

[3]:

```
import matplotlib.pyplot as plt
import numpy as np
import pandas as pd
```

[4]:

```
import seaborn as sns
```

[5]:

```
df = pd.read_csv("fifa_data.csv")
df
```

[5]:

| | Unnamed: 0 | ID | Name | Age | Photo | Nationality | Flag | Overall | Potential | Club |
|-------|------------|--------|--------------------|-----|--|-------------|-------------------------------------|---------|-----------|---------------------|
| 0 | 0 | 158023 | L. Messi | 31 | https://cdn.sofifa.org/players/4/19/158023.png | Argentina | https://cdn.sofifa.org/flags/52.png | 94 | 94 | FC Barcelona |
| 1 | 1 | 20801 | Cristiano Ronaldo | 33 | https://cdn.sofifa.org/players/4/19/20801.png | Portugal | https://cdn.sofifa.org/flags/38.png | 94 | 94 | Juventus |
| 2 | 2 | 190871 | Neymar Jr | 26 | https://cdn.sofifa.org/players/4/19/190871.png | Brazil | https://cdn.sofifa.org/flags/54.png | 92 | 93 | Paris Saint-Germain |
| 3 | 3 | 193080 | De Gea | 27 | https://cdn.sofifa.org/players/4/19/193080.png | Spain | https://cdn.sofifa.org/flags/45.png | 91 | 93 | Manchester United |
| 4 | 4 | 192985 | K. De Bruyne | 27 | https://cdn.sofifa.org/players/4/19/192985.png | Belgium | https://cdn.sofifa.org/flags/7.png | 91 | 92 | Manchester City |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 18202 | 18202 | 238813 | J. Lundstram | 19 | https://cdn.sofifa.org/players/4/19/238813.png | England | https://cdn.sofifa.org/flags/14.png | 47 | 65 | Crewe Alexandra |
| 18203 | 18203 | 243165 | N. Christoffersson | 19 | https://cdn.sofifa.org/players/4/19/243165.png | Sweden | https://cdn.sofifa.org/flags/46.png | 47 | 63 | Trelleborgs FF |

| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
|-------|-------|--------|--------------------|-----|--|---------|-------------------------------------|-----|-----|------------------|-----|
| 18202 | 18202 | 238813 | J. Lundstram | 19 | https://cdn.sofifa.org/players/4/19/238813.png | England | https://cdn.sofifa.org/flags/14.png | 47 | 65 | Crewe Alexandra | |
| 18203 | 18203 | 243165 | N. Christoffersson | 19 | https://cdn.sofifa.org/players/4/19/243165.png | Sweden | https://cdn.sofifa.org/flags/46.png | 47 | 63 | Trelleborgs FF | |
| 18204 | 18204 | 241638 | B. Worman | 16 | https://cdn.sofifa.org/players/4/19/241638.png | England | https://cdn.sofifa.org/flags/14.png | 47 | 67 | Cambridge United | |
| 18205 | 18205 | 246268 | D. Walker-Rice | 17 | https://cdn.sofifa.org/players/4/19/246268.png | England | https://cdn.sofifa.org/flags/14.png | 47 | 66 | Tranmere Rovers | |
| 18206 | 18206 | 246269 | G. Nugent | 16 | https://cdn.sofifa.org/players/4/19/246269.png | England | https://cdn.sofifa.org/flags/14.png | 46 | 66 | Tranmere Rovers | |

18207 rows x 89 columns



```
[5]: import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

```
[6]: # 1. Which country has the most number of players
```

```
[10]: count = df["Nationality"].value_counts()
print(count)
players_country = count.idxmax()
num_players = count.max()
print("The country with the most number of players is", players_country, "with", num_players, "players.")
```

Nationality
England 1662
Germany 1198

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import seaborn as sns
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[6]: # 1. Which country has the most number of players
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[10]: count = df["Nationality"].value_counts()
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```

