DA Mini Project

IPL Data Analysis

Code with Output:

```
import numpy as np # numerical computing
import pandas as pd # data processing, CSV file I/O (e.g. pd.read_csv)
import matplotlib.pyplot as plt #visualization
import seaborn as sns #modern visualization
```

```
file_path = 'D://Study/BE/LP1/Mini Project/DA/Dataset/'
matches = pd.read_csv(file_path+'matches.csv')
```

```
matches.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 670 entries, 0 to 669
Data columns (total 18 columns):
 #   Column           Non-Null Count  Dtype  
---  ------           --------------  -----  
 0   id               670 non-null    int64  
 1   season           670 non-null    int64  
 2   city             670 non-null    object 
 3   date             670 non-null    object 
 4   team1            670 non-null    object 
 5   team2            670 non-null    object 
 6   toss_winner      670 non-null    object 
 7   toss_decision    670 non-null    object 
 8   result           636 non-null    object 
 9   dl_applied       636 non-null    float64
 10  winner           670 non-null    object 
 11  win_by_runs      636 non-null    float64
 12  win_by_wickets   636 non-null    float64
 13  player_of_match  633 non-null    object 
 14  venue            636 non-null    object 
 15  umpire1          635 non-null    object 
 16  umpire2          635 non-null    object 
 17  umpire3          0 non-null      float64
dtypes: float64(4), int64(2), object(12)
memory usage: 94.3+ KB
```

```
m=matches
```

```
team=str(input("Enter Team Name :-"))
```

```
u=m[m["team1"]==team]
u2=m[m["team2"]==team]
uf=u.append(u2)
r=uf.count().id
r
```

```
i=uf[uf['winner']==team]
i
```

```
i1=i.count().id
i1
```

```
j=uf[uf['winner']!=team]
j
```

```
j1=j.count().id
j1
```

```
matches.iloc[matches['win_by_runs'].idxmax()]
```

```
matches.iloc[matches[matches['win_by_runs'].ge(1)].win_by_runs.idxmin()]
```

```
win = m[m['toss_winner']==team]
win
```

```
result=win[win["winner"]==team]
result
```

```
m_win=win.count()      #It counts the total toss won by the team
p=win.count().id
r_win=result.count()   #It counts the total toss won resulting in match win
o=result.count().id
```

```
import matplotlib.pyplot as plt
labels='win','lose'
sizes=[o,p-o]
colors=['CYAN','GREY']
explode=(0.09,0)
```

```
plt.pie(sizes,explode=explode,labels=labels,colors=colors,autopct='%10.1f%%',s
hadow=True,startangle=130)
plt.axis('equal')
plt.show()
```

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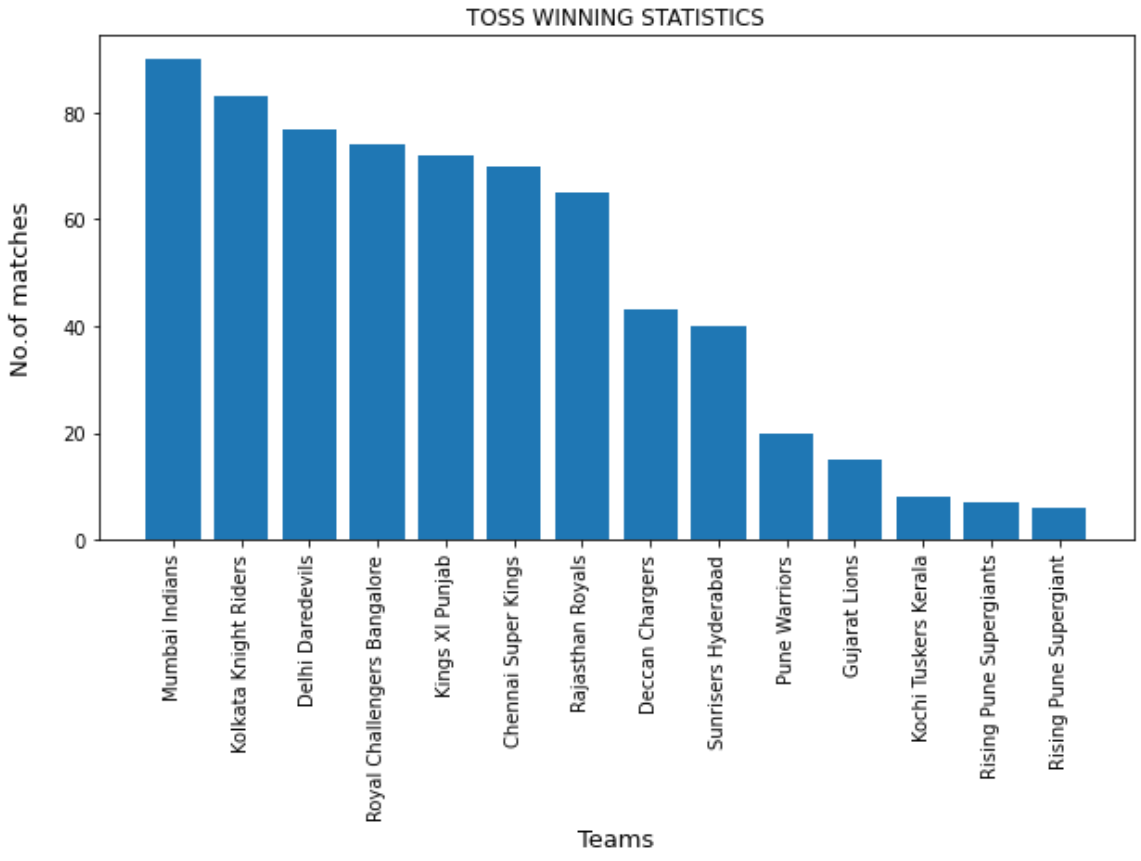
```

