India vs Australia Mastercard 3rd T-20I Analysis

In [1]:
```
import numpy as np
import pandas as pd
from matplotlib import pyplot as plt
from datetime import date
```

In [2]:

```
def match_day():
    from datetime import date
    date = date.today()
    match_date = date
    print("Date of the match is:",match_date)
    print(" ")
    print("Mastercard T20I Series")
    print(" ")
    print("India vs Australia 3rd T20I")
    print(" ")
    toss_winner = "IND"
    toss_decision = "bowl"
    print("Toss: ",toss_winner,"won the toss and decided to",toss_decision)
    print(" ")
    Stadium = 'Rajiv Gandhi International Stadium, Nagpur'
    print("Stadium: ",Stadium)
    print(" ")
    Umpires= 'Jayaraman Madanagopal, Nitin Menon'
    print("Umpires: ",Umpires)
    print(" ")
    Third_Umpire = 'KN Anantha Padmanabhan'
    print("Third Umpire: ",Third_Umpire)
    print(" ")
    Match_Referee='Javagal Srinath'
    print("Match Referee: ",Match_Referee)


match_day()
```

Date of the match is: 2022-09-25

Mastercard T20I Series

India vs Australia 3rd T20I

Toss: IND won the toss and decided to bowl

Stadium: Rajiv Gandhi International Stadium, Nagpur

Umpires: Jayaraman Madanagopal, Nitin Menon

Third Umpire: KN Anantha Padmanabhan

Match Referee: Javagal Srinath

In [3]:
```
nt("Australia Playing XI:-\n")
ying_11=['Aaron Finch (c)','Cameron Green','Steven Smith','Glenn Maxwell','Daniel Sams',
         'Tim David','Matthew Wade (wk)','Pat Cummins','Josh Inglis','Adam Zampa',
             'Josh Hazlewood']

 i in playing_11:
      print(i)
nt()

nt("India Playing XI:-\n")
ying_11=['KL Rahul','Rohit Sharma (c)','Virat Kohli','Suryakumar Yadav','Hardik Pandya','Dinesh Karthik (wk)'
         ,'Axar Patel','Harshal Patel','Bhuvneshwar Kumar','Jasprit Bumrah','Yuzvendra Chahal']

 i in playing_11:
      print(i)
```

```
Australia Playing XI:-

Aaron Finch (c)
Cameron Green
Steven Smith
Glenn Maxwell
Daniel Sams
Tim David
Matthew Wade (wk)
Pat Cummins
Josh Inglis
Adam Zampa
Josh Hazlewood

India Playing XI:-

KL Rahul
```

```
Rohit Sharma (c)
Virat Kohli
Suryakumar Yadav
Hardik Pandya
Dinesh Karthik (wk)
Axar Patel
Harshal Patel
Bhuvneshwar Kumar
Jasprit Bumrah
Yuzvendra Chahal
```

India Bowling DataFrame

In [4]:

```
#Create Empty Lists
Over = []
Bowler = []
Runs = []
Wickets = []
Batsman = []
Score = []
#Date = []
```

In [5]:

```
#Create a function to add the records to the lists and organize the data
def add_ind_bowling(over, bowler, runs, wickets, batsman, score):
    Over.append(over)
    Bowler.append(bowler)
    Runs.append(runs)
    Wickets.append(wickets)
    Batsman.append(batsman)
    Score.append(score)
    #Date.append(date)
```

In [6]:

```
#Main program
option = -1 #This will be the users option or choice or input from user

while (option != 0):

    #Create the option menu
    print('Welcome to India vs Australia Mastercard T-20I Series:')
    print('1. Add India Bowling Stats')
    print('2. Show And Save The Expense Report')
    print('0. Exit')

    option = int(input('Choose an option:\n'))
    print()

    #Check for the users choice or option or input
    if option == 0:
        print('Exiting the program')
        break

    elif option == 1:
        print('Adding India Bowling Stats')

    elif option == 2:
          #Create a data frame and add the expenses
        bowling_report = pd.DataFrame()
        bowling_report['Over'] = Over
        bowling_report['Bowler'] = Bowler
        bowling_report['Runs'] = Runs
```

```
        bowling_report['Wickets'] = Wickets
        bowling_report['Batsman'] = Batsman
        bowling_report['Score'] = Score
        #bowling_report['Date'] = Date

        #Save the expense report
        bowling_report.to_csv('ind_bowling.csv')

        #Show the expense report
        print(bowling_report)

    else:
        print('You chose an incorrect option. Please choose 0,1 or 2')

        #Allow the user to enter the stats
    if option == 1 :
        over=int(input("Enter over number:\n "))
        bowler=str(input("Enter bowler name:\n "))
        runs=int(input("How many runs scored this over:\n "))
        wickets=int(input("How many wickets fall this over:\n "))
        batsman=str(input("Which batsman out this over:\n "))
        score=int(input("What is current over score:\n "))
        #date = date.today()

        add_ind_bowling(over, bowler, runs, wickets, batsman, score)

    #Print a new line
    print()
```

	Over	Bowler	Runs	Wickets	Batsman	Score
0	1	Bhuvneshwar Kumar	12	0		12
1	2	Axar Patel	11	0		23
2	3	Jasprit Bumrah	17	0		40
3	4	Axar Patel	16	1	Aaron Finch	56
4	5	Bhuvneshwar Kumar	6	1	Cameron Green	62
5	6	Axar Patel	4	0		66
6	7	Hardik Pandya	5	0		71
7	8	Yuzvendra Chahal	5	1	Glenn Maxwell	76
8	9	Hardik Pandya	7	0		83
9	10	Yuzvendra Chahal	3	1	Steven Smith	86
10	11	Jasprit Bumrah	9	0		95
11	12	Yuzvendra Chahal	8	0		103
12	13	Harshal Patel	12	0		115
13	14	Axar Patel	2	2	Josh Inglis, Matthew Wade	117
14	15	Yuzvendra Chahal	6	0		123
15	16	Hardik Pandya	11	0		134
16	17	Jasprit Bumrah	6	0		140
17	18	Bhuvneshwar Kumar	21	0		161
18	19	Jasprit Bumrah	18	0		179
19	20	Harshal Patel	7	1	Tim David	186

Welcome to India vs Australia Mastercard T-20I Series:

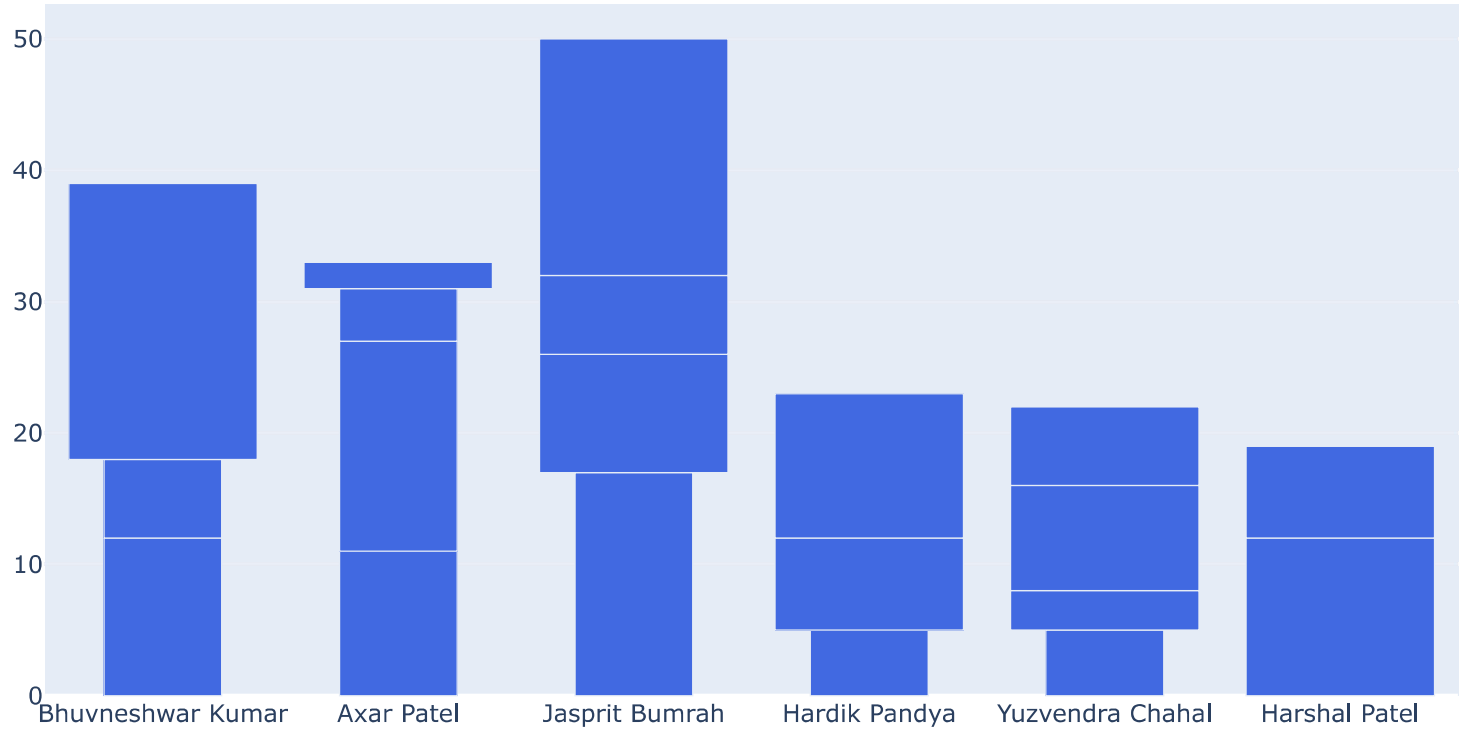
In [7]:
```
bowling_report.describe()
```

