



**RAMAIAH INSTITUTE OF TECHNOLOGY, BANGALORE – 560054**  
**(Autonomous Institute, Affiliated to VTU)**

**Department of Computer Science & Engineering**

**Internship Report**

**on**

**Python Programming**

**INT411: Intra Institutional Internship**

**STUDENT NAME : PERUGU GUNAVARDHAN REDDY**

**USN : 1MS21CY035**

---

**Ramaiah Institute of Technology**

**(Autonomous Institute, Affiliated to VTU)**

**MSR Nagar, MSRIT Post, Bangalore-560054**

**September – October, 2022**



**RAMAIAH INSTITUTE OF TECHNOLOGY, BANGALORE – 560054**  
**(Autonomous Institute, Affiliated to VTU)**

**Department of Computer Science & Engineering**

**CERTIFICATE**

This is to certify that Mr./Ms. PERUGU GUNAVARDHAN REDDY, a student of Bachelor of Engineering, bearing USN: 1MS21CY035, has successfully completed, 30 Hours: from 29.09.2022 to 15.10.2022 Intra Institutional Internship in Python Programming from the Department of Computer Science & Engineering, M S Ramaiah Institute of Technology, Bangalore.

SL No.	Component	Maximum Marks	Marks Obtained
1	Continuous Evaluation	50	
2	Presentation	20	
3	Report	30	
Total Marks		100	

Signature of the Student with Date

Signature of the Faculty Co-Ordinator

Signature of Head of the Department

## **OVERVIEW OF INTERNSHIP ACTIVITIES**

<b>DATE</b>	<b>DAY</b>	<b>NAME OF THE TOPIC COMPLETED</b>
29.09.2022	Thursday	Python - Basics
30.09.2022	Friday	Control Statements
01.10.2022	Saturday	Data Structures in Python
06.10.2022	Thursday	Functions, Strings
07.10.2022	Friday	Advanced Functions in Python
08.10.2022	Saturday	Exception Handling
10.10.2022	Monday	Numpy Assessment 1
11.10.2022	Tuesday	Pandas
12.10.2022	Wednesday	Objects and Classes
13.10.2022	Thursday	Assessment 2
14.10.2022	Friday	Modules and Packages Project
15.10.2022	Saturday	Project Evaluation

# TABLE OF CONTENTS

Contents	Page No.
1. Overall view of the project in terms of implementation	
2. Code of main Modules	
3. Result Snapshots	
4. Conclusion	

## **Overall view of the project in terms of implementation**

The project aims to provide a comprehensive analysis of a dataset using and graphical representation of data. The dataset used in the project is a record of cricket matches of IPL 2022. It holds information like venue of the matches, scores, teams, matches held on, etc. All the data is recorded for all the 74 matches held.

### **Modules used:**

1. **Pandas:** for data analysis and associated manipulation of tabular data in DataFrames.
2. **Matplotlib:** for creating static, animated, and interactive visualizations in Python.

### **This project covers the following functions:**

1. **The team that won maximum matches.**
2. **The team that won maximum tosses.**
3. **Mean, Median, and Mode of first and second innings scores.**
4. **Man of the match.**
5. **Best bowler.**
6. **Match information on a particular date.**
7. **Team information of that season.**
8. **Data filter of particular team on particular entity.**
9. **Graphical representation of entities.**
10. **Team names and venues of matches.**
11. **Correlation between 2 types of scores**

The program is written in a user friendly manner and hence it uses the user's input to extract and display the required information.