```
plt.figure(figsize=(10,5))
plt.bar(teams_toss,count_toss)
plt.xticks(rotation=90)
plt.tick_params(axis='x',which='major' ,labelsize=10)
plt.tick_params(axis='y',which='major' ,labelsize=10)
plt.xlabel('Teams',fontsize=13)
plt.ylabel('No.of matches',labelpad=15,fontsize=13)
plt.title('TOSS WINNING STATISTICS')
```



```
match_win=m[m['winner']==team]
match_win
```

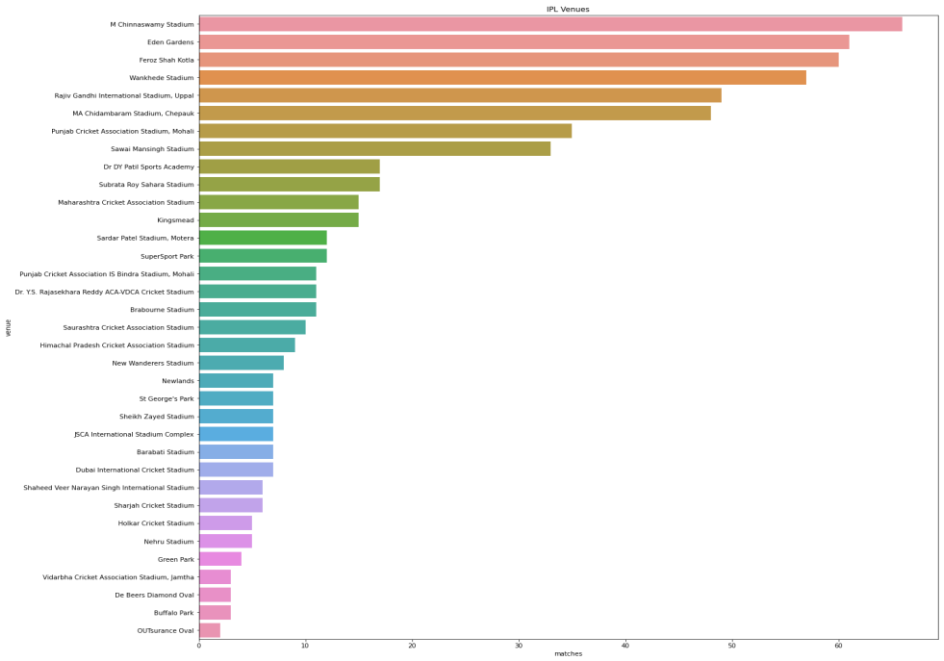
```
w=m[m["team1"]==team]
w2=m[m["team2"]==team]
wf=w.append(w2)
toss_win=wf[wf["toss_winner"]==team]
win_field=toss_win[toss_win['toss_decision']=='field']
toss_loss=wf[wf["toss_winner"]!=team]
loss_field=toss_loss[toss_loss['toss_decision']!='field']
f=win_field.append(loss_field)
k=f[f['winner']==team]
k
```

```
z=k[k['city']=='Mumbai']
z[z['team1']=='Chennai Super Kings']
```

```
venue_ser = m['venue'].value_counts()
```

```
venue_df = pd.DataFrame(columns=['venue', 'matches'])
for items in venue_ser.iteritems():
    temp_df = pd.DataFrame({
        'venue':[items[0]],
        'matches':[items[1]]
    })
    venue_df = venue_df.append(temp_df, ignore_index=True)
```

```
plt.figure(figsize=(20,20))
plt.title("IPL Venues")
sns.barplot(x='matches', y='venue', data=venue_df)
```


IPL Venues
M Chinnaswamy Stadium
Eden Gardens
Feroz Shah Kotla
Wankhede Stadium
Rajiv Gandhi International Stadium, Uppal
MA Chidambaram Stadium, Chepauk
Punjab Cricket Association Stadium, Mohali
Sawai Mansingh Stadium
Dr DY Patil Sports Academy
Subrata Roy Sahara Stadium
Maharashtra Cricket Association Stadium
Kingsmead
Sardar Patel Stadium, Motera
SuperSport Park
Punjab Cricket Association IS Bindra Stadium, Mohali
Dr. YS. Rajasekhara Reddy ACA-VDCA Cricket Stadium
Brabourne Stadium
Saurashtra Cricket Association Stadium
Himachal Pradesh Cricket Association Stadium
New Wanderers Stadium
Newlands
St George's Park
Sheikh Zayed Stadium
JSCA International Stadium Complex
Barabati Stadium
Dubai International Cricket Stadium
Shaheed Veer Narayan Singh International Stadium
Sharjah Cricket Stadium
Holkar Cricket Stadium
Nehru Stadium
Green Park
Vidarbha Cricket Association Stadium, Jamtha
De Beers Diamond Oval
Buffalo Park
OUTsurance Oval
venue
0
10
20
30
40
50
60
matches