	Over	Runs	Wickets	Score
count	20.00000	20.000000	20.000000	20.00000
mean	10.50000	9.300000	0.350000	96.40000
std	5.91608	5.332127	0.587143	48.47289
min	1.00000	2.000000	0.000000	12.00000
25%	5.75000	5.750000	0.000000	65.00000
50%	10.50000	7.500000	0.000000	90.50000
75%	15.25000	12.000000	1.000000	125.75000
max	20.00000	21.000000	2.000000	186.00000

In [8]:

```
import plotly.graph_objects as go

labels = Bowler
values = Runs
fig = go.Figure()
fig.add_trace(go.Bar(
    x=labels,
    y=values,
    width=[0.5, 0.5, 0.5, 0.5, 0.5,0.5,0.5,0.5], # customize width here
    name='Primary Product',
    marker_color='royalblue'
))

# Here we modify the tickangle of the xaxis, resulting in rotated labels.
fig.update_layout(barmode='group', xaxis_tickangle=0)

fig.update_layout(
    title_font_family="Times New Roman",
    title_font_color="black"
)

fig.update_layout(title_text='Runs Spend by Indian bowlers')

fig.show()
```

Runs Spend by Indian bowlers



Which Bowler Bowled which over

In [9]:
```
pd.crosstab(bowling_report.Over,bowling_report.Bowler)
```

Bowler / Over	Axar Patel	Bhuvneshwar Kumar	Hardik Pandya	Harshal Patel	Jasprit Bumrah	Yuzvendra Chahal
1	0	1	0	0	0	0
2	1	0	0	0	0	0
3	0	0	0	0	1	0
4	1	0	0	0	0	0
5	0	1	0	0	0	0
6	1	0	0	0	0	0
7	0	0	1	0	0	0
8	0	0	0	0	0	1
9	0	0	1	0	0	0
10	0	0	0	0	0	1
11	0	0	0	0	1	0
12	0	0	0	0	0	1
13	0	0	0	1	0	0
14	1	0	0	0	0	0
15	0	0	0	0	0	1
16	0	0	1	0	0	0
17	0	0	0	0	1	0
18	0	1	0	0	0	0
19	0	0	0	0	1	0
20	0	0	0	1	0	0

Which Batsman out which over

In [10]:
```
pd.crosstab(bowling_report.Over,bowling_report.Batsman)
```

Batsman	Aaron Finch	Cameron Green	Glenn Maxwell	Josh Inglis, Matthew Wade	Steven Smith	Tim David
Over						
1	1	0	0	0	0	0
2	1	0	0	0	0	0
3	1	0	0	0	0	0
4	0	1	0	0	0	0
5	0	0	1	0	0	0
6	1	0	0	0	0	0
7	1	0	0	0	0	0
8	0	0	0	1	0	0
9	1	0	0	0	0	0
10	0	0	0	0	1	0
11	1	0	0	0	0	0
12	1	0	0	0	0	0
13	1	0	0	0	0	0
14	0	0	0	1	0	0
15	1	0	0	0	0	0
16	1	0	0	0	0	0
17	1	0	0	0	0	0
18	1	0	0	0	0	0
19	1	0	0	0	0	0
20	0	0	0	0	0	1

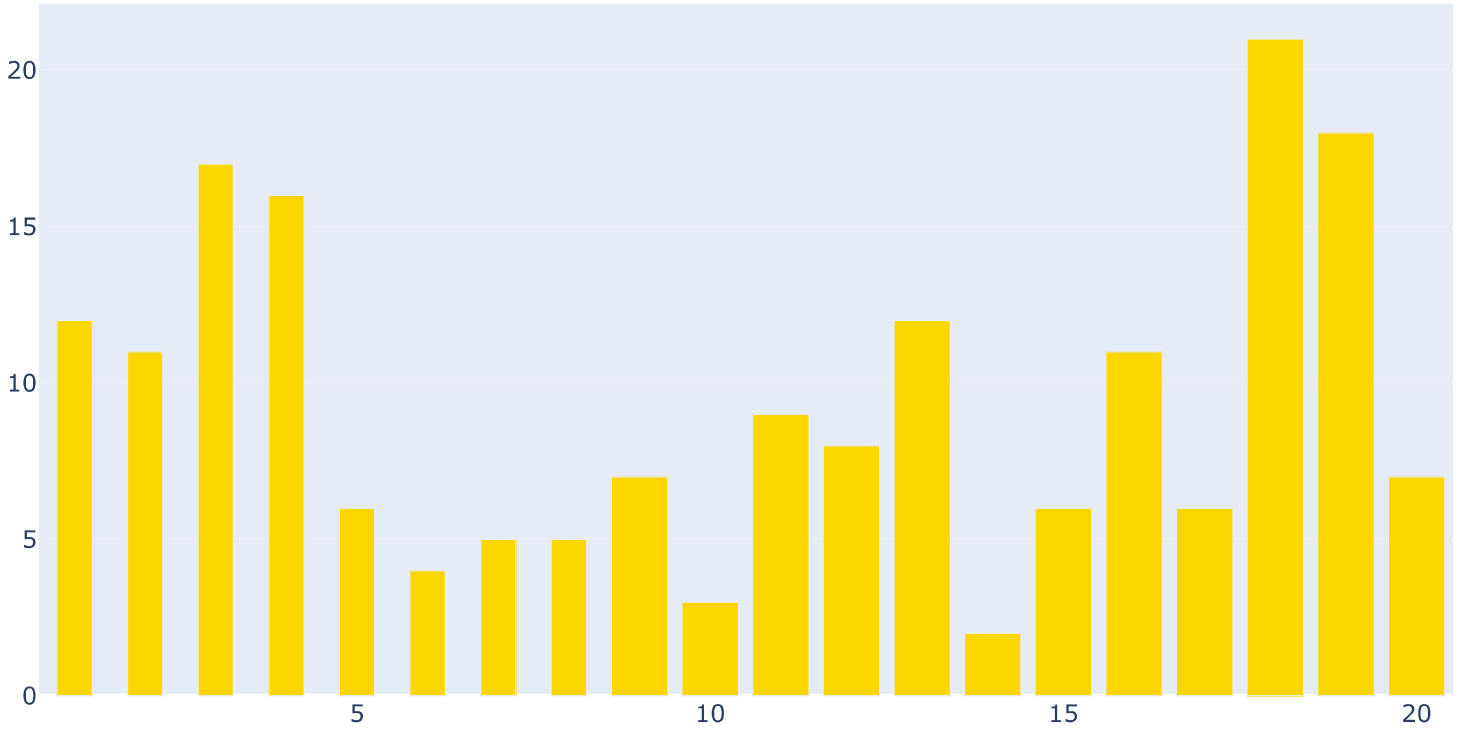
In [11]:
```
pd.crosstab(bowling_report.Batsman,bowling_report.Bowler)
```

Batsman \ Bowler	Axar Patel	Bhuvneshwar Kumar	Hardik Pandya	Harshal Patel	Jasprit Bumrah	Yuzvendra Chahal
	2	2	3	1	4	2
Aaron Finch	1	0	0	0	0	0
Cameron Green	0	1	0	0	0	0
Glenn Maxwell	0	0	0	0	0	1
Josh Inglis, Matthew Wade	1	0	0	0	0	0
Steven Smith	0	0	0	0	0	1
Tim David	0	0	0	1	0	0

In [12]:

```
import plotly.graph_objects as go

labels = Over
values = Runs
fig = go.Figure()
fig.add_trace(go.Bar(
    x=labels,
    y=values,
    width=[0.5, 0.5, 0.5, 0.5, 0.5,0.5,0.5,0.5], # customize width here
    name='Primary Product',
    marker_color='gold'
))


# Here we modify the tickangle of the xaxis, resulting in rotated labels.
fig.update_layout(barmode='group', xaxis_tickangle=0)

fig.update_layout(
    title_font_family="Times New Roman",
    title_font_color="black"
)


fig.update_layout(title_text='Runs Scored by Australia vs Over')

fig.show()
```