```
Nationality
England          1662
Germany          1198
Spain            1072
Argentina         937
France           914
...
New Caledonia     1
Fiji               1
São Tomé & Príncipe 1
United Arab Emirates 1
Botswana          1
Name: count, Length: 164, dtype: int64
The country with the most number of players is England with 1662 players.
```

```
[7]: # 2. Plot top 5 countries
```

```
[12]: l=count.head()
print(l)
```

```
Nationality
England      1662
Germany      1198
Spain        1072
Argentina     937
```

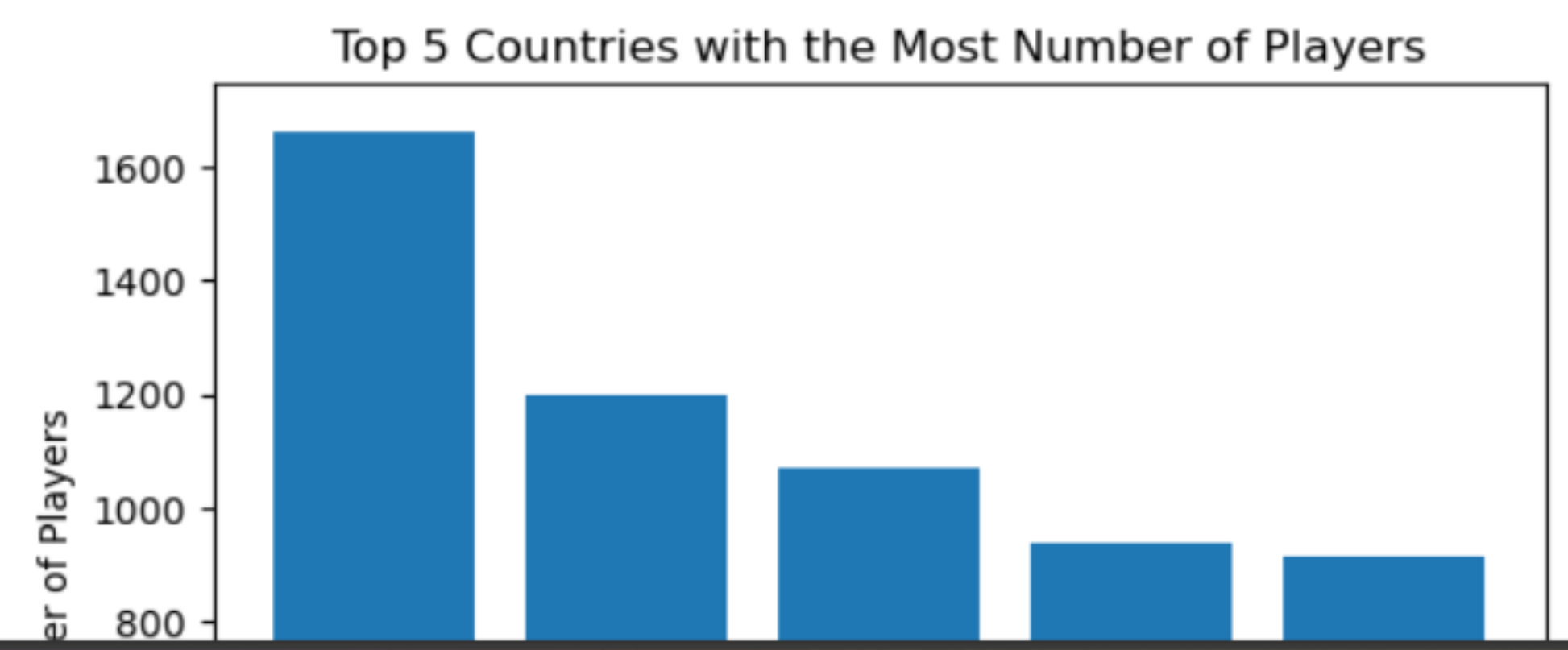