The code of main modules .....

```
# 2022 IPL ANALYSIS.....
import pandas as pd
import matplotlib.pyplot as plt

ipl = pd.read_csv('IPL 2022.csv')

print("<<<=====OVER ALL DESCRIPTION OF THE MATCHES=====>>>\n\n")
display(ipl.describe())
print("\n\n")

print("<<<=====OVER ALL ROWS AND COLOUMNS OF THE DATA=====>>>\n\n")
print(ipl.shape)
print('\n\n')

print("<<<=====OVER ALL INFORMATION OF THE DATA PRESENT=====>>>\n\n")
display(ipl.info())
print('\n\n')

print("<<<=====CHECKING THE NULL CONTENTS OF THE DATA, DATA CLEANING=====>>>\n\n")
display(ipl.isnull())
print('\n\n')

ch='yes'
while ch=='yes':
    print("1. Team Name")
    print("2. Stadium")
    print("3. Team rank according to matches won")
    print("4. Team rank according to tosses")
    print("5. Mean, Median and Mode")
    print("6. Man of the Match")
    print("7. Best Bowler")
    print("8. Top n and Last n entity")
    print("9. Match on a date")
    print("10. Team info")
    print("11. Data filter")
    print("12. Graph")
    print("13. Correlation")
    print("14. Exit")

    ch=int(input("Enter the choice : "))
    if ch==1:
        all_teams = ipl['team1'].tolist() + ipl['team2'].tolist()
        all_teams = list(set(all_teams))
        print('\n',all_teams,'\n\n\n')
    elif ch==2:
        stadiums = ipl['venue'].tolist()
```

```

    stadiums = list(set(stadiums))
    print('\n',stadiums,'\n\n')
elif ch==3:
#won max times team
    winner = ipl['match_winner'].value_counts()
    print('\n\n')
    print("Winner      count\n")
    print(winner)
    print('\n\n')
elif ch==4:
#toss win
    winner_toss = ipl['toss_winner'].value_counts()
    print('\n\n')
    print("Winner      count\n")
    display(winner_toss)
    print('\n\n')
elif ch==5:
#mean median mode
    first_innings = ipl['first_ings_score']
    second_innings = ipl['second_ings_score']
    print("\nMode of two innings.")
    print(first_innings.mode())
    print(second_innings.mode())
    print("\nmean of two innings.")
    print(first_innings.mean())
    print(second_innings.mean())
    print("\nMeadian of two innings.")
    print(first_innings.mode())
    print(second_innings.mode())
    print('\n\n')
elif ch==6:
# mom
    print("\n\nTop 10 man of the matches.")
    temp_data = ipl['player_of_the_match'].value_counts()[0:10]
    print(temp_data)
    #print(list(ipl['player_of_the_match'].value_counts()[0:7].keys()))
elif ch==7:
#best bowler
    print("\n\nTop 10 best bowlers.")
    temp_data = ipl['best_bowling'].value_counts()[0:10]
    print(temp_data)
    #print(list(ipl['best_bowling'].value_counts()[0:7].keys()))
elif ch==8:
    n=int(input("Enter the value of n : "))
    print("Head : ")
    display(ipl.head(n))
    print("Tail : ")
    display(ipl.tail(n))
elif ch==9:
    inp=input("Enter a date in the format of {month<space>date,year} : ")
    display(ipl.loc[ipl["date"]==inp])

```

```

elif ch==10:
    inp=input("Enter a team : ")
    display(ipl.loc[ipl["team1"]==inp])
    display(ipl.loc[ipl["team2"]==inp])
elif ch==11:
    en=input("Enter the data entity : ")
    n=int(input("Enter the limit : "))
    display(ipl[['team1','team2',en]][ipl[en]>n])
elif ch==12:
    str=input("Enter the entity for which graph need to be drawn which is of numeric
type : ")
    n=int(input("Enter total number of matches whose graph is to be drawn : "))
    print("1. Histogram")
    print("2. Line")
    print("3. Scatter")
    print("4. OverAnalysis")
    ch=int(input("Enter which way of graphical representation you want: "))
    if ch==1:
        st='hist'
    elif ch==2:
        st='line'
    elif ch==3:
        st='scatter'
    elif ch==4:
        ipl.plot()
        plt.show()
    else:
        print("Incorrect choice.Try again.")
    if ch<4 and ch>0:
        ipl.iloc[1:n].plot(kind=st,x='date',y=str)
        plt.show()

elif (ch==13):
    def func2():
        while True:
            print()
            print("Enter two entities to find the correlation between : ")
            entity1=input("Enter entity 1 : ")
            entity2=input("Enter entity 2 : ")

            if (entity1 not in
['venue','date','team1','team2','stage','toss_winner','toss_decision','match_winner',
'won_by','player_of_the_match','top-scorer','best_bowling'] and entity2 not in
['venue','date','team1','team2','stage','toss_winner','toss_decision','match_winner',
'won_by','player_of_the_match','top-scorer','best_bowling']):
                print(ipl[(entity1)].astype(float).corr(ipl[(entity2)].astype(float)))
                break
            else:
                print("Enter only number based entities.")
        func2()

```



```
elif ch == 14:
    break
ch=input("Enter 'yes' to continue and 'no' to exit.").lower()
```

Result Snapshots (Output):

```
<<<=====OVER ALL DESCRIPTION OF THE MATCHES=====>>>
```

	match_id	first_ings_score	first_ings_wkts	second_ings_score	second_ings_wkts	margin	highscore
count	74.000000	74.000000	74.000000	74.000000	74.000000	74.000000	74.000000
mean	37.500000	171.121622	6.135135	158.540541	6.175676	16.972973	71.716216
std	21.505813	29.048355	2.222699	29.299207	2.639832	19.651047	20.705052
min	1.000000	68.000000	0.000000	72.000000	1.000000	2.000000	28.000000
25%	19.250000	154.250000	5.000000	142.750000	4.000000	5.250000	57.000000
50%	37.500000	169.500000	6.000000	160.000000	6.000000	8.000000	68.000000
75%	55.750000	192.750000	8.000000	176.000000	8.000000	18.000000	87.750000
max	74.000000	222.000000	10.000000	211.000000	10.000000	91.000000	140.000000

```
<<<=====OVER ALL ROWS AND COLOUMNS OF THE DATA=====>>>
```

```
(74, 20)
```

```
<<<=====OVER ALL INFORMATION OF THE DATA PRESENT=====>>>
```

```
<class 'pandas.core.frame.DataFrame'>
```

```
RangeIndex: 74 entries, 0 to 73
```

```
Data columns (total 20 columns):
```

#	Column	Non-Null Count	Dtype
---	-----	-----	-----
0	match_id	74 non-null	int64
1	date	74 non-null	object
2	venue	74 non-null	object
3	team1	74 non-null	object

```

4   team2                74 non-null    object
5   stage                74 non-null    object
6   toss_winner          74 non-null    object
7   toss_decision        74 non-null    object
8   first_ings_score     74 non-null    int64
9   first_ings_wkts      74 non-null    int64
10  second_ings_score    74 non-null    int64
11  second_ings_wkts     74 non-null    int64
12  match_winner         74 non-null    object
13  won_by               74 non-null    object
14  margin               74 non-null    int64
15  player_of_the_match  74 non-null    object
16  top_scorer           74 non-null    object
17  highscore            74 non-null    int64
18  best_bowling         74 non-null    object
19  best_bowling_figure  74 non-null    object

```

```
dtypes: int64(7), object(13)
```

```
memory usage: 11.7+ KB
```

```
None
```

```
<<<=====CHECKING THE NULL CONTENTS OF THE DATA,DATA CLEANING=====>>>
```

	match_id	date	venue	team1	team2	stage	toss_winner	toss_decision	first_ings_score	first_ings_wkts	second_ings_score	second_ings_wkts
0	False	False	False	False	False	False	False	False	False	False	False	False
1	False	False	False	False	False	False	False	False	False	False	False	False
2	False	False	False	False	False	False	False	False	False	False	False	False
3	False	False	False	False	False	False	False	False	False	False	False	False
4	False	False	False	False	False	False	False	False	False	False	False	False
...	...	...	...	...	...	...	...	...	...	...	...	...
69	False	False	False	False	False	False	False	False	False	False	False	False
70	False	False	False	False	False	False	False	False	False	False	False	False
71	False	False	False	False	False	False	False	False	False	False	False	False
72	False	False	False	False	False	False	False	False	False	False	False	False
73	False	False	False	False	False	False	False	False	False	False	False	False

74 rows x 20 columns

	match_winner	won_by	margin	player_of_the_match	top_scorer	highscore	best_bowling	best_bowling_figure
	False	False	False	False	False	False	False	False
	False	False	False	False	False	False	False	False
	False	False	False	False	False	False	False	False
	False	False	False	False	False	False	False	False
	False	False	False	False	False	False	False	False
...	...	...	...	...	...	...	...	...
	False	False	False	False	False	False	False	False
	False	False	False	False	False	False	False	False
	False	False	False	False	False	False	False	False
	False	False	False	False	False	False	False	False
	False	False	False	False	False	False	False	False

74 rows x 20 columns

1. Team Name
2. Stadium

3. Team rank according to matches won
4. Team rank according to tosses
5. Mean, Median and Mode
6. Man of the Match
7. Best Bowler
8. Top n and Last n entity
9. Match on a date
10. Team info
11. Data filter
12. Graph
13. Correlation
14. Exit

Enter the choice : 1

['Punjab', 'Delhi', 'Kolkata', 'Banglore', 'Hyderabad', 'Mumbai', 'Lucknow', 'Chennai', 'Rajasthan', 'Gujarat']

Enter 'yes' to continue and 'no' to exit.yes

1. Team Name
2. Stadium
3. Team rank according to matches won
4. Team rank according to tosses
5. Mean, Median and Mode
6. Man of the Match
7. Best Bowler
8. Top n and Last n entity
9. Match on a date
10. Team info
11. Data filter
12. Graph
13. Correlation
14. Exit

Enter the choice : 2

['Dr DY Patil Sports Academy, Mumbai', 'Brabourne Stadium, Mumbai', 'Narendra Modi Stadium, Ahmedabad', 'Maharashtra Cricket Association Stadium,Pune', 'Eden Gardens, Kolkata', 'Wankhede Stadium, Mumbai']

Enter 'yes' to continue and 'no' to exit.yes

1. Team Name
2. Stadium
3. Team rank according to matches won
4. Team rank according to tosses
5. Mean, Median and Mode
6. Man of the Match
7. Best Bowler
8. Top n and Last n entity
9. Match on a date
10. Team info
11. Data filter
12. Graph
13. Correlation
14. Exit

Enter the choice : 3

Winner	count
--------	-------

Gujarat	12
---------	----

Rajasthan	10
-----------	----

```
Banglore      9
Lucknow       9
Delhi         7
Punjab        7
Kolkata       6
Hyderabad     6
Chennai       4
Mumbai        4
Name: match_winner, dtype: int64
```

Enter 'yes' to continue and 'no' to exit.yes

1. Team Name
2. Stadium
3. Team rank according to matches won
4. Team rank according to tosses
5. Mean, Median and Mode
6. Man of the Match
7. Best Bowler
8. Top n and Last n entity
9. Match on a date
10. Team info
11. Data filter
12. Graph
13. Correlation
14. Exit

Enter the choice : 4

Winner	count
--------	-------

Gujarat	10
Hyderabad	10
Mumbai	9
Kolkata	8
Delhi	8
Banglore	8
Lucknow	7
Chennai	6
Punjab	4
Rajasthan	4

Name: toss\_winner, dtype: int64

Enter 'yes' to continue and 'no' to exit.yes

1. Team Name
2. Stadium
3. Team rank according to matches won
4. Team rank according to tosses
5. Mean, Median and Mode
6. Man of the Match
7. Best Bowler
8. Top n and Last n entity
9. Match on a date
10. Team info
11. Data filter
12. Graph
13. Correlation
14. Exit

Enter the choice : 5

Mode of two innings.

```
0    169
1    177
2    189
3    210
```

dtype: int64

```
0    155
```

```
1    161
```

dtype: int64

mean of two innings.

```
171.1216216216216
```

```
158.54054054054055
```

Meadian of two innings.

```
0    169
```

```
1    177
```

```
2    189
```

```
3    210
```

dtype: int64

```
0    155
```

```
1    161
```

dtype: int64

Enter 'yes' to continue and 'no' to exit.yes

1. Team Name

2. Stadium

3. Team rank according to matches won

4. Team rank according to tosses

5. Mean, Median and Mode

6. Man of the Match

7. Best Bowler

8. Top n and Last n entity

9. Match on a date

10. Team info

11. Data filter

12. Graph

13. Correlation

14. Exit

Enter the choice : 6

Top 10 man of the matches.

```
Kuldeep Yadav      4
```

```
Jos Buttler        3
```

```
Umesh Yadav         2
```

```
Quinton de Kock    2
```

```
David Miller        2
```

```
Umaran Malik        2
```

```
K L Rahul           2
```

```
Rahul Tripathi      2
```

```
Hardik Pandya       2
```

```
Jasprit Bumrah      2
```

Name: player\_of\_the\_match, dtype: int64

Enter 'yes' to continue and 'no' to exit.yes

1. Team Name

2. Stadium

3. Team rank according to matches won

4. Team rank according to tosses

5. Mean, Median and Mode

6. Man of the Match

7. Best Bowler

8. Top n and Last n entity
9. Match on a date
10. Team info
11. Data filter
12. Graph
13. Correlation
14. Exit

Enter the choice : 7

Top 10 best bowlers.

```
Yuzvendra Chahal      5
Rashid Khan           4
T Natarajan           3
Kagiso Rabada         3
Jasprit Bumrah        3
Kuldeep Yadav         3
Avesh Khan            3
Josh Hazlewood        3
Dwayne Bravo         2
Mohsin Khan           2
```

Name: best\_bowling, dtype: int64

Enter 'yes' to continue and 'no' to exit.yes

1. Team Name
2. Stadium
3. Team rank according to matches won
4. Team rank according to tosses
5. Mean, Median and Mode
6. Man of the Match
7. Best Bowler
8. Top n and Last n entity
9. Match on a date
10. Team info
11. Data filter
12. Graph
13. Correlation
14. Exit

Enter the choice : 8

Enter the value of n : 2

Head :

	match_id	date	venue	team1	team2	stage	toss_winner	toss_decision	first_ings_score	first_ings_wkts	second_ings_score	second_ings_wkts
0	1	March 26,2022	Wankhede Stadium, Mumbai	Chennai	Kolkata	Group	Kolkata	Field	131	5	133	4
1	2	March 27,2022	Brabourne Stadium, Mumbai	Delhi	Mumbai	Group	Delhi	Field	177	5	179	6

Tail :

	match_id	date	venue	team1	team2	stage	toss_winner	toss_decision	first_ings_score	first_ings_wkts	second_ings_score	second_ings_wkts
72	73	May 27,2022	Narendra Modi Stadium, Ahmedabad	Banglore	Rajasthan	Playoff	Rajasthan	Field	157	8	161	
73	74	May 29,2022	Narendra Modi Stadium, Ahmedabad	Gujarat	Rajasthan	Final	Rajasthan	Bat	130	9	133	

	match_winner	won_by	margin	player_of_the_match	top_scorer	highscore	best_bowling	best_bowling_figure
	Kolkata	Wickets	6	Umesh Yadav	MS Dhoni	50	Dwayne Bravo	3--20
	Delhi	Wickets	4	Kuldeep Yadav	Ishan Kishan	81	Kuldeep Yadav	3--18
wkts	match_winner	won_by	margin	player_of_the_match	top_scorer	highscore	best_bowling	best_bowling_figure
3	Rajasthan	Wickets	7	Jos Buttler	Jos Buttler	106	Prasidh Krishna	3--22
3	Gujarat	Wickets	7	Hardik Pandya	Shubman Gill	45	Hardik Pandya	3--17

Enter 'yes' to continue and 'no' to exit.yes

1. Team Name
2. Stadium
3. Team rank according to matches won
4. Team rank according to tosses
5. Mean, Median and Mode
6. Man of the Match
7. Best Bowler
8. Top n and Last n entity
9. Match on a date
10. Team info
11. Data filter
12. Graph
13. Correlation
14. Exit

Enter the choice : 9

Enter a date in the format of {month<space>date,year} : April 2,2022

match_id	date	venue	team1	team2	stage	toss_winner	toss_decision	first_ings_score	first_ings_wkts	second_ings_score	second_ings_wkts
8	9 April 2,2022	Dr DY Patil Sports Academy, Mumbai	Mumbai	Rajasthan	Group	Mumbai	Field	193	8	170	8
9	10 April 2,2022	Maharashtra Cricket Association Stadium,Pune	Delhi	Gujarat	Group	Delhi	Field	171	6	157	9
second_ings_score	second_ings_wkts	match_winner	won_by	margin	player_of_the_match	top_scorer	highscore	best_bowling	best_bowling_figure		
170	8	Rajasthan	Runs	23	Jos Buttler	Jos Buttler	100	Jasprit Bumrah	3--17		
157	9	Gujarat	Runs	14	Lockie Ferguson	Shubman Gill	84	Lockie Ferguson	4--28		

Enter 'yes' to continue and 'no' to exit.yes

1. Team Name
2. Stadium
3. Team rank according to matches won
4. Team rank according to tosses
5. Mean, Median and Mode
6. Man of the Match
7. Best Bowler
8. Top n and Last n entity
9. Match on a date
10. Team info
11. Data filter
12. Graph
13. Correlation

14. Exit

Enter the choice : 10

Enter a team : Mumbai

match_id	date	venue	team1	team2	stage	toss_winner	toss_decision	first_ings_score	first_ings_wkts	second_ings_score	second_ings_wkts
8	9 April 2,2022	Dr DY Patil Sports Academy, Mumbai	Mumbai	Rajasthan	Group	Mumbai	Field	193	8	170	8
22	23 April 13,2022	Maharashtra Cricket Association Stadium,Pune	Mumbai	Punjab	Group	Mumbai	Field	198	5	186	9
43	44 April 30,2022	Dr DY Patil Sports Academy, Mumbai	Mumbai	Rajasthan	Group	Mumbai	Field	158	6	161	5

match_winner	won_by	margin	player_of_the_match	top_scorer	highscore	best_bowling	best_bowling_figure
Rajasthan	Runs	23	Jos Buttler	Jos Buttler	100	Jasprit Bumrah	3--17
Punjab	Runs	12	Mayank Agarwal	Shikhar Dhawan	70	Odean Smith	4--30
Mumbai	Wickets	5	Suruakumar Yadav	Jos Buttler	67	Rilley Meredith	2--24

match_id	date	venue	team1	team2	stage	toss_winner	toss_decision	first_ings_score	first_ings_wkts	second_ings_score	second_ings_wkts
1	2 March 27,2022	Brabourne Stadium, Mumbai	Delhi	Mumbai	Group	Delhi	Field	177	5	179	6
13	14 April 6,2022	Maharashtra Cricket Association Stadium,Pune	Kolkata	Mumbai	Group	Kolkata	Field	161	4	162	5
17	18 April 9,2022	Maharashtra Cricket Association Stadium,Pune	Banglore	Mumbai	Group	Banglore	Field	151	6	152	3
25	26 April 16,2022	Brabourne Stadium, Mumbai	Lucknow	Mumbai	Group	Mumbai	Field	199	4	181	9
32	33 April 21,2022	Dr DY Patil Sports Academy, Mumbai	Chennai	Mumbai	Group	Chennai	Field	155	7	156	7
36	37 April 24,2022	Wankhede Stadium, Mumbai	Lucknow	Mumbai	Group	Mumbai	Field	168	6	132	8
50	51 May 6,2022	Brabourne Stadium, Mumbai	Gujarat	Mumbai	Group	Gujarat	Field	177	6	172	5
55	56 May 9,2022	Dr DY Patil Sports Academy, Mumbai	Kolkata	Mumbai	Group	Mumbai	Field	165	9	113	10
58	59 May 12,2022	Wankhede Stadium, Mumbai	Chennai	Mumbai	Group	Mumbai	Field	97	10	103	5
64	65 May 17,2022	Wankhede Stadium, Mumbai	Hyderabad	Mumbai	Group	Mumbai	Field	193	6	190	7
68	69 May 21,2022	Wankhede Stadium, Mumbai	Delhi	Mumbai	Group	Mumbai	Field	159	7	160	5

Screenshot



match_winner	won_by	margin	player_of_the_match	top_scorer	highscore	best_bowling	best_bowling_figure
Delhi	Wickets	4	Kuldeep Yadav	Ishan Kishan	81	Kuldeep Yadav	3--18
Kolkata	Wickets	5	Pat Cummins	Pat Cummins	56	Murugan Ashwin	2--25
Banglore	Wickets	7	Anuj Rawat	Suryakumar Yadav	68	Harshal Patel	2--23
Lucknow	Runs	18	K L Rahul	KL Rahul	103	Avesh Khan	3--30
Chennai	Wickets	3	Mukesh Choudhary	Tilak Varma	51	Daniel Sams	4--30
Lucknow	Runs	36	K L Rahul	KL Rahul	103	Krunal Pandya	3--19
Mumbai	Runs	5	Tim David	W. Saha	55	Rashid Khan	2--24
Kolkata	Runs	52	Jasprit Bumrah	Ishan Kishan	51	Jasprit Bumrah	5--10
Mumbai	Wickets	5	Daniel Sams	MS Dhoni	36	Daniel Sams	3--16
Hyderabad	Runs	3	Rahul Tripathi	Rahul Tripathi	76	Ramandeep Singh	3--20
Mumbai	Wickets	5	Jasprit Bumrah	Ishan Kishan	48	Jasprit Bumrah	3--25

Screenshot

Enter 'yes' to continue and 'no' to exit.yes

1. Team Name
2. Stadium
3. Team rank according to matches won
4. Team rank according to tosses
5. Mean, Median and Mode
6. Man of the Match
7. Best Bowler
8. Top n and Last n entity
9. Match on a date
10. Team info
11. Data filter
12. Graph
13. Correlation
14. Exit

```
Enter the choice : 11
Enter the data entity : first_ings_score
Enter the limit : 215
```

	team1	team2	first_ings_score
21	Banglore	Chennai	216
29	Kolkata	Rajasthan	217
33	Delhi	Rajasthan	222

```
Enter 'yes' to continue and 'no' to exit.yes
```

1. Team Name
2. Stadium
3. Team rank according to matches won
4. Team rank according to tosses
5. Mean, Median and Mode
6. Man of the Match
7. Best Bowler
8. Top n and Last n entity
9. Match on a date
10. Team info
11. Data filter
12. Graph
13. Correlation
14. Exit

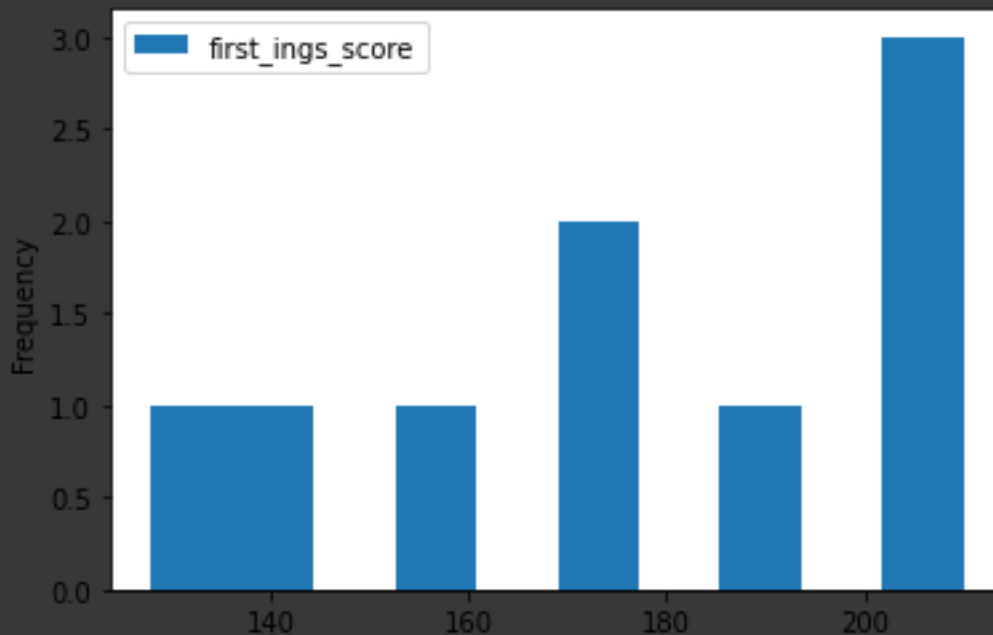
```
Enter the choice : 12
```

```
Enter the entity for which graph need to be drawn which is of numeric type :
first_ings_score
```

```
Enter total number of matches whose graph is to be drawn : 10
```

1. Histogram
2. Line
3. Scatter
4. OverAnalysis

```
Enter which way of graphical representation you want: 1
```



```
Inference:
```

```
This is histogram showing number of matches versus entity chosen that is first innings score here. You can observe that most teams secured more than 200 runs.
```

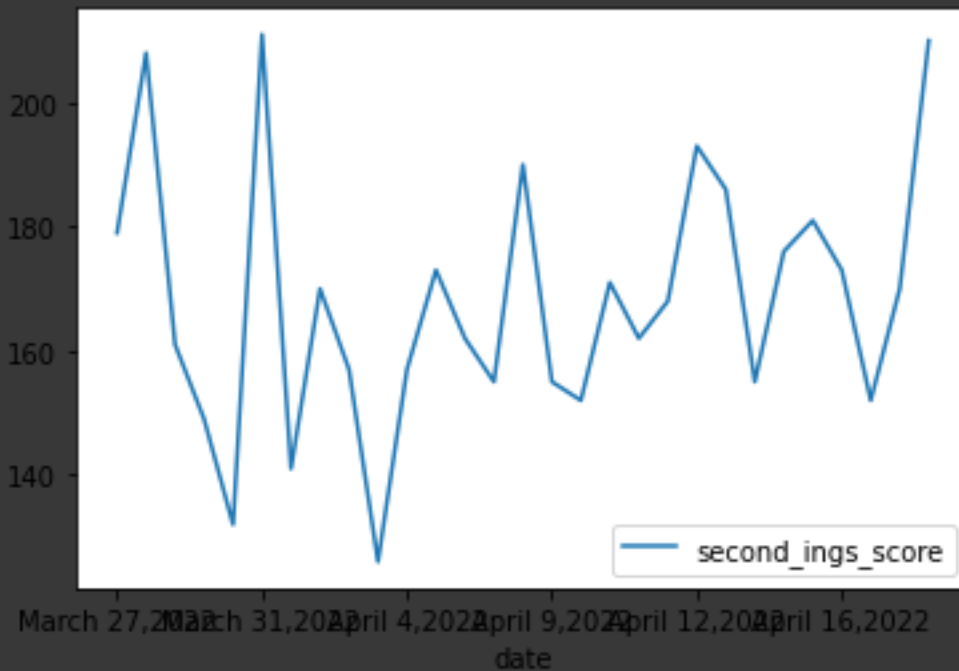
```
Enter 'yes' to continue and 'no' to exit.yes
```

1. Team Name

```

2. Stadium
3. Team rank according to matches won
4. Team rank according to tosses
5. Mean, Median and Mode
6. Man of the Match
7. Best Bowler
8. Top n and Last n entity
9. Match on a date
10. Team info
11. Data filter
12. Graph
13. Correlation
14. Exit
Enter the choice : 12
Enter the entity for which graph need to be drawn which is of numeric type :
second_ings_score
Enter total number of matches whose graph is to be drawn : 30
1. Histogram
2. Line
3. Scatter
4. OverAnalysis
Enter which way of graphical representation you want: 2

```



Inference:

This is line graph and graph is between second innings score and dates on which matches held. We can notice that matches played in march month are well played than April month.

Enter 'yes' to continue and 'no' to exit.yes

```

1. Team Name
2. Stadium
3. Team rank according to matches won
4. Team rank according to tosses
5. Mean, Median and Mode
6. Man of the Match
7. Best Bowler
8. Top n and Last n entity
9. Match on a date
10. Team info
11. Data filter
12. Graph
13. Correlation

```

14. Exit

Enter the choice : 12

Enter the entity for which graph need to be drawn which is of numeric type : margin

Enter total number of matches whose graph is to be drawn : 60

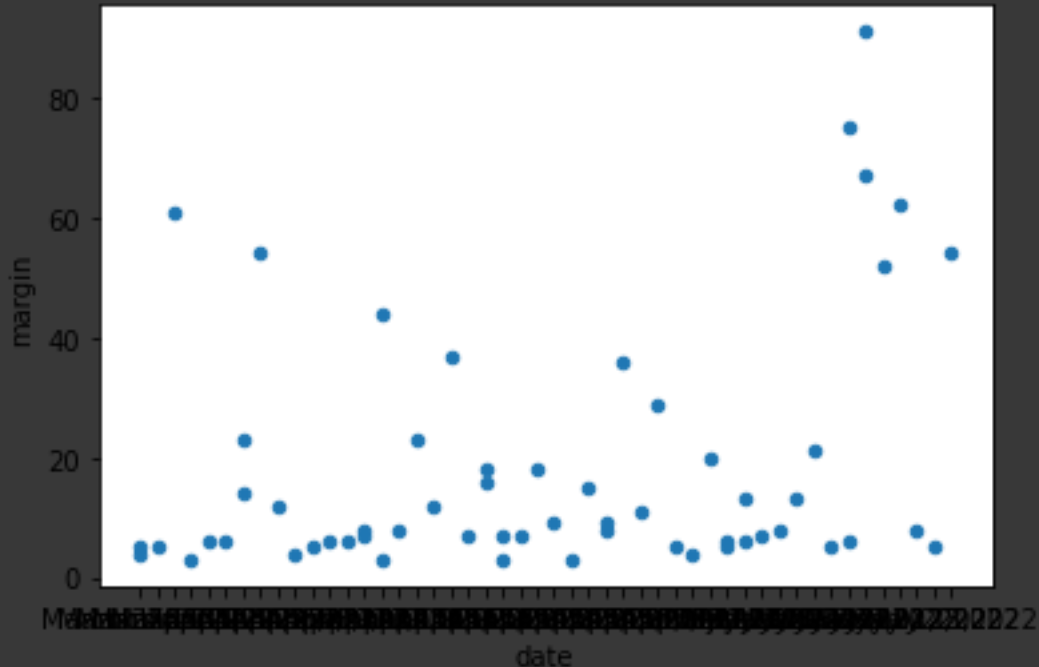
1. Histogram

2. Line

3. Scatter

4. OverAnalysis

Enter which way of graphical representation you want: 3



Inference :

The graph above is a scatter graph, between margin and date on which they played. We can notice that only four matches which lose by more than 60 runs.

Enter 'yes' to continue and 'no' to exit.yes

1. Team Name

2. Stadium

3. Team rank according to matches won

4. Team rank according to tosses

5. Mean, Median and Mode

6. Man of the Match

7. Best Bowler

8. Top n and Last n entity

9. Match on a date

10. Team info

11. Data filter

12. Graph

13. Correlation

14. Exit

Enter the choice : 12

Enter the entity for which graph need to be drawn which is of numeric type : margin

Enter total number of matches whose graph is to be drawn : 74

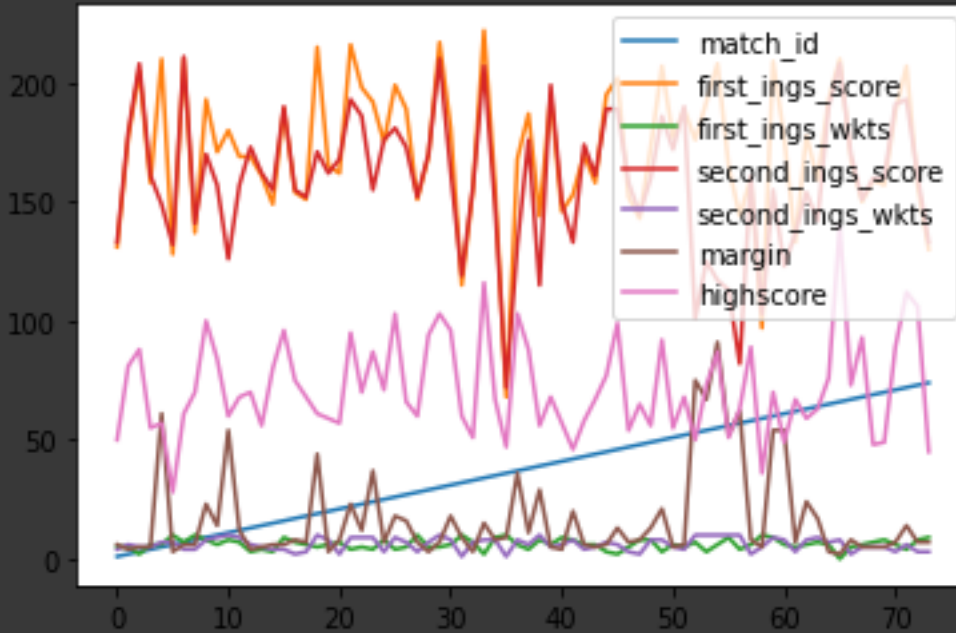
1. Histogram

2. Line

3. Scatter

4. OverAnalysis

Enter which way of graphical representation you want: 4



Inference:

The above graph is of line kind and gives the overall analysis of the all matches.

Enter 'yes' to continue and 'no' to exit.yes

1. Team Name
2. Stadium
3. Team rank according to matches won
4. Team rank according to tosses
5. Mean, Median and Mode
6. Man of the Match
7. Best Bowler
8. Top n and Last n entity
9. Match on a date
10. Team info
11. Data filter
12. Graph
13. Correlation
14. Exit

Enter the choice : 13

Enter two entities to find the correlation between :

Enter entity 1 : margin

Enter entity 2 : first\_ings\_score

0.28404280175959745

Enter 'yes' to continue and 'no' to exit.yes

1. Team Name
2. Stadium
3. Team rank according to matches won
4. Team rank according to tosses
5. Mean, Median and Mode
6. Man of the Match
7. Best Bowler
8. Top n and Last n entity
9. Match on a date
10. Team info
11. Data filter
12. Graph
13. Correlation
14. Exit

Enter the choice : 14

## Conclusion:

So this is how we can perform the task of IPL 2022 analysis using Python, Pandas, and Matplotlib. This time the IPL 2022 was conducted among only 10 teams. All the matches were taken place in only six different pitches this time. I have noticed that the IPL 2022 is very special as all the teams are newly formed. IPL 2022 is going great for Gujarat as a new team this year. We should congratulate Gujarat team since it has been the team which secured first place both in playing more number of matches and for winning more number of tosses. The runner up team this time is Rajasthan Royals. Jos Buttler and KL Rahul have been great with the bat, and Yuzvendra Chahal and Kuldeep Yadav have been great with the bowl. In whole the season Kuldeep Yadav have been the person who won most man of the matches title. Finally every team has given their better and according to me every match is very interesting.

## Bibliography:

Dataset Source: <https://www.kaggle.com/datasets/aravindas01/ipl-2022dataset>

Other References:

- 1.Kaggle
2. W3schools for concept reference
3. Pandas and Matplotlib documentation
4. Stack Overflow