Runs Scored by Australia vs Over

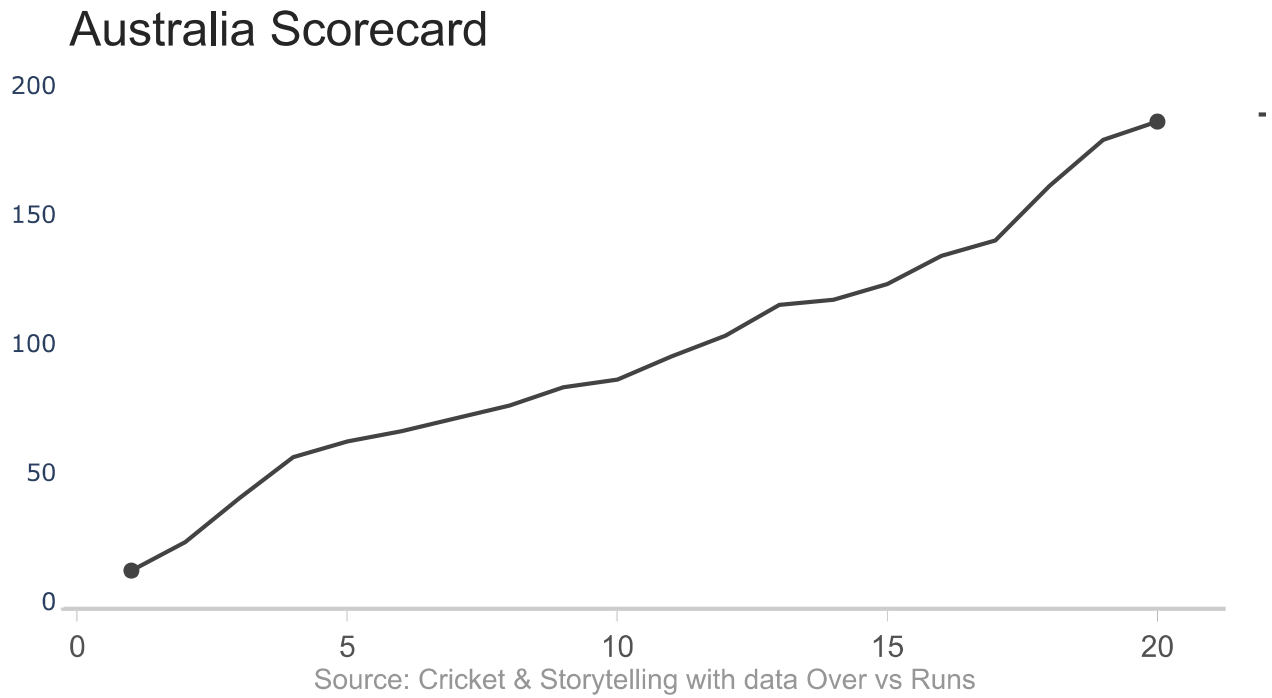


In [13]:

```
import plotly.graph_objects as go
import numpy as np

title = 'Main Source for News'
labels = ['Australia']
colors = ['rgb(67,67,67)']

mode_size = [8]
line_size = [2]

x_data = np.vstack((np.arange(1, 21),)*1)

y_data = np.array([Score])

fig = go.Figure()

for i in range(0, 1):
    fig.add_trace(go.Scatter(x=x_data[i], y=y_data[i], mode='lines',
        name=labels[i],
        line=dict(color=colors[i], width=line_size[i]),
        connectgaps=True,
    ))

    # endpoints
    fig.add_trace(go.Scatter(
        x=[x_data[i][0], x_data[i][-1]],
        y=[y_data[i][0], y_data[i][-1]],
        mode='markers',
```

```
            marker=dict(color=colors[i], size=mode_size[i])
        ))

    fig.update_layout(
        xaxis=dict(
            showline=True,
            showgrid=True,
            showticklabels=True,
            linecolor='rgb(204, 204, 204)',
            linewidth=2,
            ticks='outside',
            tickfont=dict(
                family='Arial',
                size=15,
                color='rgb(82, 82, 82)',
            ),
        ),
        yaxis=dict(
            showgrid=True,
            zeroline=True,
            showline=True,
            showticklabels=True,
        ),
        autosize=False,
        margin=dict(
            autoexpand=False,
            l=100,
            r=20,
```

```
        t=110,
    ),
    showlegend=True,
    plot_bgcolor='white'
)

annotations = []
# Title
annotations.append(dict(xref='paper', yref='paper', x=0.0, y=1.05,
                              xanchor='left', yanchor='bottom',
                              text='Australia Scorecard',
                              font=dict(family='Arial',
                                        size=24,
                                        color='rgb(37,37,37)'),
                              showarrow=False))
# Source
annotations.append(dict(xref='paper', yref='paper', x=0.5, y=-0.1,
                              xanchor='center', yanchor='top',
                              text='Source: Cricket & ' +
                                   'Storytelling with data Over vs Runs',
                              font=dict(family='Arial',
                                        size=14,
                                        color='rgb(150,150,150)'),
                              showarrow=False))

fig.update_layout(annotations=annotations)

fig.show()
```


Australia Scorecard
200
150
100
50
0
0
5
10
15
20
Source: Cricket & Storytelling with data Over vs Runs

In [14]:

```
print("\nSCORECARD")
print("*** Australia Batting ***")

player=['Cameron Green','Aaron Finch','Steven Smith','Glenn Maxwell','Josh Inglis',
        'Tim David','Matthew Wade','Daniel Sams','Pat Cummins']
runs=[52,7,9,6,24,54,1,28,0]
balls=[21,6,10,11,22,27,3,20,1]
fours=[7,1,1,1,3,2,0,1,0]
sixes=[3,0,0,0,0,4,0,2,0]
strike_rate=[247.62,116.67,90.00,54.55,109.09,200.00,33.33,140.00,0.00]

aus={"Batting":player,"R":runs,"B":balls,"4s":fours,"6s":sixes,"S/R":strike_rate}
aus=pd.DataFrame(aus)
print(aus)

print("")
ytb=['Adam Zampa','Josh Hazlewood']
print("\nYet to bat:")
for i in ytb:
    print(i)

#====================Bowling==================
print("\n***IND Bowlig***\n")
player=['Yuzvendra Chahal','Axar Patel','Jasprit Bumrah','Hardik Pandya','Bhuvneshwar Kumar','Harshal Patel
overs=[4.0,4.0,4.0,3.0,3.0,2.0]
M=[0,0,0,0,0,0]
Runs=[22,33,50,23,39,18]
wickets=[1,3,0,0,1,1]
```

```
econ=[5.50,8.25,12.50,7.67,13.00,9.00]

ind_bowl={"Bowling":player,"O":overs,"M":M,"R":Runs,"W":wickets,"Econ":econ}
ind_bowl=pd.DataFrame(ind_bowl)
print(ind_bowl)
print("")

Buys=1
fours=sum(fours)
sixes=sum(sixes)

print("\nAustralia Total Fours:",fours)
print("\nAustralia Total Sixes:",sixes)
print("\nExtras:",sum(Runs)-sum(runs)+Buys)
Aus=sum(Runs)+Buys
print("\nTotal runs:",Aus)
```

```
SCORECARD
*** Australia Batting ***
         Batting   R   B  4s  6s     S/R
0  Cameron Green  52  21   7   3  247.62
1    Aaron Finch   7   6   1   0  116.67
2   Steven Smith   9  10   1   0   90.00
3  Glenn Maxwell   6  11   1   0   54.55
4    Josh Inglis  24  22   3   0  109.09
5      Tim David  54  27   2   4  200.00
6   Matthew Wade   1   3   0   0   33.33
7    Daniel Sams  28  20   1   2  140.00
8    Pat Cummins   0   1   0   0    0.00
```

Yet to bat:
Adam Zampa
Josh Hazlewood

IND Bowlig

	Bowling	O	M	R	W	Econ
0	Yuzvendra Chahal	4.0	0	22	1	5.50
1	Axar Patel	4.0	0	33	3	8.25
2	Jasprit Bumrah	4.0	0	50	0	12.50
3	Hardik Pandya	3.0	0	23	0	7.67
4	Bhuvneshwar Kumar	3.0	0	39	1	13.00
5	Harshal Patel	2.0	0	18	1	9.00

Australia Total Fours: 16

Australia Total Sixes: 9

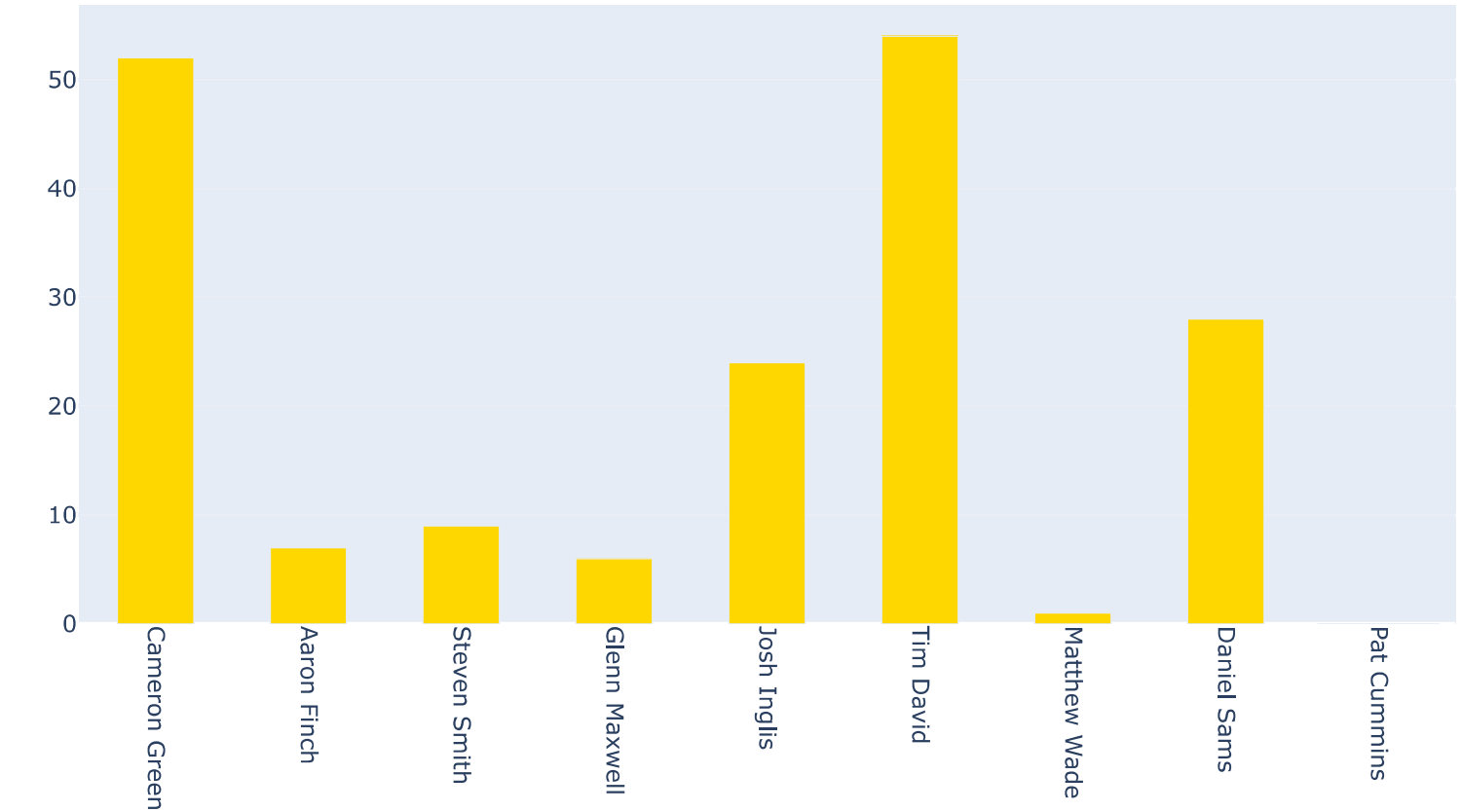
Extras: 5

Total runs: 186

In [15]:

```
import plotly.graph_objects as go

labels = aus['Batting']
values = aus['R']
fig = go.Figure()
fig.add_trace(go.Bar(
    x=labels,
    y=values,
    width=[0.5, 0.5, 0.5, 0.5, 0.5,0.5,0.5,0.5], # customize width here
    name='Primary Product',
    marker_color='gold'
))

# Here we modify the tickangle of the xaxis, resulting in rotated labels.
fig.update_layout(barmode='group', xaxis_tickangle=90)

fig.update_layout(
    title_font_family="Times New Roman",
    title_font_color="black"

)


fig.update_layout(title_text='Runs Scored by Australian players')

fig.show()
```

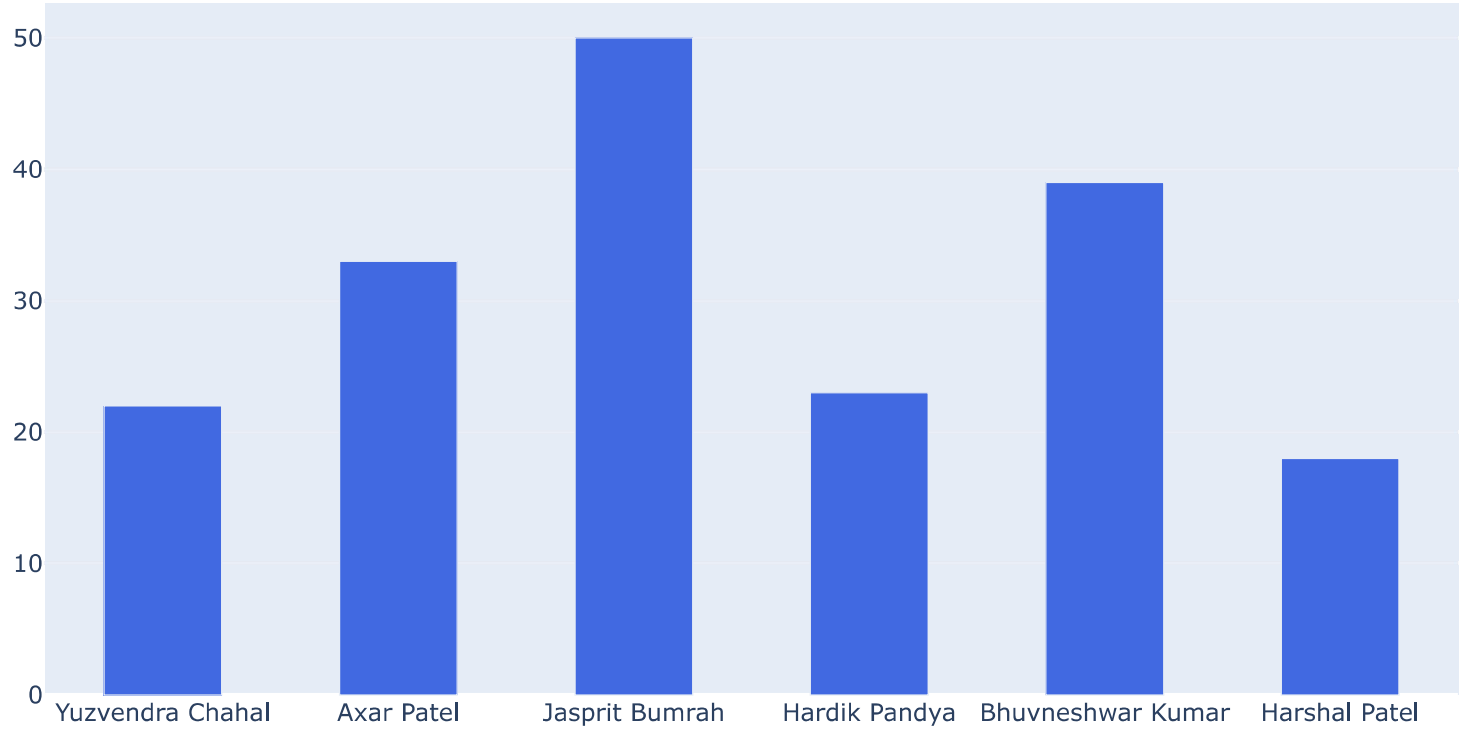
Runs Scored by Australian players



In [17]:

```
import plotly.graph_objects as go

labels = ind_bowl['Bowling']
values = ind_bowl['R']
fig = go.Figure()
fig.add_trace(go.Bar(
    x=labels,
    y=values,
    width=[0.5, 0.5, 0.5, 0.5, 0.5,0.5,0.5,0.5], # customize width here
    name='Primary Product',
    marker_color='royalblue'
))


# Here we modify the tickangle of the xaxis, resulting in rotated labels.
fig.update_layout(barmode='group', xaxis_tickangle=0)

fig.update_layout(
    title_font_family="Times New Roman",
    title_font_color="black"
)


fig.update_layout(title_text='Runs Spend by Indian bowlers')

fig.show()
```

Runs Spend by Indian bowlers



Top 3 scorers of Australia

In [18]:
```
#nlargest
aus.nlargest(3,'R')
```

	Batting	R	B	4s	6s	S/R
5	Tim David	54	27	2	4	200.00
0	Cameron Green	52	21	7	3	247.62
7	Daniel Sams	28	20	1	2	140.00

Top 3 wicket takers of India

In [19]:
```
#nlargest
ind_bowl.nlargest(3,'W')
```

	Bowling	O	M	R	W	Econ
1	Axar Patel	4.0	0	33	3	8.25
0	Yuzvendra Chahal	4.0	0	22	1	5.50
4	Bhuvneshwar Kumar	3.0	0	39	1	13.00

Australia Bowling DataFrame

In [20]:
```
#Create Empty Lists
Over = []
Bowler = []
Runs = []
Wickets = []
Batsman = []
Score = []
```

In [21]:

```
#Create a function to add the expenses to the lists and organize the data
def add_aus_bowling(over, bowler, runs, wickets, batsman, score):
    Over.append(over)
    Bowler.append(bowler)
    Runs.append(runs)
    Wickets.append(wickets)
    Batsman.append(batsman)
    Score.append(score)
```

In [24]:

```
#Main program
option = -1 #This will be the users option or choice or input from user

while (option != 0):
    #Create the option menu
    print('Welcome to India vs Australia Mastercard T-20I Series:')
    print('1. Add Australia Bowling Stats')
    print('2. Show And Save The Stat Report')
    print('0. Exit')

    option = int(input('Choose an option:\n'))
    print()

    #Check for the users choice or option or input
    if option == 0:
        print('Exiting the program')
        break

    elif option == 1:
        print('Adding Australia Bowling Stats')

    elif option == 2:
          #Create a data frame and add the expenses
        bowling_report = pd.DataFrame()
        bowling_report['Over'] = Over
        bowling_report['Bowler'] = Bowler
        bowling_report['Runs'] = Runs
        bowling_report['Wickets'] = Wickets
```

```
            bowling_report['Batsman'] = Batsman
            bowling_report['Score'] = Score
            #bowling_report['Date'] = Date

            #Save the expense report
            bowling_report.to_csv('aus_bowling.csv')

            #Show the expense report
            print(bowling_report)

        else:
            print('You chose an incorrect option. Please choose 0,1 or 2')

            #Allow the user to enter the stats
        if option == 1 :
            over=int(input("Enter over number:\n "))
            bowler=str(input("Enter bowler name:\n "))
            runs=int(input("How many runs scored this over:\n "))
            wickets=int(input("How many wickets fall this over:\n "))
            batsman=str(input("Which batsman out this over:\n "))
            score=int(input("What is current over score:\n "))
            #date = date.today()
            add_aus_bowling(over, bowler, runs, wickets, batsman, score)

        #Print a new line
        print()
```

```
1. Add Australia Bowling Stats
2. Show And Save The Stat Report
0. Exit
```

```
0. Exit
Choose an option:
2
```

	Over	Bowler	Runs	Wickets	Batsman	Score
0	1	Daniel Sams	5	1	KL Rahul	5
1	2	Josh Hazlewood	11	0		16
2	3	Adam Zampa	10	0		26
3	4	Pat Cummins	8	1	Rohit Sharma	34
4	5	Cameron Green	5	0		39
5	6	Josh Hazlewood	11	0		50
6	7	Adam Zampa	5	0		55
7	8	Glenn Maxwell	12	0		67
8	9	Adam Zampa	14	0		81
9	10	Daniel Sams	10	0		91
10	11	Pat Cummins	12	0		103
11	12	Cameron Green	4	0		107
12	13	Adam Zampa	15	0		122
13	14	Josh Hazlewood	12	1	Suryakumar Yadav	134
14	15	Pat Cummins	9	0		143
15	16	Cameron Green	5	0		148
16	17	Daniel Sams	7	0		155

In [25]:
```
bowling_report.describe()
```

	Over	Runs	Wickets	Score
count	20.00000	20.000000	20.000000	20.000000
mean	10.50000	9.350000	0.200000	95.250000
std	5.91608	3.232646	0.410391	57.039114
min	1.00000	4.000000	0.000000	5.000000
25%	5.75000	6.500000	0.000000	47.250000
50%	10.50000	10.000000	0.000000	97.000000
75%	15.25000	11.250000	0.000000	144.250000
max	20.00000	15.000000	1.000000	187.000000

In [26]:

```
import plotly.graph_objects as go

labels = Bowler
values = Runs
fig = go.Figure()
fig.add_trace(go.Bar(
    x=labels,
    y=values,
    width=[0.5, 0.5, 0.5, 0.5, 0.5,0.5,0.5,0.5], # customize width here
    name='Primary Product',
    marker_color='gold'
))


# Here we modify the tickangle of the xaxis, resulting in rotated labels.
fig.update_layout(barmode='group', xaxis_tickangle=0)

fig.update_layout(
    title_font_family="Times New Roman",
    title_font_color="black"
)

fig.update_layout(title_text='Runs Spend by Australian bowlers')


fig.show()
```

Runs Spend by Australian bowlers

Which Bowler Bowled which over

In [27]:
```
pd.crosstab(bowling_report.Over,bowling_report.Bowler)
```

Bowler / Over	Adam Zampa	Cameron Green	Daniel Sams	Glenn Maxwell	Josh Hazlewood	Pat Cummins
1	0	0	1	0	0	0
2	0	0	0	0	1	0
3	1	0	0	0	0	0
4	0	0	0	0	0	1
5	0	1	0	0	0	0
6	0	0	0	0	1	0
7	1	0	0	0	0	0
8	0	0	0	1	0	0
9	1	0	0	0	0	0
10	0	0	1	0	0	0
11	0	0	0	0	0	1
12	0	1	0	0	0	0
13	1	0	0	0	0	0
14	0	0	0	0	1	0
15	0	0	0	0	0	1
16	0	1	0	0	0	0
17	0	0	1	0	0	0
18	0	0	0	0	0	1
19	0	0	0	0	1	0
20	0	0	1	0	0	0

Which Batsman out which over

In [28]:
```
pd.crosstab(bowling_report.Over,bowling_report.Batsman)
```

Batsman	KL Rahul	Rohit Sharma	Suryakumar Yadav	Virat Kohli
Over				
1	0	1	0	0
2	1	0	0	0
3	1	0	0	0
4	0	0	1	0
5	1	0	0	0
6	1	0	0	0
7	1	0	0	0
8	1	0	0	0
9	1	0	0	0
10	1	0	0	0
11	1	0	0	0
12	1	0	0	0
13	1	0	0	0
14	0	0	1	0
15	1	0	0	0
16	1	0	0	0
17	1	0	0	0
18	1	0	0	0
19	1	0	0	0
20	0	0	0	1

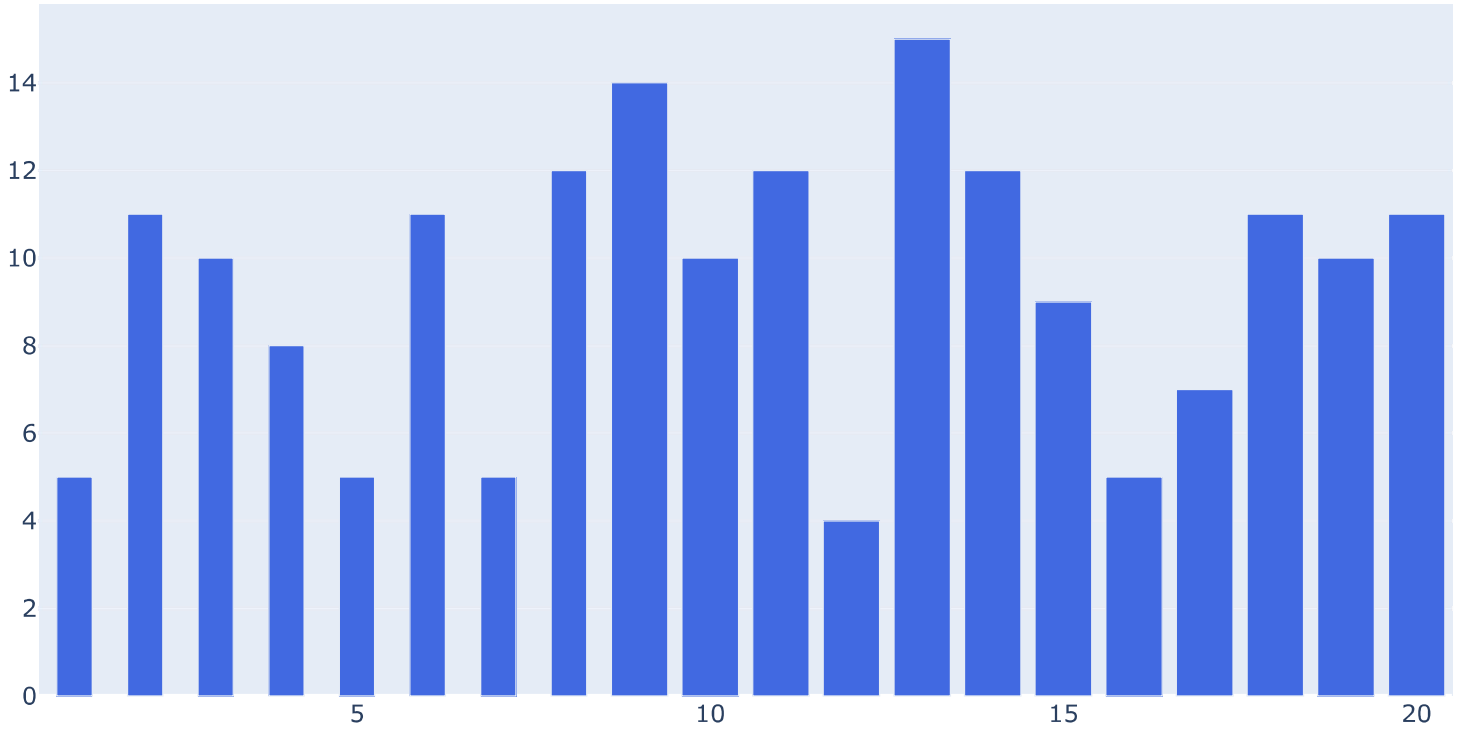
In [29]:
```
pd.crosstab(bowling_report.Batsman,bowling_report.Bowler)
```

Bowler / Batsman	Adam Zampa	Cameron Green	Daniel Sams	Glenn Maxwell	Josh Hazlewood	Pat Cummins
	4	3	2	1	3	3
KL Rahul	0	0	1	0	0	0
Rohit Sharma	0	0	0	0	0	1
Suryakumar Yadav	0	0	0	0	1	0
Virat Kohli	0	0	1	0	0	0

In [30]:

```
import plotly.graph_objects as go

labels = Over
values = Runs
fig = go.Figure()
fig.add_trace(go.Bar(
    x=labels,
    y=values,
    width=[0.5, 0.5, 0.5, 0.5, 0.5,0.5,0.5,0.5], # customize width here
    name='Primary Product',
    marker_color='royalblue'
))


# Here we modify the tickangle of the xaxis, resulting in rotated labels.
fig.update_layout(barmode='group', xaxis_tickangle=0)


fig.update_layout(
    title_font_family="Times New Roman",
    title_font_color="black"
)


fig.update_layout(title_text='Runs Scored by India vs Over')

fig.show()
```

Runs Scored by India vs Over

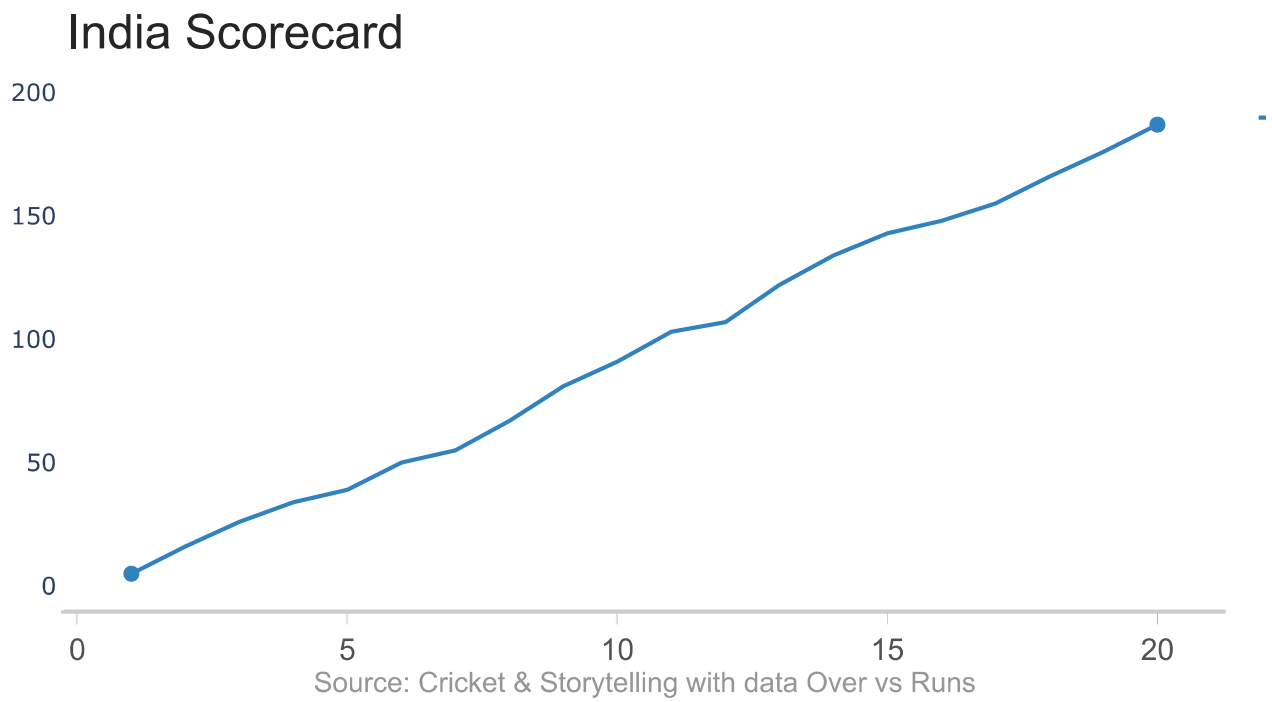


In [31]:

```
import plotly.graph_objects as go
import numpy as np

title = 'Main Source for News'
labels = ['India']
colors = ['rgb(49,130,189)']#rgb(49,130,189)

mode_size = [8]
line_size = [2]

x_data = np.vstack((np.arange(1, 21),)*1)

y_data = np.array([Score])

fig = go.Figure()

for i in range(0, 1):
    fig.add_trace(go.Scatter(x=x_data[i], y=y_data[i], mode='lines',
        name=labels[i],
        line=dict(color=colors[i], width=line_size[i]),
        connectgaps=True,
    ))

    # endpoints
    fig.add_trace(go.Scatter(
        x=[x_data[i][0], x_data[i][-1]],
        y=[y_data[i][0], y_data[i][-1]],
        mode='markers',
```

```
            marker=dict(color=colors[i], size=mode_size[i])
        ))

    fig.update_layout(
        xaxis=dict(
            showline=True,
            showgrid=True,
            showticklabels=True,
            linecolor='rgb(204, 204, 204)',
            linewidth=2,
            ticks='outside',
            tickfont=dict(
                family='Arial',
                size=15,
                color='rgb(82, 82, 82)',
            ),
        ),
        yaxis=dict(
            showgrid=True,
            zeroline=True,
            showline=True,
            showticklabels=True,
        ),
        autosize=False,
        margin=dict(
            autoexpand=False,
            l=100,
            r=20,
```

```
        t=110,
    ),
    showlegend=True,
    plot_bgcolor='white'
)

annotations = []
# Title
annotations.append(dict(xref='paper', yref='paper', x=0.0, y=1.05,
                              xanchor='left', yanchor='bottom',
                              text='India Scorecard',
                              font=dict(family='Arial',
                                        size=24,
                                        color='rgb(37,37,37)'),
                              showarrow=False))
# Source
annotations.append(dict(xref='paper', yref='paper', x=0.5, y=-0.1,
                              xanchor='center', yanchor='top',
                              text='Source: Cricket & ' +
                                   'Storytelling with data Over vs Runs',
                              font=dict(family='Arial',
                                        size=14,
                                        color='rgb(150,150,150)'),
                              showarrow=False))

fig.update_layout(annotations=annotations)

fig.show()
```


India Scorecard
200
150
100
50
0
0
5
10
15
20
Source: Cricket & Storytelling with data Over vs Runs

In [32]:

```
print("\nSCORECARD")
print("*** India Batting ***")

player=['KL Rahul','Rohit Sharma (c)','Virat Kohli','Suryakumar Yadav','Hardik Pandya','Dinesh Karthik',]

runs=[1,17,63,69,25,1]
balls=[4,14,48,36,16,1]
fours=[0,2,3,5,2,0]
sixes=[0,1,4,5,1,0]
strike_rate=[25.00,121.43,131.25,191.67,156.25,100]

ind={"Batting":player,"R":runs,"B":balls,"4s":fours,"6s":sixes,"S/R":strike_rate}
ind=pd.DataFrame(ind)
print(ind)

print("")
ytb=['Axar Patel','Harshal Patel','Bhuvneshwar Kumar','Jasprit Bumrah','Yuzvendra Chahal']
print("\nYet to bat:")
for i in ytb:
    print(i)

#====================Bowling==================
print("\n***AUS Bowlig***\n")
player=['Daniel Sams','Josh Hazlewood','Adam Zampa','Pat Cummins','Cameron Green','Glenn Maxwell']
overs=[3.5,4.0,4.0,4.0,3.0,1.0]
M=[0,0,0,0,0,0]
Runs=[33,40,44,40,14,11]
wickets=[2,1,0,1,0,0]
```

```
econ=[8.61,10.00,11.00,10.00,4.67,11.00]

aus_bowl={"Bowling":player,"O":overs,"M":M,"R":Runs,"W":wickets,"Econ":econ}
aus_bowl=pd.DataFrame(aus_bowl)
print(aus_bowl)
print("")

Buys=5
fours=sum(fours)
sixes=sum(sixes)

print("\nIndia Total Fours:",fours)
print("\nIndia Total Sixes:",sixes)
print("\nExtras:",sum(Runs)-sum(runs)+Buys)
Ind=sum(Runs)+Buys
print("\nTotal runs:",Ind)
```

```
SCORECARD
*** India Batting ***
            Batting   R   B  4s  6s     S/R
0          KL Rahul   1   4   0   0   25.00
1  Rohit Sharma (c)  17  14   2   1  121.43
2       Virat Kohli  63  48   3   4  131.25
3  Suryakumar Yadav  69  36   5   5  191.67
4     Hardik Pandya  25  16   2   1  156.25
5    Dinesh Karthik   1   1   0   0  100.00


Yet to bat:
```

Axar Patel
Harshal Patel
Bhuvneshwar Kumar
Jasprit Bumrah
Yuzvendra Chahal

AUS Bowlig

	Bowling	O	M	R	W	Econ
0	Daniel Sams	3.5	0	33	2	8.61
1	Josh Hazlewood	4.0	0	40	1	10.00
2	Adam Zampa	4.0	0	44	0	11.00
3	Pat Cummins	4.0	0	40	1	10.00
4	Cameron Green	3.0	0	14	0	4.67
5	Glenn Maxwell	1.0	0	11	0	11.00

India Total Fours: 12

India Total Sixes: 11

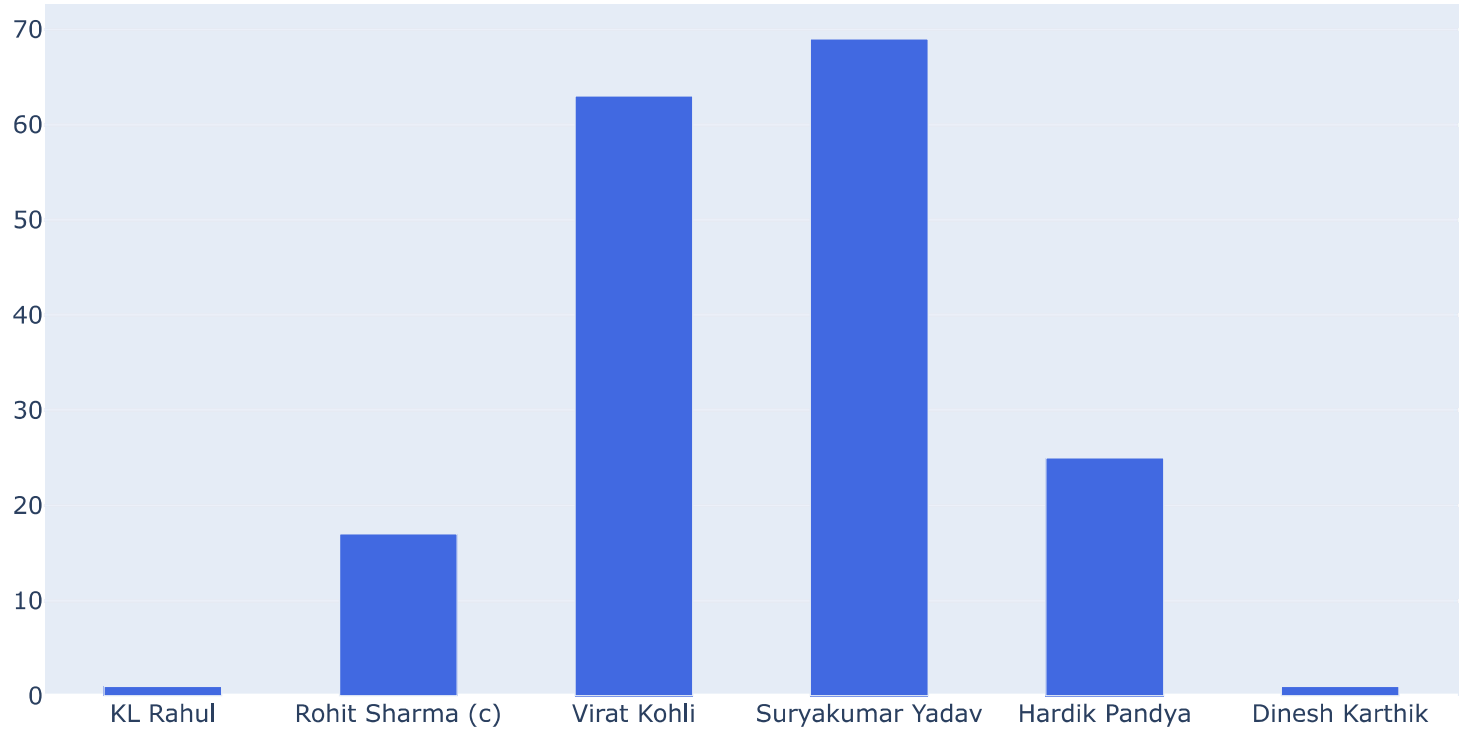
Extras: 11

Total runs: 187

In [33]:

```
labels = ind['Batting']
values = ind['R']
fig = go.Figure()

fig.add_trace(go.Bar(
    x=labels,
    y=values,
    width=[0.5, 0.5, 0.5, 0.5, 0.5,0.5,0.5,0.5], # customize width here
    name='Primary Product',
    marker_color='royalblue'
))


# Here we modify the tickangle of the xaxis, resulting in rotated labels.
fig.update_layout(barmode='group', xaxis_tickangle=0)

fig.update_layout(
    title_font_family="Times New Roman",
    title_font_color="black"
)



fig.update_layout(title_text='Runs Scored by Indian players')

fig.show()
```

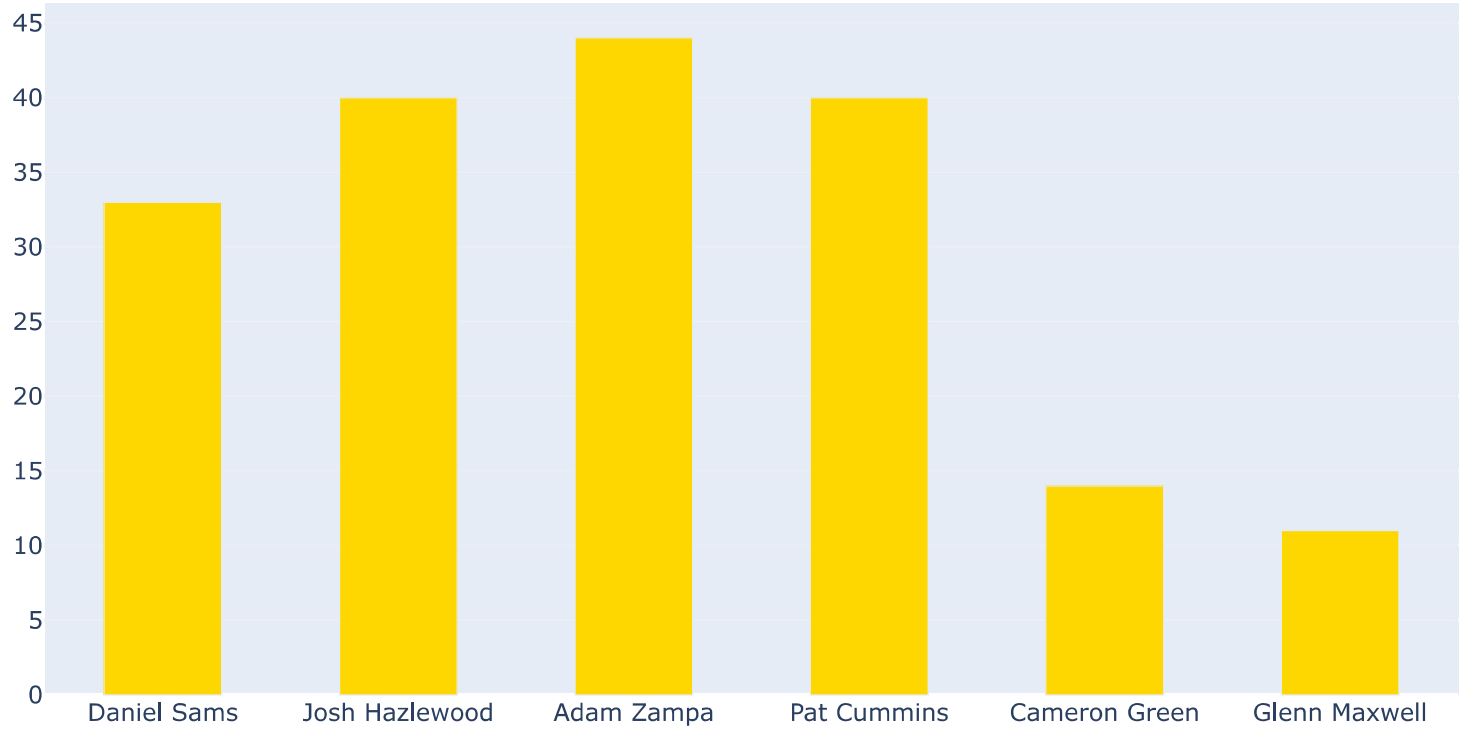
Runs Scored by Indian players



In [34]:

```
import plotly.graph_objects as go

labels = aus_bowl["Bowling"]
values = aus_bowl["R"]
fig = go.Figure()
fig.add_trace(go.Bar(
    x=labels,
    y=values,
    width=[0.5, 0.5, 0.5, 0.5, 0.5,0.5,0.5,0.5], # customize width here
    name='Primary Product',
    marker_color='gold'
))



# Here we modify the tickangle of the xaxis, resulting in rotated labels.
fig.update_layout(barmode='group', xaxis_tickangle=0)

fig.update_layout(
    title_font_family="Times New Roman",
    title_font_color="black"
)

fig.update_layout(title_text='Runs Spend by Australian bowlers')

fig.show()
```

Runs Spend by Australian bowlers



Top 3 scorers of India

In [35]:
```
#nlargest
ind.nlargest(3,'R')
```

	Batting	R	B	4s	6s	S/R
3	Suryakumar Yadav	69	36	5	5	191.67
2	Virat Kohli	63	48	3	4	131.25
4	Hardik Pandya	25	16	2	1	156.25

Top 3 wicket takers of Australia

In [36]:
```
#nlargest
aus_bowl.nlargest(3,'W')
```

	Bowling	O	M	R	W	Econ
0	Daniel Sams	3.5	0	33	2	8.61
1	Josh Hazlewood	4.0	0	40	1	10.00
3	Pat Cummins	4.0	0	40	1	10.00

Match Result

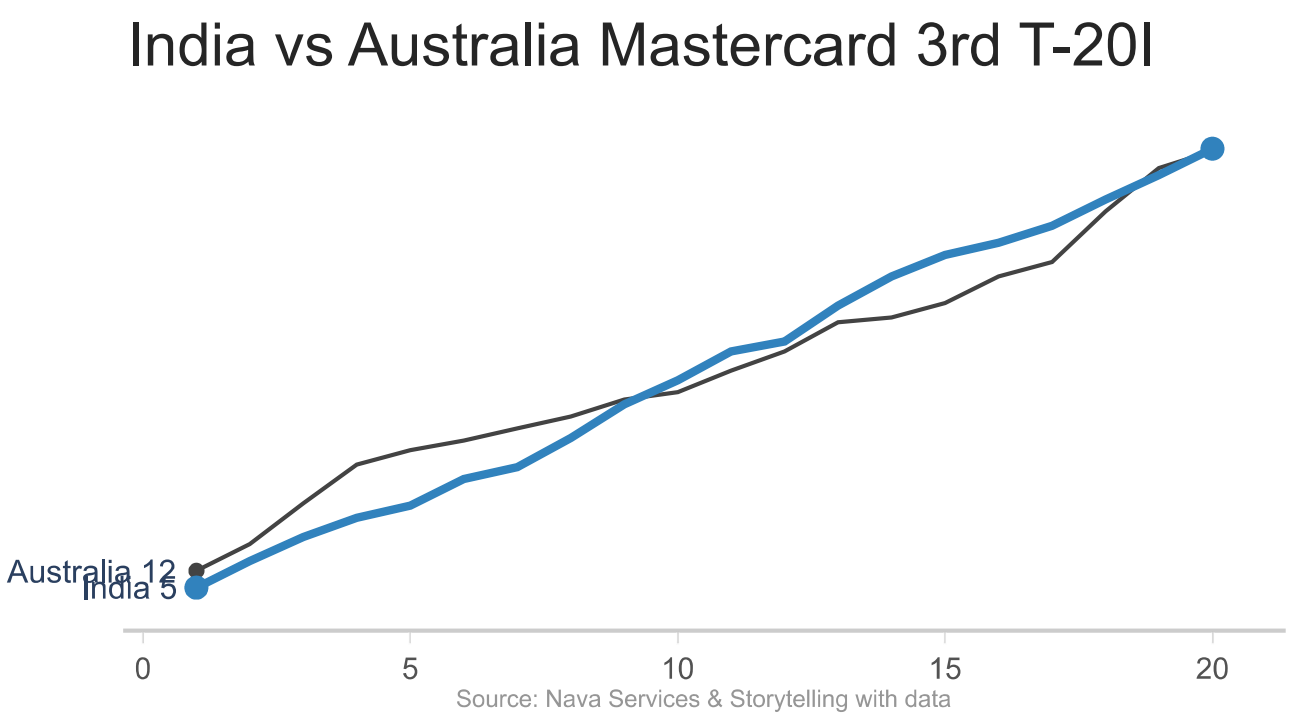
In [37]:

```
import plotly.graph_objects as go
import numpy as np

title = 'India vs Australia'
labels = ['Australia', 'India']
colors = ['rgb(67,67,67)',  'rgb(49,130,189)']
mode_size = [8, 12]
line_size = [2, 4]

x_data = np.vstack((np.arange(1, 21),)*2)

y_data = np.array([
    [12,23,40,56,62,66,71,76,83,86,95,103,115,117,123,134,140,161,179,186],
    [5,16,26,34,39,50,55,67,81,91,103,107,122,134,143,148,155,166,176,187],
])
fig = go.Figure()
for i in range(0, 2, 1):
  fig.add_trace(go.Scatter(x=x_data[i], y=y_data[i], mode='lines',
                           name=labels[i],
                           line=dict(color=colors[i],
                                     width=line_size[i]),
                           connectgaps=True,
    ))
    # endpoints
  fig.add_trace(go.Scatter(
        x=[x_data[i][0], x_data[i][-1]],
        y=[y_data[i][0], y_data[i][-1]],
        mode='markers',
```

```
            marker=dict(color=colors[i], size=mode_size[i])
        ))
    fig.update_layout(
        xaxis=dict(
            showline=True,
            showgrid=False,
            showticklabels=True,
            linecolor='rgb(204, 204, 204)',
            linewidth=2,
            ticks='outside',
            tickfont=dict(
                family='Arial',
                size=15,
                color='rgb(82, 82, 82)',
            ),
        ),
        yaxis=dict(
            showgrid=False,
            zeroline=False,
            showline=False,
            showticklabels=False,
        ),
        autosize=False,
        margin=dict(
            autoexpand=False,
            l=100,
            r=20,
            t=110,
```

```
    ),
    showlegend=False,
    plot_bgcolor='white'
)

annotations = []
# Adding labels
for y_trace, label, color in zip(y_data, labels, colors):
    # labeling the left_side of the plot
    annotations.append(dict(xref='paper', x=0.05, y=y_trace[0],
                                  xanchor='right', yanchor='middle',
                                  text=label + ' {}'.format(y_trace[0]),
                                  font=dict(family='Arial',
                                            size=16),
                                  showarrow=False))

# Title
annotations.append(dict(xref='paper', yref='paper', x=0.0, y=1.05,
                              xanchor='left', yanchor='bottom',
                              text='India vs Australia Mastercard 3rd T-20I',
                              font=dict(family='Arial',
                                        size=30,
                                        color='rgb(37,37,37)'),
                              showarrow=False))
# Source
annotations.append(dict(xref='paper', yref='paper', x=0.5, y=-0.1,
                              xanchor='center', yanchor='top',
                              text='Source: Nava Services & ' +
```

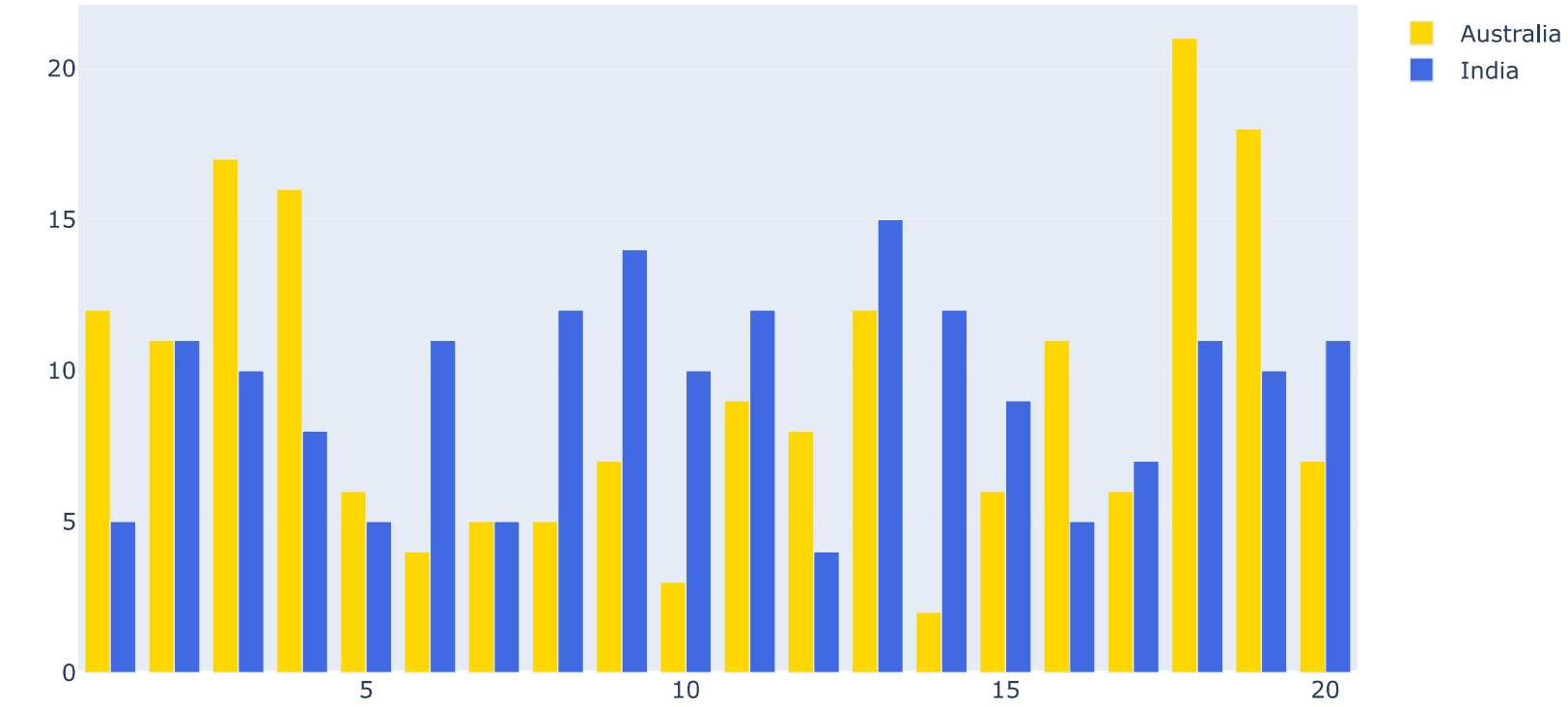
```
                    'Storytelling with data',
                font=dict(family='Arial',
                          size=12,
                          color='rgb(150,150,150)'),
                showarrow=False))

fig.update_layout(annotations=annotations)

fig.show()
```



In [38]:

```
import plotly.graph_objects as go

overs = [1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20]
team_a = [12,11,17,16,6,4,5,5,7,3,9,8,12,2,6,11,6,21,18,7]
team_b = [5,11,10,8,5,11,5,12,14,10,12,4,15,12,9,5,7,11,10,11]
fig = go.Figure()
fig.add_trace(go.Bar(
    x=overs,
    y=team_a,
    name='Australia',
    marker_color='gold'
))

fig.add_trace(go.Bar(
    x=overs,
    y=team_b,
    name='India',
    marker_color='royalblue'
))

# Here we modify the tickangle of the xaxis, resulting in rotated labels.
fig.update_layout(barmode='group', xaxis_tickangle=0)

fig.update_layout(
    title_font_family="Times New Roman",
    title_font_color="black"
)
```

```
fig.update_layout(title_text='India vs Australia Mastercard 3rd T-20I')

fig.show()
```



In [39]:
```
print("India won by 6 wickets (1 balls left")
```

```
India won by 6 wickets (1 balls left
```

In [40]:
```
print("Player of the Match:-\nSuryakumar Yadav (IND)\n69(36)")
```

```
Player of the Match:-
Suryakumar Yadav (IND)
69(36)
```

In [41]:
```
print("Player of the Series:-\nAxar Patel (IND)")
```

```
Player of the Series:-
Axar Patel (IND)
```

In [42]:
```
print("© Copyright\nAll Rights Reserved")
print("Navnath Bhoskar")
print("Pursuing Post Graduate Diploma in Big Data Analytics from C-DAC Mumbai")
print("Centre for Development of Advanced Computing (C-DAC)")
```

```
© Copyright
All Rights Reserved
Navnath Bhoskar
Pursuing Post Graduate Diploma in Big Data Analytics from C-DAC Mumbai
Centre for Development of Advanced Computing (C-DAC)
```

In [ ]: