

T20 World Cup 2022

importing libraries

```
In [2]: import pandas as pd
import plotly.express as px
import plotly.graph_objects as go
import plotly.io as pio
pio.templates.default = 'plotly_white'
```

Download the dataset

```
In [3]: data=pd.read_csv("T20 world cup.csv")
```

Data Cleaning

```
In [4]: data.head()

Out[4]:
```

	venue	team1	team2	stage	loss winner	loss decision	first innings score	first innings wickets	second innings score	second innings wickets	winner	won by	player of the match	top scorer	highest score	best bowler
0	SCG	New Zealand	Australia	Super 12	Australia	Field	200.0	3.0	111.0	10.0	New Zealand	Runs	Devon Conway	Devon Conway	92.0	Tim Southee
1	Optus Stadium	Afghanistan	England	Super 12	England	Field	112.0	10.0	113.0	5.0	England	Wickets	Sam Curran	Ibrahim Zadran	32.0	Sam Curran
2	Blundstone Arena	Ireland	Sri Lanka	Super 12	Ireland	Bat	128.0	8.0	133.0	1.0	Sri Lanka	Wickets	Kusal Mendis	Kusal Mendis	68.0	Maheesh Theekshana
3	MCG	Pakistan	India	Super 12	India	Field	159.0	8.0	160.0	6.0	India	Wickets	Virat Kohli	Virat Kohli	82.0	Hardik Pandya
4	Blundstone Arena	Bangladesh	Netherlands	Super 12	Netherlands	Field	144.0	8.0	135.0	10.0	Bangladesh	Runs	Taskin Ahmed	Colln Ackermann	62.0	Taskin Ahmed

```
In [14]: data.columns

Out[14]: Index(['venue', 'team1', 'team2', 'stage', 'loss winner', 'loss decision', 'first innings score', 'first innings wickets', 'second innings score', 'second innings wickets', 'winner', 'won by', 'player of the match', 'top scorer', 'highest score', 'best bowler', 'best bowling figure'], dtype='object')

In [5]: data.isnull().sum()

Out[5]: venue      0
team1      0
team2      0
stage      0
loss winner  3
loss decision  3
first innings score  3
first innings wickets  3
second innings score  3
second innings wickets  3
winner      4
won by      4
player of the match  4
top scorer   3
highest score  3
best bowler   3
best bowling figure  3
dtype: int64
```

Data Visualization

Now let's look at the number of matches won by each team in the world cup.

```
In [7]: figure = px.bar(data,
                      x=data["winner"],
                      title="Number of Matches won by teams in T20 world Cup 2022")
figure.show()
```

Number of Matches Won by teams in T20 World Cup 2022

winner	count
New Zealand	3
England	5
Sri Lanka	2
India	4
Bangladesh	2
Australia	3
Ireland	1
South Africa	2
Zimbabwe	1
Pakistan	4
Netherlands	2

As England won the T20 world cup 2022,England won five matches and Both Pakistan and India won 4 Matches.

Now let's have a look at the number of matches won by batting first or second in the T20 world cup 2022.

```
In [6]: won_by = data["won by"].value_counts()
label=won_by.index
counts = won_by.values
colors = ['red','yellow']

fig=go.Figure(data=[go.Pie(labels=label,values=counts)])
fig.update_layout(title_text="Number of Matches Won By Runs or Wickets")
fig.update_traces(hoverinfo='label+percent', textinfo='value', textfont_size=30,
                  marker=dict(colors=colors, line=dict(color='black', width=5)))

fig.show()
```

Number of Matches Won By Runs or Wickets

Category	Count
Runs	16
Wickets	13

So in the T20 world cup 2022,16 matches were won by batting first and 13 matches were won by chasing.

Now,we look at the toss decisions by teams in the world cup.

```
In [7]: toss = data["toss decision"].value_counts()
print(toss)

Bat: 17
Field: 13
Name: toss decision, dtype: int64

In [8]: toss = data["toss decision"].value_counts()
label=toss.index
count=toss.values
colors=['blue','yellow']

fig=go.Figure(data=[go.Pie(labels=label,values=counts)])
fig.update_layout(title_text="Toss Decisions in T20 World Cup 2022")
fig.update_traces(hoverinfo='label+percent', textinfo='value', textfont_size=30,
                  marker=dict(colors=colors, line=dict(color='black', width=5)))
fig.show()
```

Toss Decisions in T20 World Cup 2022

Category	Count
Bat	17
Field	13

So in 17 matches,the teams decided to bat first,and in 13 matches,the teams chose to field first.

Now let's we have a look at the top scorers in T20 World Cup.

```
In [9]: figure=px.bar(data,
                     x=data["top scorer"],
                     y=data["highest score"],
                     color = data["highest score"],
                     title="Top Scorers in T20 World Cup 2022")
figure.show()
```

Top Scorers in T20 World Cup 2022

top scorer	highest score
Devon Conway	40
Ibrahim Zadran	60
Kusal Mendis	80
Virat Kohli	100
Quinton de Kock	120
Glenn Maxwell	140
Andre Barnes	160
Shan Masood	180
Glenn Phillips	200
Najmul Hossain	220
Suryakumar Yadav	240
Shadab Khan	260
Lucifer Tucker	280
Asim Shai	300
Shadab Khan	320
Glenn Maxwell	340
Quinton de Kock	360
Andre Barnes	380
Shan Masood	400
Suryakumar Yadav	420
Glenn Phillips	440
Shadab Khan	460
Lucifer Tucker	480
Asim Shai	500
Shadab Khan	520
Glenn Maxwell	540
Quinton de Kock	560
Andre Barnes	580
Shan Masood	600
Suryakumar Yadav	620
Glenn Phillips	640
Shadab Khan	660
Lucifer Tucker	680
Asim Shai	700
Shadab Khan	720
Glenn Maxwell	740
Quinton de Kock	760
Andre Barnes	780
Shan Masood	800
Suryakumar Yadav	820
Glenn Phillips	840
Shadab Khan	860
Lucifer Tucker	880
Asim Shai	900
Shadab Khan	920
Glenn Maxwell	940
Quinton de Kock	960
Andre Barnes	980
Shan Masood	1000
Suryakumar Yadav	1020
Glenn Phillips	1040
Shadab Khan	1060
Lucifer Tucker	1080
Asim Shai	1100
Shadab Khan	1120
Glenn Maxwell	1140
Quinton de Kock	1160
Andre Barnes	1180
Shan Masood	1200
Suryakumar Yadav	1220
Glenn Phillips	1240
Shadab Khan	1260
Lucifer Tucker	1280
Asim Shai	1300
Shadab Khan	1320
Glenn Maxwell	1340
Quinton de Kock	1360
Andre Barnes	1380
Shan Masood	1400
Suryakumar Yadav	1420
Glenn Phillips	1440
Shadab Khan	1460
Lucifer Tucker	1480
Asim Shai	1500
Shadab Khan	1520
Glenn Maxwell	1540
Quinton de Kock	1560
Andre Barnes	1580
Shan Masood	1600
Suryakumar Yadav	1620
Glenn Phillips	1640
Shadab Khan	1660
Lucifer Tucker	1680
Asim Shai	1700
Shadab Khan	1720
Glenn Maxwell	1740
Quinton de Kock	1760
Andre Barnes	1780
Shan Masood	1800
Suryakumar Yadav	1820
Glenn Phillips	1840
Shadab Khan	1860
Lucifer Tucker	1880
Asim Shai	1900
Shadab Khan	1920
Glenn Maxwell	1940
Quinton de Kock	1960
Andre Barnes	1980
Shan Masood	2000

So,Virat Kohli scored the highest in 3 matches.-He was the best batsma in T20 world cup 2022.

Now we see the number of matches awards in the world cup.

```
In [10]: figure=px.bar(data,
                     x=data["player of the match"],
                     title="Player of the Matches")
figure.show()
```

Player of the Matches

player of the match	count
Devon Conway	1
Ibrahim Zadran	1
Kusal Mendis	1
Virat Kohli	2
Quinton de Kock	1
Glenn Maxwell	1
Andre Barnes	1
Shan Masood	1
Suryakumar Yadav	1
Glenn Phillips	1
Najmul Hossain	1
Shadab Khan	1
Lucifer Tucker	1
Asim Shai	1
Shadab Khan	1
Glenn Maxwell	1
Quinton de Kock	1
Andre Barnes	1
Shan Masood	1
Suryakumar Yadav	1
Glenn Phillips	1
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