

T20 World Cup 2024 Analysis using Python

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```
In [1]: 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"
```

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In [2]: df = pd.read_csv("ICC Mens T20 Worldcup.csv")
```

```
In [3]: df.head()
```

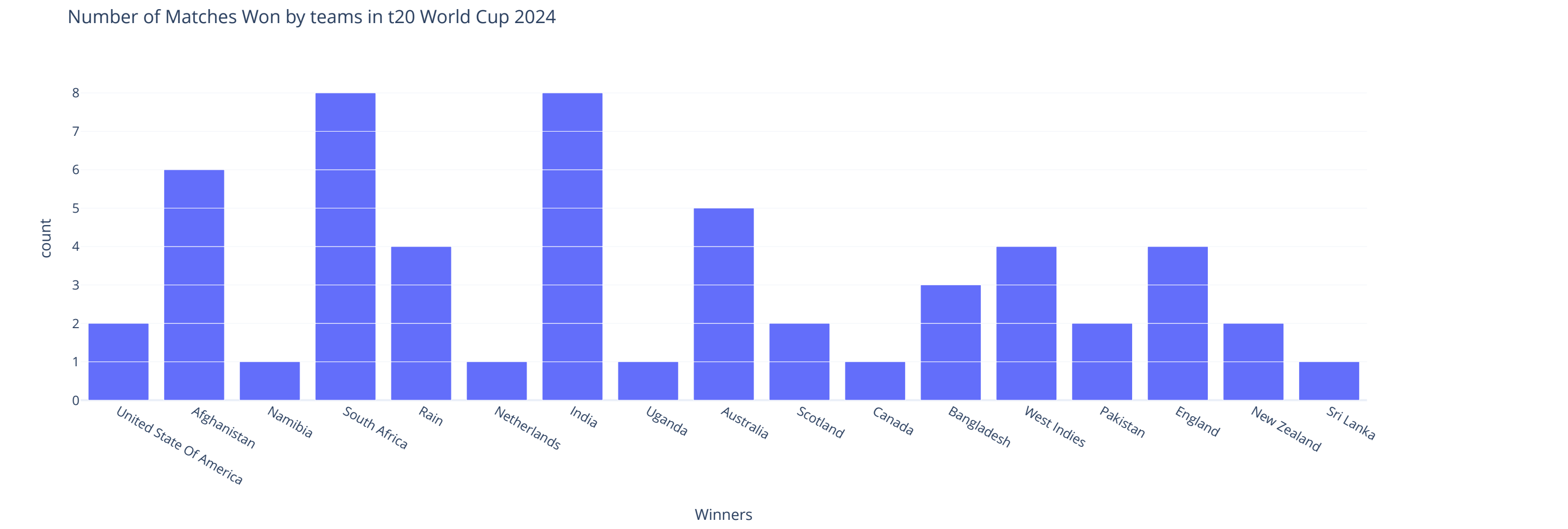
Out[3]:

	Match No.	Date	Venue	1st Team	2nd Team	Stage	Toss Winning	Toss Decision	First Innings Score	Fall of wickets	First Innings	...	Winners	Method	Won by	Winning Margin	Top Scorer	Highest Score	Best Bowler	Best Bowler Figure(Wickets Taken)	Best Bowler Figure(Runs Recieved)	Player Of The Match
0	1st	Saturday,June 1,2024	Grand Prairie Stadium, Dallas	Canada	United State Of America	Group A	United State Of America	Fielding	194	5	...		United State Of America	Normal Match	Wickets	7	Aaron Jones	94	Dilon Heyliger	1	19	Aaron Jones
1	2nd	Sunday,June 2,2024	Providence Stadium, Guyana	Papua New Guinea	Afghanistan	Group C	Afghanistan	Fielding	95	10	...		Afghanistan	Normal Match	Wickets	7	Gulbadin Naib	49	Fazalhaq Farooqi	3	16	Fazalhaq Farooqi
2	3rd	Sunday,June 2,2024	Kensington Oval, Bridgetown, Barbados	Oman	Namibia	Group B	Namibia	Fielding	109	10	...		Namibia	Normal Match	Wickets	4	Jan Frylinck	45	Mehran Khan	3	7	David Wiese
3	4th	Monday,June 3,2024	Nassau County International Cricket Stadium, N...	Sri Lanka	South Africa	Group D	Sri Lanka	Batting	77	10	...		South Africa	Normal Match	Wickets	6	Quinton de Kock	20	Anrich Nortje	4	7	Anrich Nortje
4	5th	Monday,June 3,2024	Providence Stadium, Guyana	Afghanistan	Uganda	Group C	Uganda	Fielding	183	5	...		Afghanistan	Normal Match	Runs	125	Rahmanullah Gurbaz	76	Fazalhaq Farooqi	5	9	Fazalhaq Farooqi

5 rows × 22 columns

Now lets look at the number of matches won by each team in the world cup:

```
In [5]: figure = px.bar(df,
x=df["Winners"],
title="Number of Matches Won by teams in t20 World Cup 2024")
figure.show()
```



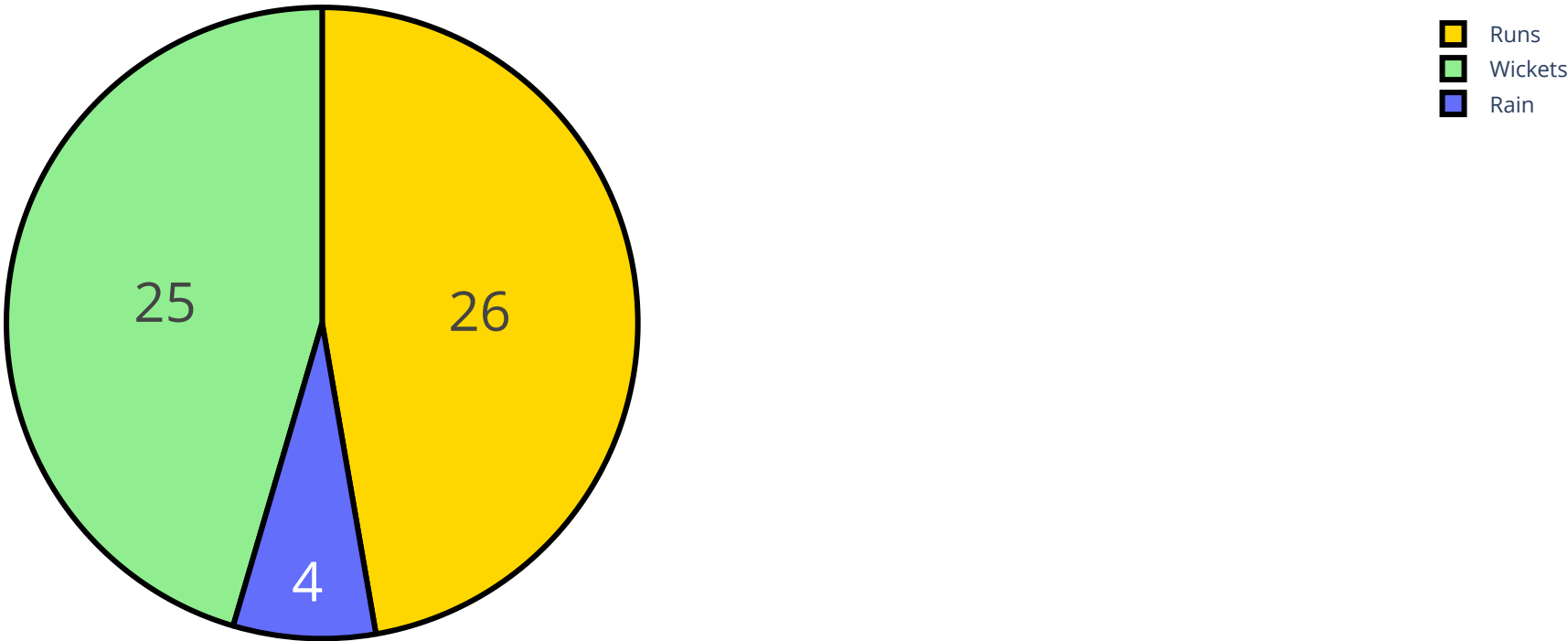
Both India and South Africa won 8 matches.And Afganistan won 5 matches.

Now let’s have a look at the number of matches won by batting first or second in the t20 world cup 2024:

```
In [6]: won_by = df["Won by"].value_counts()
label = won_by.index
counts = won_by.values
colors = ['gold','lightgreen']

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=3)))
fig.show()
```

Number of Matches Won By Runs Or Wickets



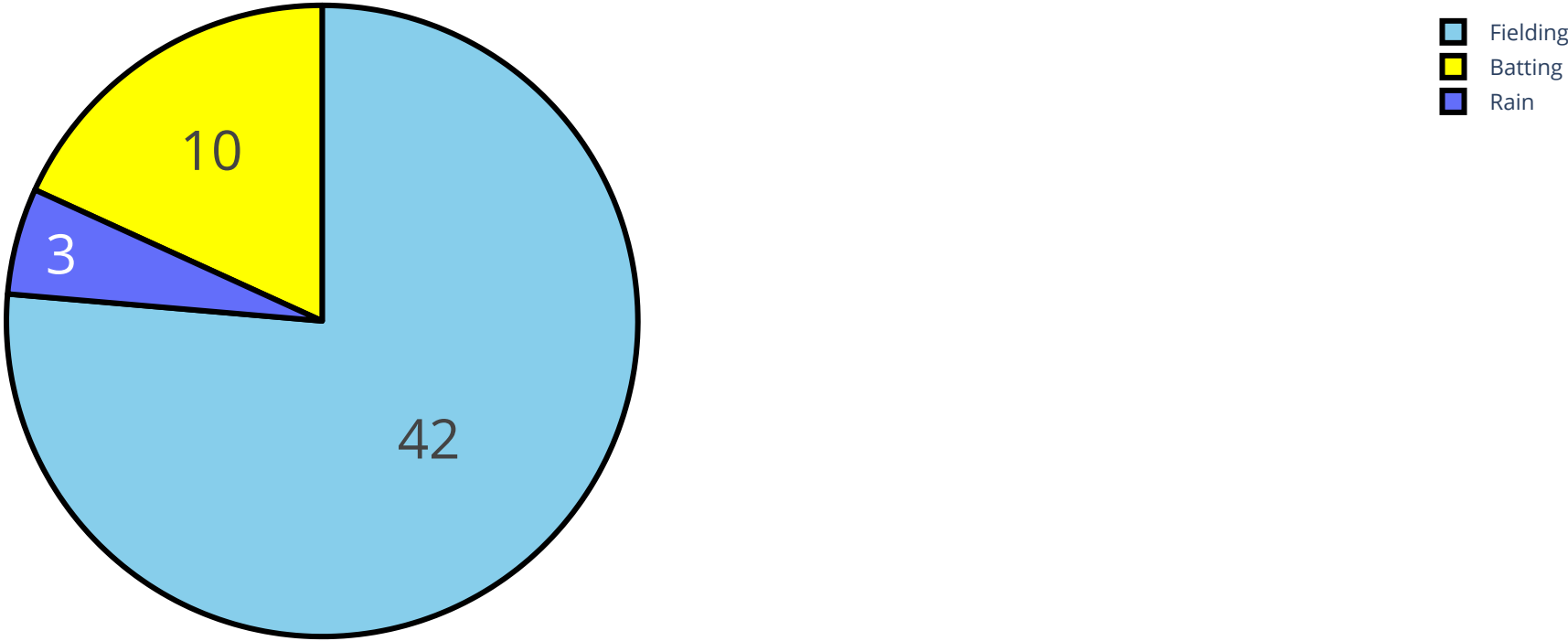
So in the t20 world cup 2024, 26 matches were won by batting first, and 25 matches were won by chasing.

Now, let’s have a look at the toss decisions by teams in the world cup:

```
In [7]: toss = df["Toss Decision"].value_counts()
label = toss.index
counts = toss.values
colors = ['skyblue', 'yellow']

fig = go.Figure(data=[go.Pie(labels=label, values=counts)])
fig.update_layout(title_text='Toss Decisions in t20 World Cup 2024')
fig.update_traces(hoverinfo='label+percent', textinfo='value', textfont_size=30,
                  marker=dict(colors=colors, line=dict(color='black', width=3)))
fig.show()
```

Toss Decisions in t20 World Cup 2024

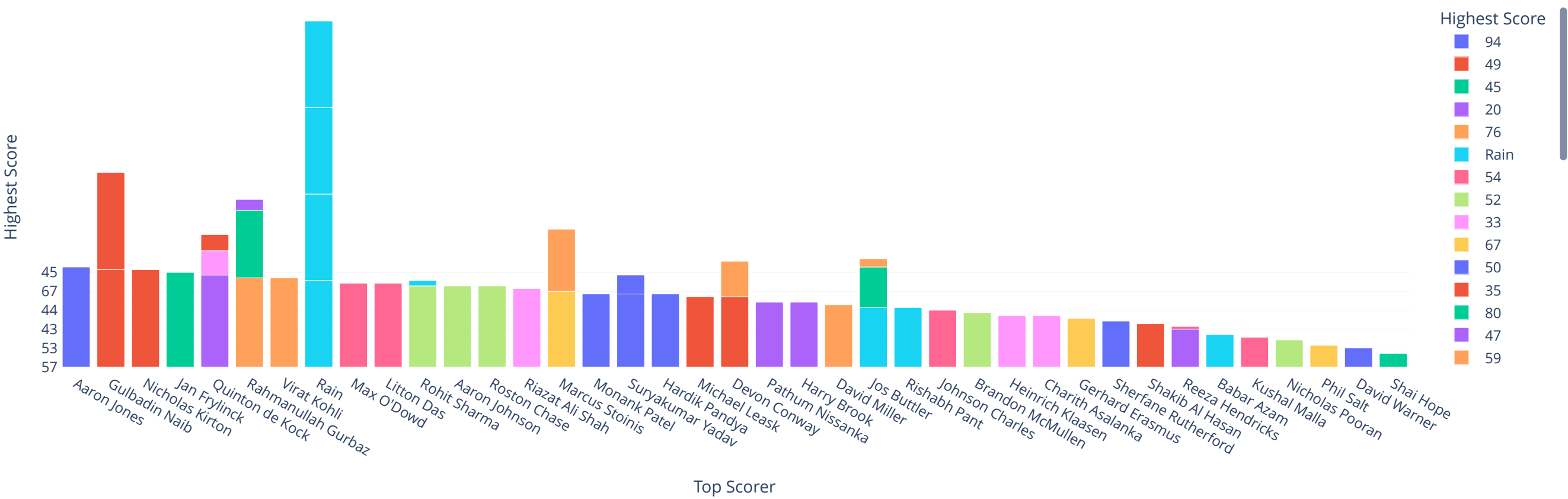


So in 10 matches, the teams decided to bat first, and in 42 matches, the teams chose to field first.

Now let’s have a look at the top scorers in the t20 world cup 2024:

```
In [9]: figure = px.bar(df,
                      x=df["Top Scorer"],
                      y = df["Highest Score"],
                      color = df["Highest Score"],
                      title="Top Scorers in t20 World Cup 2024")
figure.show()
```

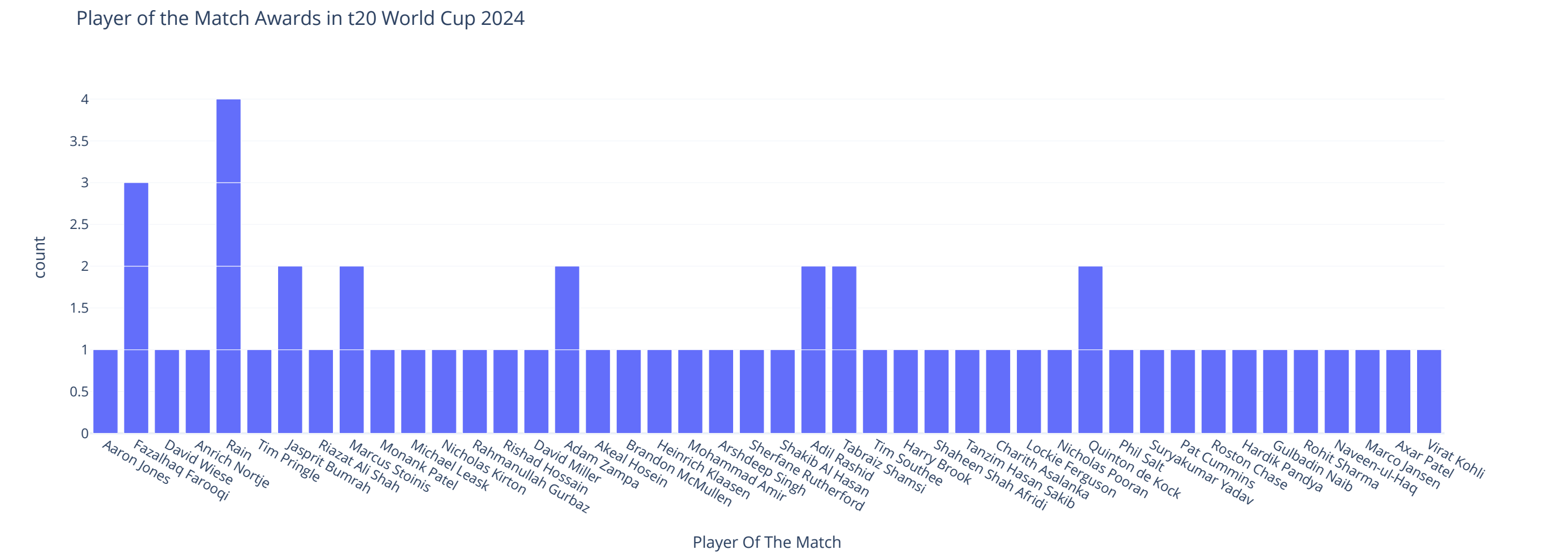
Top Scorers in t20 World Cup 2024



So, Rohit Sharma scored the highest in 3 matches. Undoubtedly, he was the best batsman in the t20 world cup 2024.

Now let’s have a look at the number of player of the match awards in the world cup:

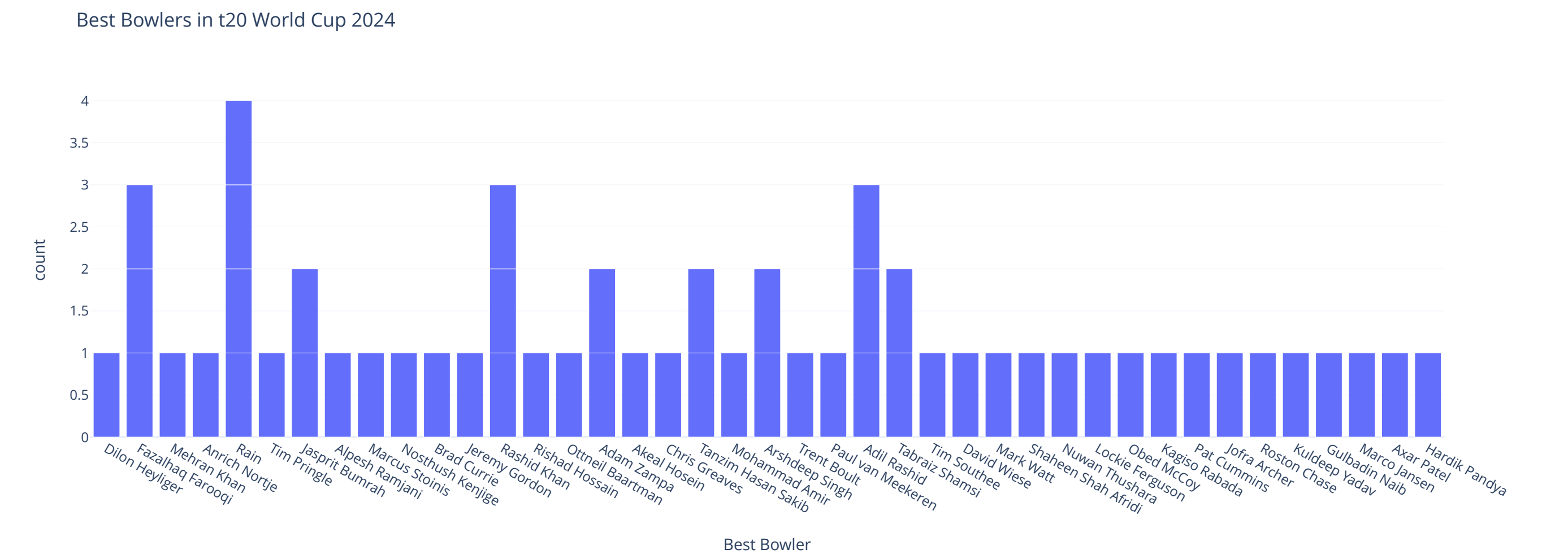
```
In [11]: figure = px.bar(df,
x = df["Player Of The Match"],
title="Player of the Match Awards in t20 World Cup 2024")
figure.show()
```



Fazalhaq Farooqi was the only got player of the match in 3 matches.Undoubtedly, he deserved to be the player of the match awards.

Now let’s have a look at the bowlers with the best bowling figures at the end of the matches:

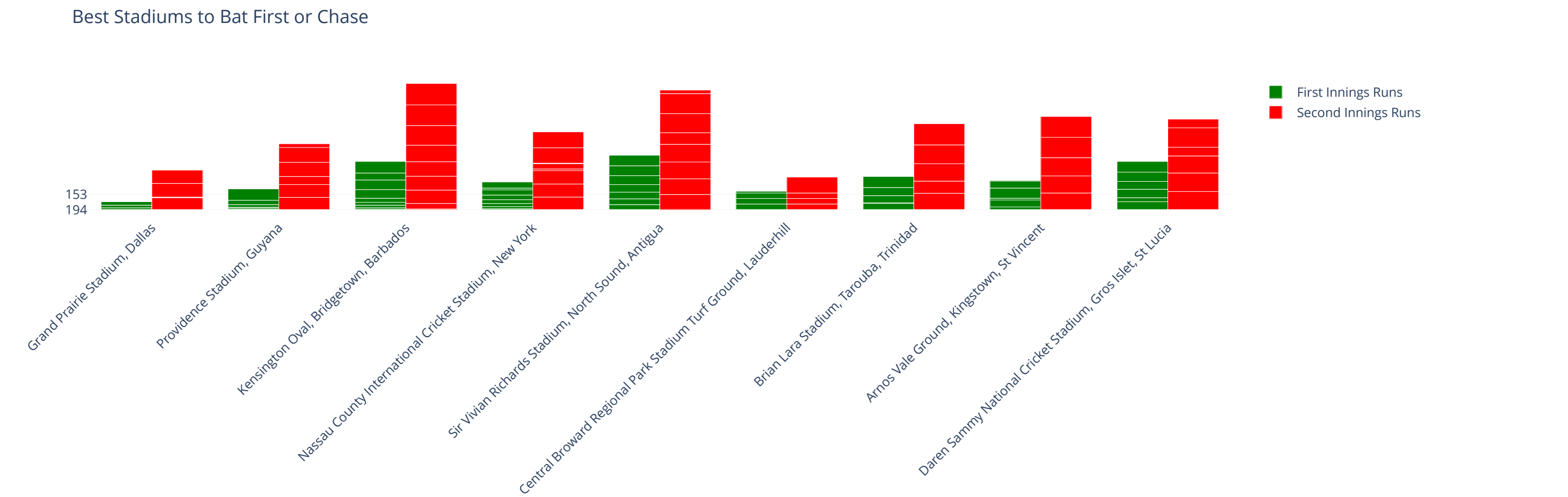
```
In [13]: figure = px.bar(df,
x=df["Best Bowler"],
title="Best Bowlers in t20 World Cup 2024")
figure.show()
```



Fazalhaq Farooqi,Rashid Khan and Adil Rashid got the best bowler in 3 matches. No player got the player of the match award in more than three matches.

Now let’s compare the runs scored in the first innings and second innings in every stadium of the t20 world cup 2024:

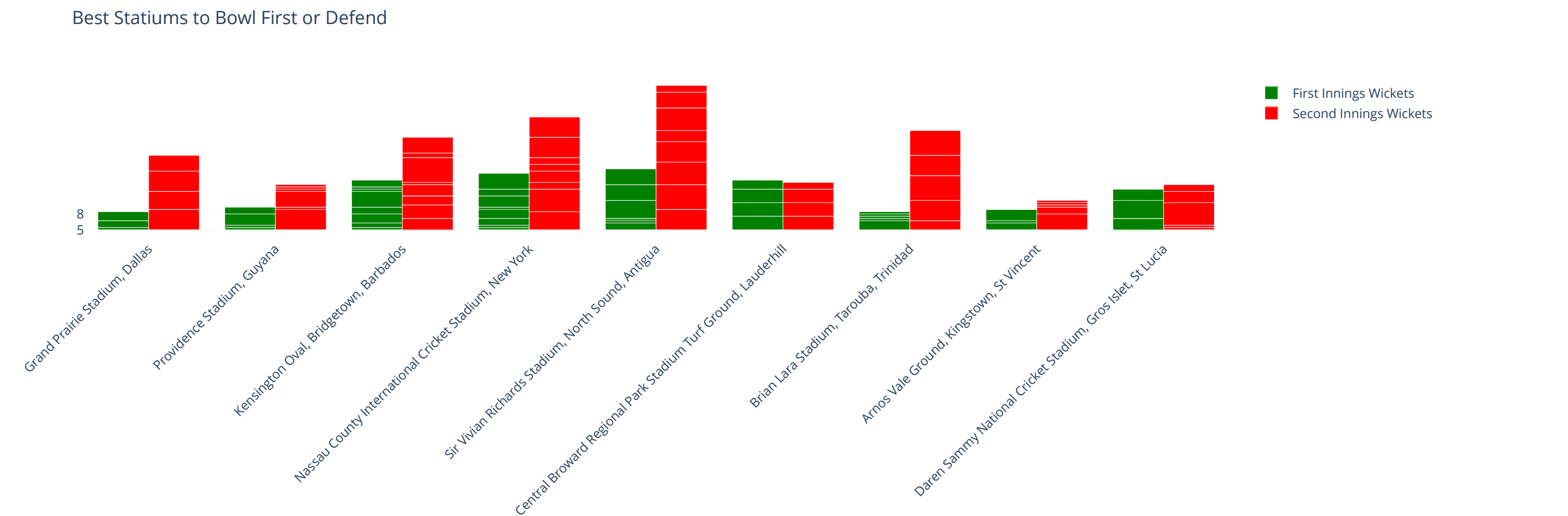
```
In [15]: fig = go.Figure()
fig.add_trace(go.Bar(
x=df["Venue"],
y=df["First Innings Score"],
name='First Innings Runs',
marker_color='green'
))
fig.add_trace(go.Bar(
x=df["Venue"],
y=df["Second Innings Score"],
name='Second Innings Runs',
marker_color='red'
))
fig.update_layout(barmode='group',
xaxis_tickangle=-45,
title="Best Stadiums to Bat First or Chase")
fig.show()
```



Stadiums are perfect for chasing.

Now let’s compare the number of wickets lost in the first innings and second innings in every stadium of the t20 world cup 2024:

```
In [16]: fig = go.Figure()
fig.add_trace(go.Bar(
    x=df["Venue"],
    y=df["Fall of wickets First Innings"],
    name='First Innings Wickets',
    marker_color='green'
))
fig.add_trace(go.Bar(
    x=df["Venue"],
    y=df["Fall of wickets Second Innings"],
    name='Second Innings Wickets',
    marker_color='red'
))
fig.update_layout(barmode='group',
                  xaxis_tickangle=-45,
                  title="Best Statiums to Bowl First or Defend")
fig.show()
```



Sir Vivian Richards Stadium, North Sound, Antigua and Brian Lara Stadium, Tarouba, Trinidad were the best stadium to bowl while defending the target. While the no more Stadium was the best stadium to bowl first.

Summary

So some highlights of the t20 world cup 2022 we found from our analysis are:

- 1.England won the most number of matches
- 2.Virat Kohli scored highest in the most number of matches
- 3.Sam Curran was the best bowler in the most number of matches
- 4.More teams won by batting first
- 5.More teams decided to bat first
- 6.SCG was the best stadium to bat first
- 7.SCG was the best stadium to defend the target in the World Cup
- 8.The Optus Stadium was the best stadium to bowl first