Name: count, Length: 164, dtype: int64
The country with the most number of players is England with 1662 players.

[7]: # 2. Plot top 5 countries

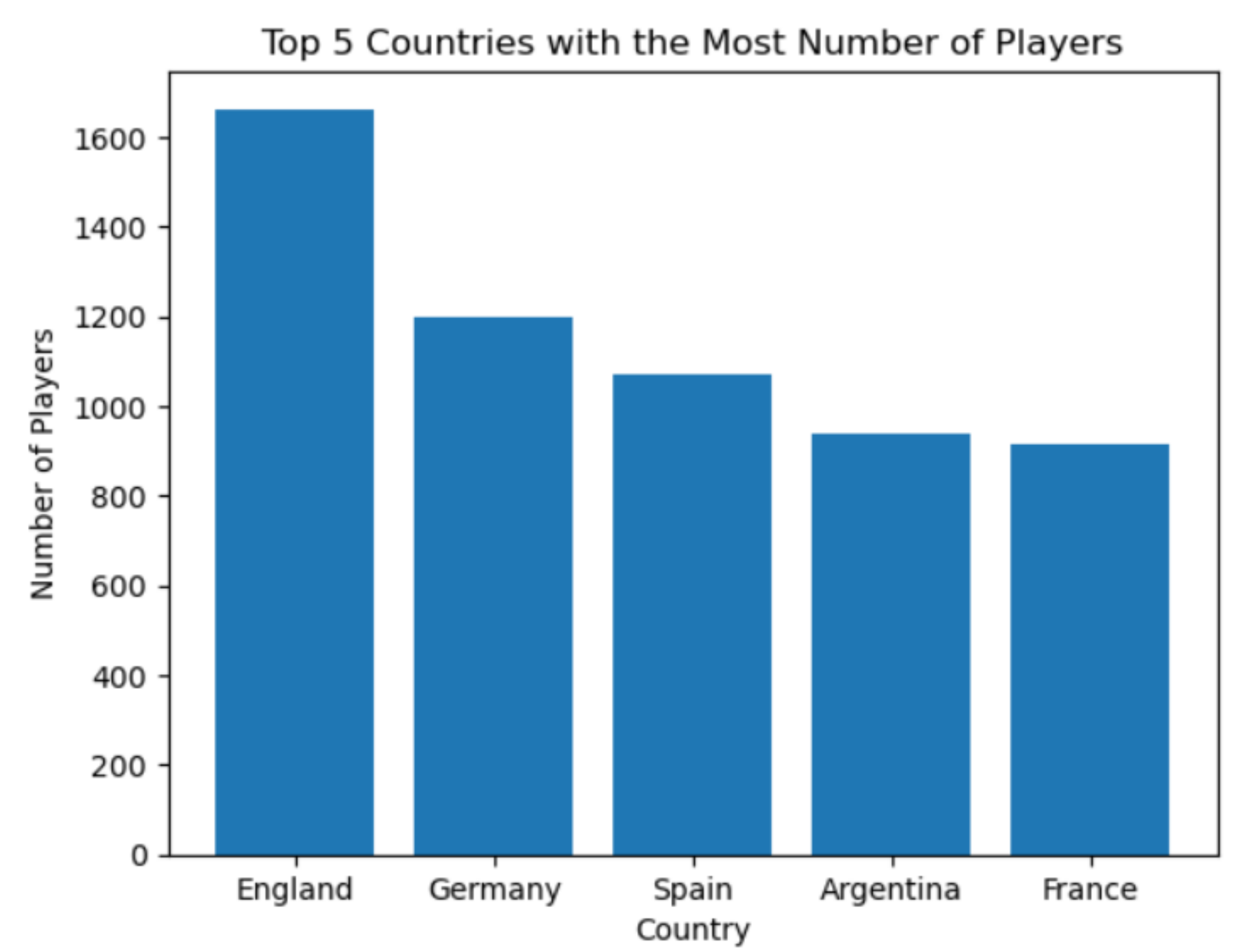
[12]: l=count.head()
print(l)

Nationality
England 1662
Germany 1198
Spain 1072
Argentina 937
France 914
Name: count, dtype: int64

[13]: plt.bar(l.index,l.values)
plt.title('Top 5 Countries with the Most Number of Players')
plt.xlabel('Country')
plt.ylabel('Number of Players')
plt.figure(figsize=(12,6))
plt.show()

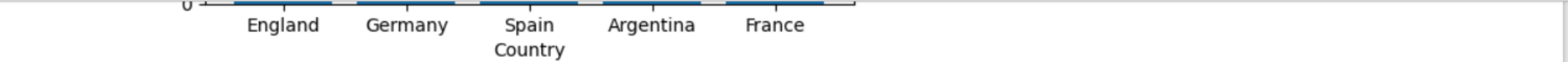


```
plt.title('Top 5 Countries with the Most Number of Players')
plt.xlabel('Country')
plt.ylabel('Number of Players')
plt.figure(figsize=(12,6))
plt.show()
```



<Figure size 1200x600 with 0 Axes>

```
[14]: # 3. Player with highest salary
salary=df.loc[df['Wage'].idxmax()]
```



```
<Figure size 1200x600 with 0 Axes>

[14]: # 3. Player with highest salary

salary=df.loc[df['Wage'].idxmax()]
print(salary)
s=salary["Wage"]
print(" highest salary is",s)
```

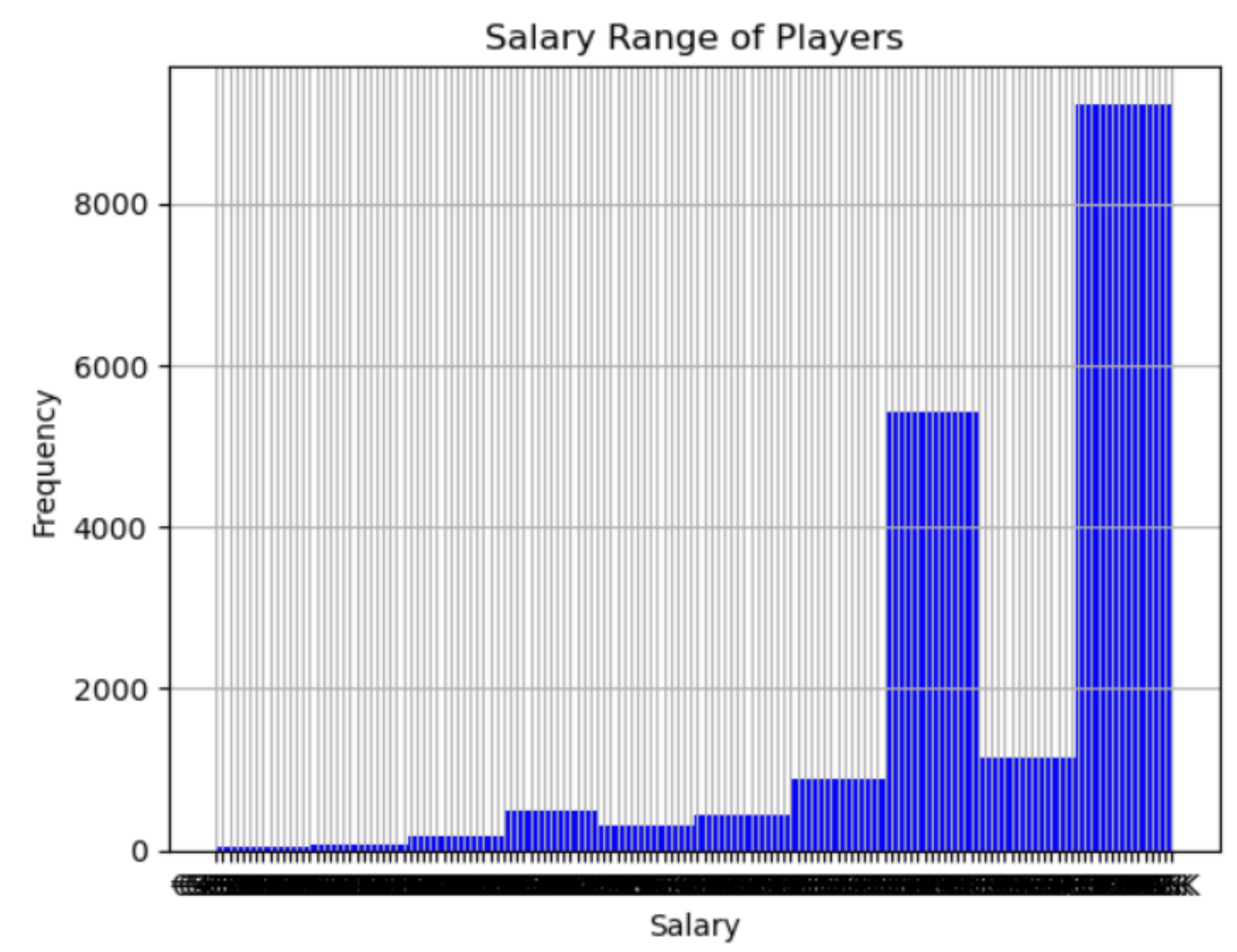
```
Unnamed: 0          1071
ID              139668
Name              F. Marchetti
Age                35
Photo      https://cdn.sofifa.org/players/4/19/139668.png
...
GKHandling          76.0
GKKicking            65.0
GKPositioning        77.0
GKReflexes            78.0
Release Clause       €3.6M
Name: 1071, Length: 89, dtype: object
 highest salary is €9K
```

```
[ ]:
```

```
[15]: # 4. Salary histogram
plt.hist(df['Wage'], color='blue')
plt.title('Salary Range of Players')
plt.xlabel('Salary')
plt.ylabel('Frequency')
plt.grid(True)
plt.show()
```



```
[15]: # 4. Salary histogram
plt.hist(df['Wage'], color='blue')
plt.title('Salary Range of Players')
plt.xlabel('Salary')
plt.ylabel('Frequency')
plt.grid(True)
plt.show()
```



```
[18]: # 6. Club with most players
no_players=df["Club"].value_counts()
```

```
[18]: # 6. Club with most players
no_player=df["Club"].value_counts()
no_player.head(30)
```

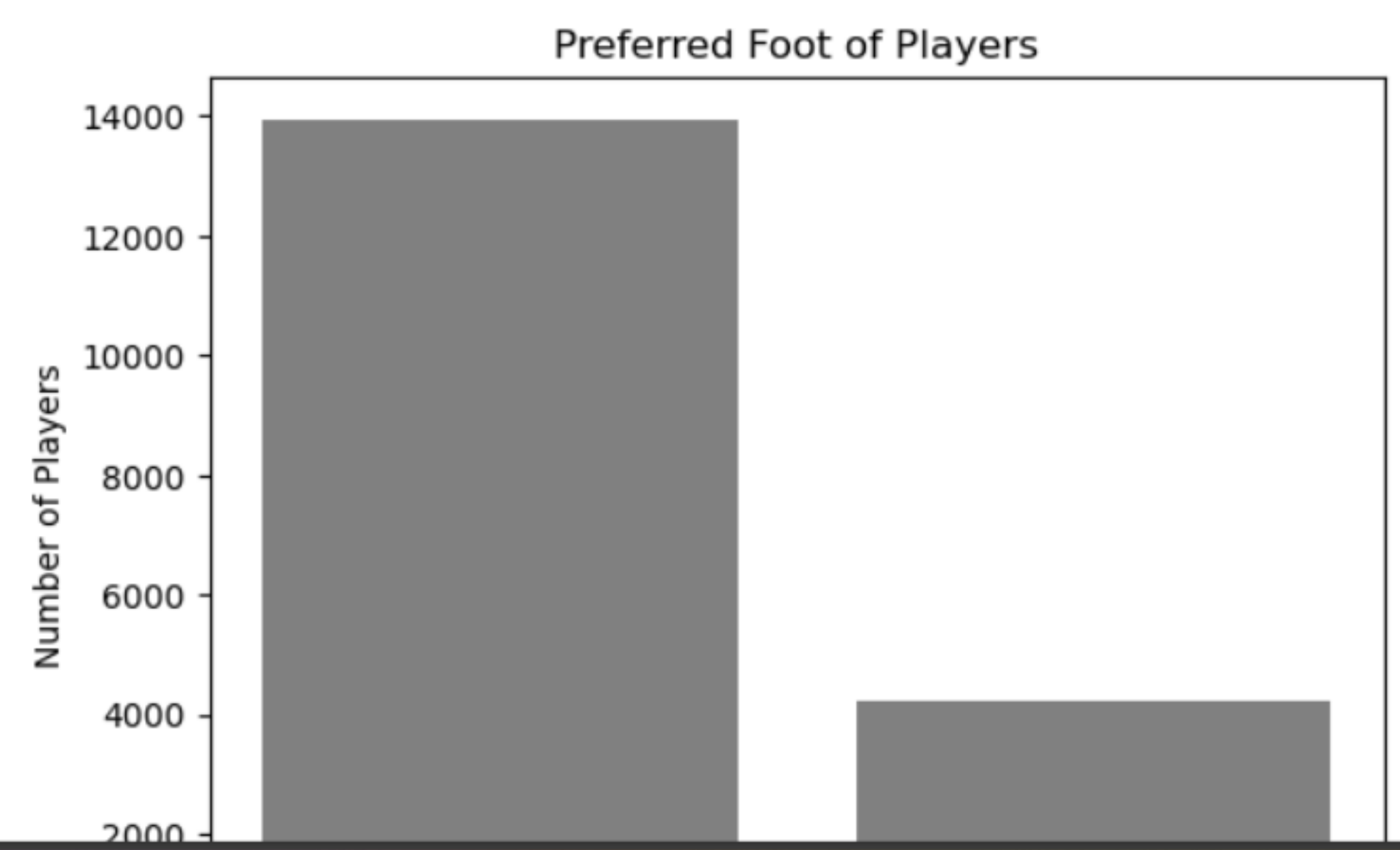
```
[18]: Club
FC Barcelona      33
Valencia CF       33
Fortuna Düsseldorf 33
Cardiff City      33
Rayo Vallecano    33
CD Leganés        33
Frosinone          33
Newcastle United  33
Southampton       33
Burnley           33
Eintracht Frankfurt 33
Wolverhampton Wanderers 33
TSG 1899 Hoffenheim 33
Everton           33
AS Monaco         33
RC Celta          33
Empoli            33
Manchester City   33
Manchester United 33
Borussia Dortmund 33
Real Madrid       33
Atlético Madrid  33
Tottenham Hotspur 33
Chelsea           33
Liverpool         33
Arsenal           33
Levante UD        32
VfL Wolfsburg     32
FC Nantes         32
Fulham            32
Name: count, dtype: int64
```



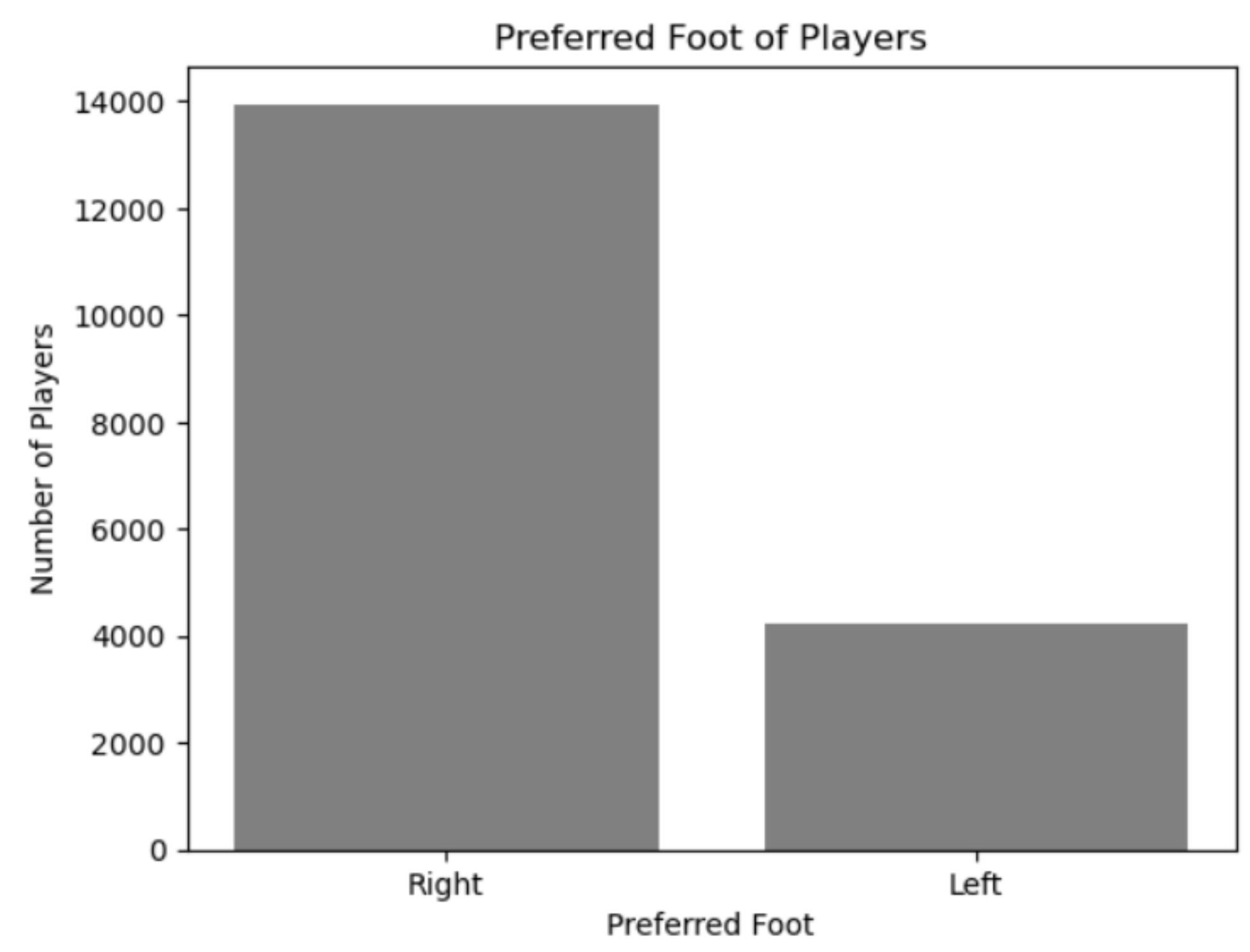
```
[8]: # 7. Preferred foot visualization
foot=df["Preferred Foot"].value_counts()
print(foot)
```

```
Preferred Foot
Right    13948
Left      4211
Name: count, dtype: int64
```

```
[9]: plt.bar(foot.index,foot.values,color="gray")
plt.title('Preferred Foot of Players')
plt.xlabel('Preferred Foot')
plt.ylabel('Number of Players')
plt.show()
```



```
plt.title('Preferred Foot of Players')
plt.xlabel('Preferred Foot')
plt.ylabel('Number of Players')
plt.show()
```



[]: