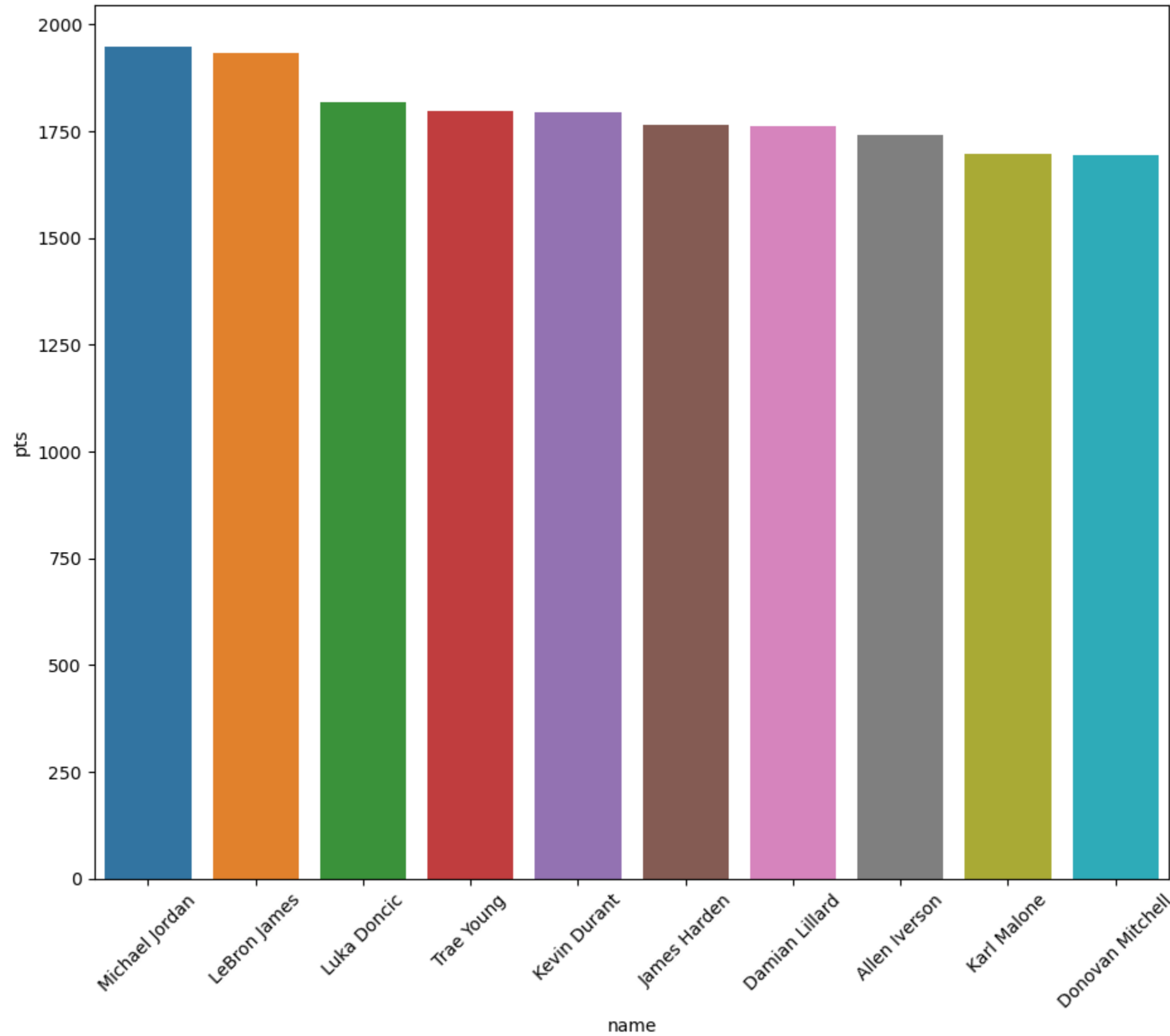
In [8]: `# Create a DataFrame containing mean points for the top 10 players
pts_data = pd.DataFrame(df.groupby('name')['pts'].mean().sort_values(ascending = False).reset_index())[0:10]`

In [9]: `# Display the resulting DataFrame
pts_data`

Out[9]:

	name	pts
0	Michael Jordan	1948.500000
1	LeBron James	1932.050000
2	Luka Doncic	1818.800000
3	Trae Young	1797.200000
4	Kevin Durant	1792.400000
5	James Harden	1763.285714
6	Damian Lillard	1762.090909
7	Allen Iverson	1741.142857
8	Karl Malone	1697.875000
9	Donovan Mitchell	1694.166667

In [11]: `# Create a bar plot for the top 10 players with the highest mean points
plt.figure(figsize = (11,9) , dpi = 100)
sns.barplot(data = pts_data , x = 'name' , y = 'pts')
plt.xticks(rotation = 45);`



In []: