

Capstone Project

IPL T20 Cricket Analysis

Team Members:-

1) Umang Wasekar 2) Ashutosh Kumar



Presented by :-
Umang Washekar
Ashutosh Kumar

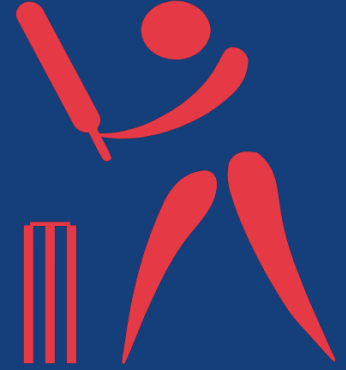
CONTENTS

- ❖ INTRODUCTION
- ❖ PROBLEM STATEMENT
- ❖ HOME & AWAY PERFORMANCES
- ❖ PLAYERWISE ANALYSIS
- ❖ PLAYER ATTRIBUTES AND BELONGING NATIONS
- ❖ DELIVERY WISE ANALYSIS
- ❖ BOWLING FIGURES

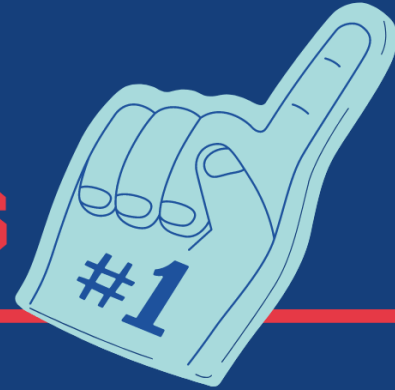
INTRODUCTION

SUMMARY

- **IPL is a professional T20 league for T20 championship in India. It is supervised by BCCI whose headquarter is in Mumbai. Bollywood has also made its presence felt with two of its leading stars bagging the ownership of their respective teams. It has given a platform to Indian youngster to show their talent. Lot of players playing in IPL had played for India after performing in IPL. In IPL 8 teams play with each other to win the IPL trophy. So we are going to analyse the data of IPL to have an understanding that which teams and which players are performing well as well as how the how many Indian and foreign players have been debuted in IPL. We will also have a look on how the toss affects the result of match.**



INTERESTING IPL FACTS



IPL FACTS

- **IPL is a professional T20 cricket league in India contested during April and May.**
- **Team Names are Based on Indian cities.**
- **It was founded by BCCI in 2008 and is now most attended cricket league in the world and ranks sixth among all sports league in India.**
- **In 2010 the IPL became the first sporting league in world to be broadcasted live on YouTube.**

PROBLEM STATEMENT

Problem Statement

IPL is a popular League in India. It is organised in year in month of April to May. And, we have different dataset of IPL on which we have to our analysis to find out the different outcomes of data in batting/ bowling performances of Individuals as well as of teams. We also have to analyse the teams performance at home venues as well as their performances on away from home venues.

HOME AND AWAY PERFORMANCES

HOME AND AWAY PERFORMANCES

- We have been provided with the performance data of 13 teams that have participated right from season one to season ten.
- Firstly, by using `head()` function on `home_away_df` we got all the data in readable format and there we analyzed the data carefully.
- Then, by using `unique()` method on `home_away_df` we separated all the teams.
- Visualizing the data helps in analyzing the data more clearly and it is way more easier to understand it by seeing data rather than just reading it.
- Below is the data snapshots that we worked on and analyzed all the data and plotted the graphs with the help of it.

DATA SNAPSHOT

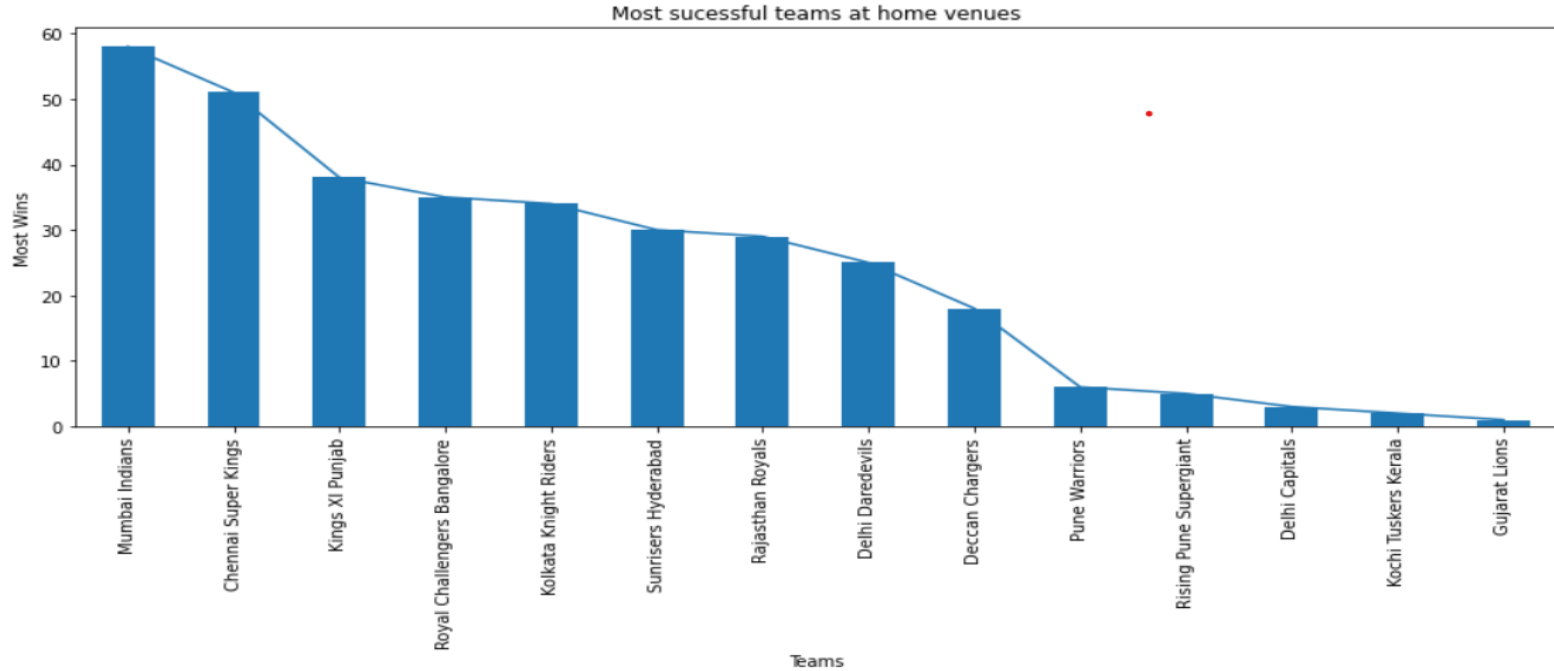


```
home_away_df.head(15)
```

	team	home_wins	away_wins	home_matches	away_matches	home_win_percentage	away_win_percentage
0	Rising Pune Supergiant	5	5	8	8	62.500000	62.500000
1	Mumbai Indians	58	51	101	86	57.425743	59.302326
2	Chennai Super Kings	51	49	89	75	57.303371	65.333333
3	Delhi Capitals	3	7	6	10	50.000000	70.000000
4	Sunrisers Hyderabad	30	28	63	45	47.619048	62.222222
5	Rajasthan Royals	29	46	67	80	43.283582	57.500000
6	Deccan Chargers	18	11	43	32	41.860465	34.375000
7	Kings XI Punjab	38	44	91	85	41.758242	51.764706
8	Royal Challengers Bangalore	35	49	85	95	41.176471	51.578947
9	Kolkata Knight Riders	34	58	83	95	40.963855	61.052632
10	Delhi Daredevils	25	42	72	89	34.722222	47.191011
11	Pune Warriors	6	6	20	26	30.000000	23.076923
12	Kochi Tuskers Kerala	2	4	7	7	28.571429	57.142857
13	Gujarat Lions	1	12	14	16	7.142857	75.000000

PERFORMANCES OF ALL THE TEAMS AT HOME VENUES

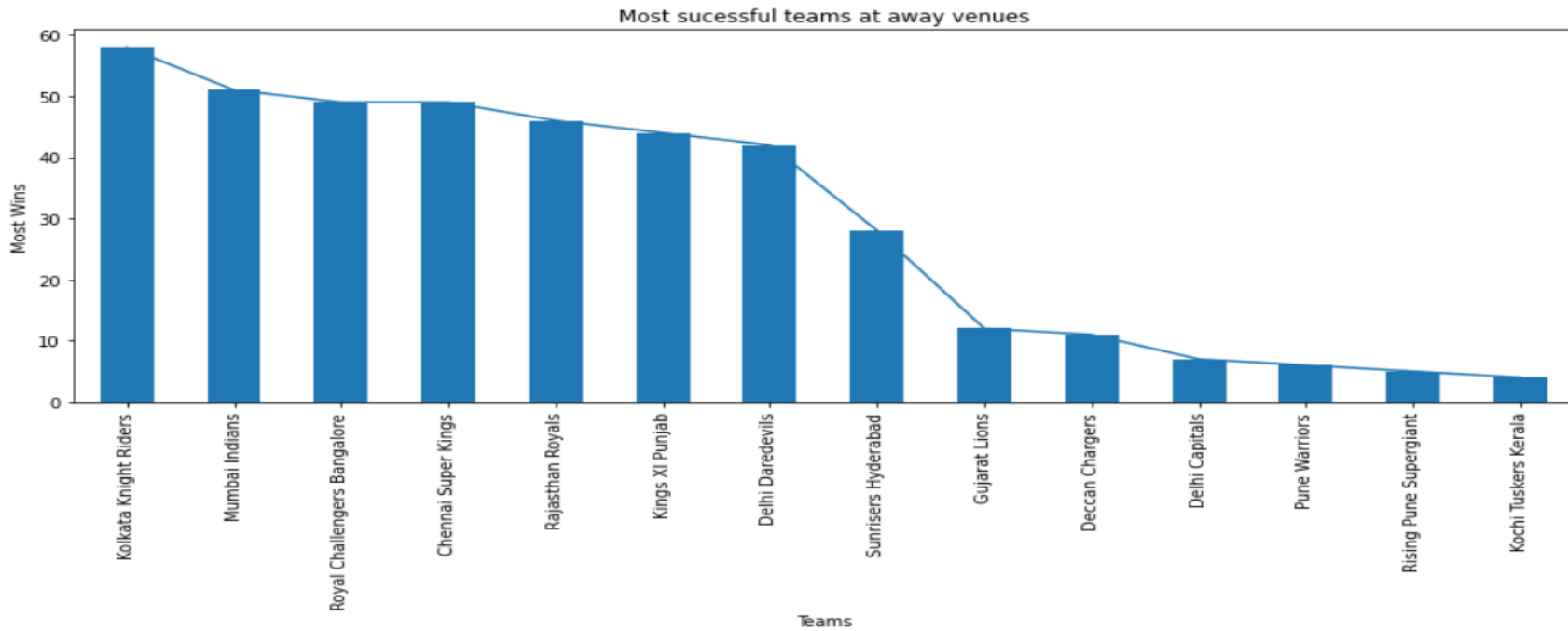
Text(0, 0.5, 'Most Wins')





PERFORMANCES OF ALL THE TEAMS AT AWAY VENUES

Text(0, 0.5, 'Most Wins')





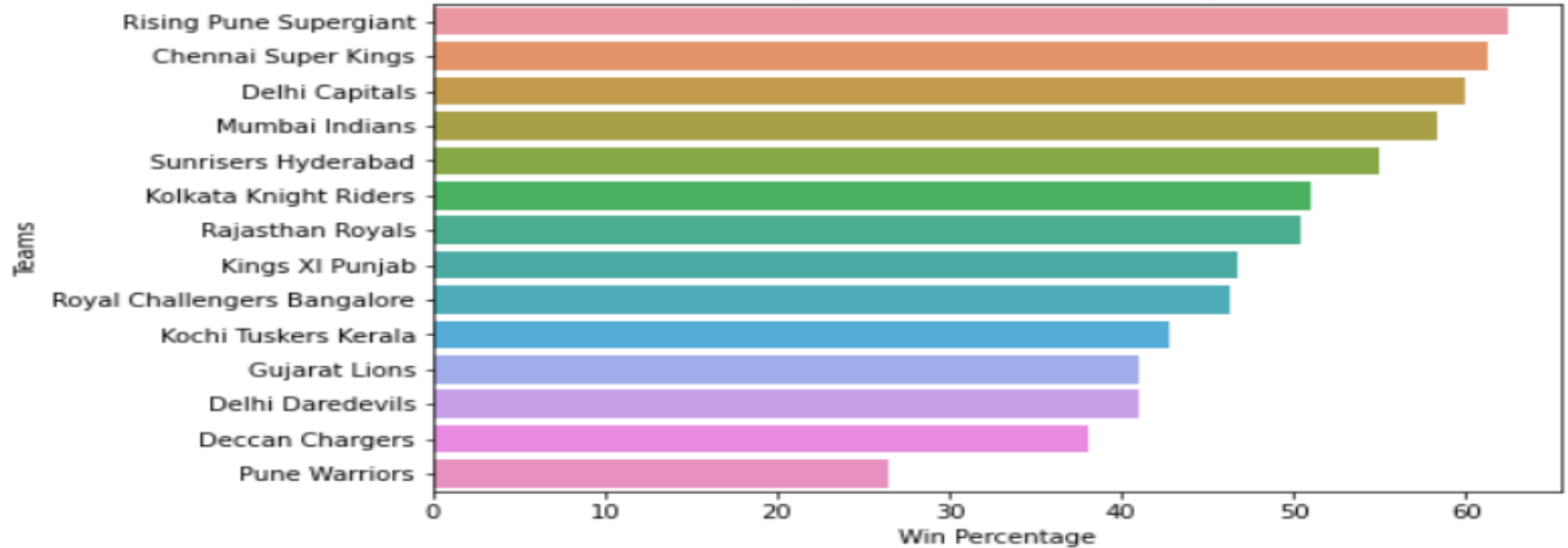
KEY POINTS FROM THE PLOTS

- From the first plot we can see that the Mumbai Indians were the most successful team in taking advantage of home conditions with total of 58 wins in their 101 matches, followed by Chennai Super Kings and KXIP (now PBKS) at 51 and 38 respectively.
- Whereas, Gujrat Lions were the least successful team to do the same with only 1 win in their 14 home games.
- Now, coming to the second plot, which is about the team performing well in away conditions.
- Here, Kolkata Knight Riders tops the list the with total of 58 wins in their 95 matches.
- On the contrary, Kochi Tuskers Kerala only registered 4 wins in their 7 league games.

HIGHEST OVERALL WIN PERCENTAGE TEAMWISE

Text(0, 0.5, 'Teams')

Highest Overall Win Percentage



KEY POINTS FROM THE PLOTS

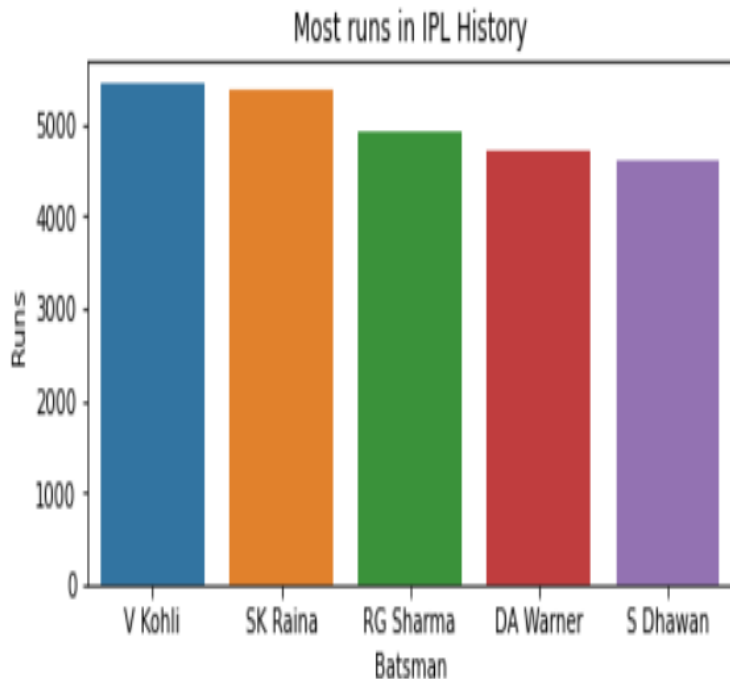
- The above plot depicts the graphical representation of teams who performed well overall in their tenure.
- It can be seen that Rising Pune Supergiants has the highest overall win percentage amongst all with average overall win percentage of 62.5 followed by CSK with 61%(appx) and whereas Pune Warriors stands on the bottom with overall win percentage of 26%(appx).

PLAYER WISE ANALYSIS

DATA SNAPSHOT

	batsman	total_runs	out	numberofballs	average	strikerate
0	V Kohli	5426	152	4111	35.697368	131.987351
1	SK Raina	5386	160	3916	33.662500	137.538304
2	RG Sharma	4902	161	3742	30.447205	130.999466
3	DA Warner	4717	114	3292	41.377193	143.286756
4	S Dhawan	4601	137	3665	33.583942	125.538881
5	CH Gayle	4525	110	2972	41.136364	152.254374
6	MS Dhoni	4450	118	3206	37.711864	138.802246
7	RV Uthappa	4420	156	3381	28.333333	130.730553
8	AB de Villiers	4414	104	2902	42.442308	152.101999
9	G Gambhir	4219	134	3400	31.485075	124.088235

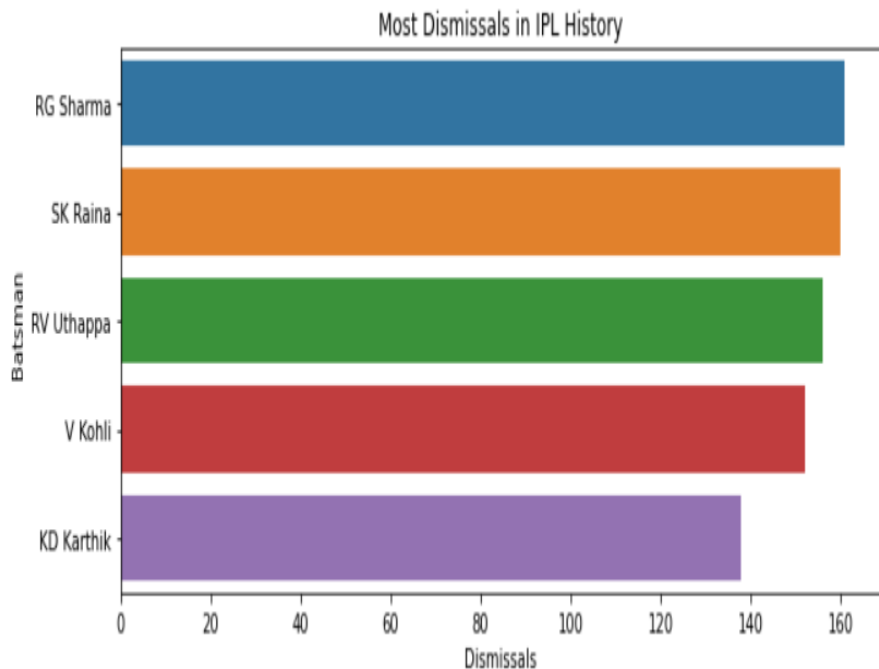
TOP 5 HIGHEST RUNS SCORER IN IPL HISTORY



- The graph shows the pictorial representation of top 5 players who scored most runs in history of IPL.
- Virat Kohli tops this list with 5426 runs just 40 runs ahead of the second most run scorer i.e. Suresh Raina with the total of 5386 runs scored in entire IPL career.
- Indian players dominating in top 5 with only one overseas player i.e. David Warner who is 4th highest run scorer in IPL.



PLAYERS WITH MOST DISMISSALS IN IPL HISTORY

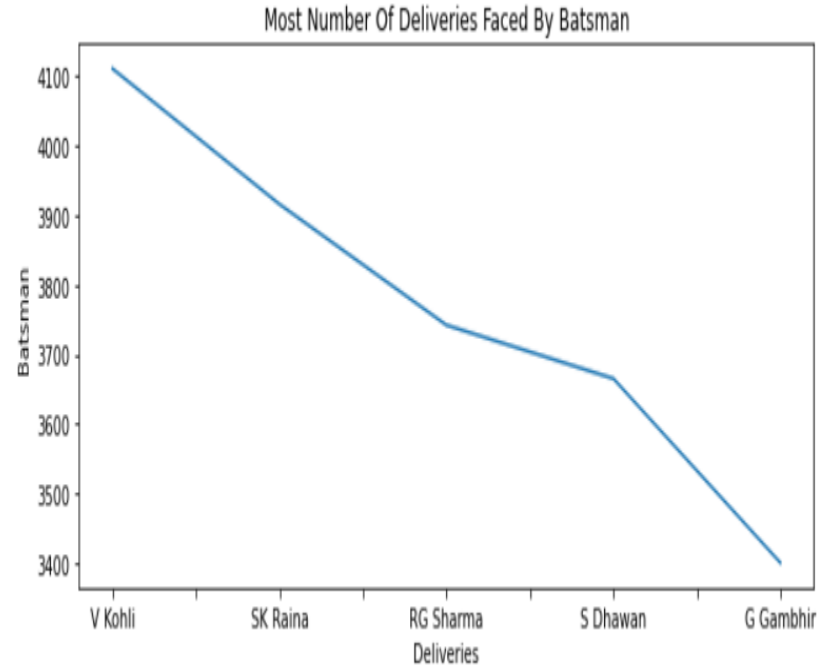


- This graph depicts the top 5 players with most number of dismissals in IPL.
- Rohit Sharma got dismissed on 161 occasions which is the most, followed by Suresh Raina with 160 dismissals.
- This list is also dominated by Indian players with all top 5 who got dismissed the most times are Indians.



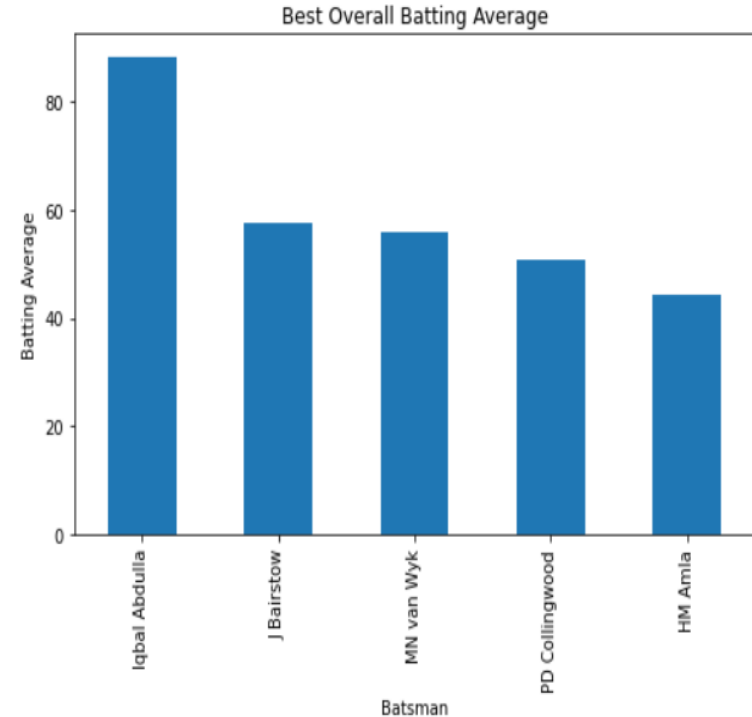
PLAYERS WHO FACED MOST NUMBERS OF DELIVERIES

- This line plot depicts the top 5 batsmen who faced most number of deliveries in IPL.
- It can be seen that 4111 deliveries faced by Virat Kohli are the most number of deliveries faced by any batsman in IPL till now.
- Virat, Suresh and Rohit has faced the most number of deliveries in IPL history.



Top 5 players with highest Batting average

- This bar graph represents the players with highest batting average in IPL career.
- Surprisingly, Iqbal Abdulla leading the list with overall career batting average of 86(appx).
- J Bairstow and HM Amla are the two openers in the list , followed by van Wyk and Paul Collingwood which are all rounders.





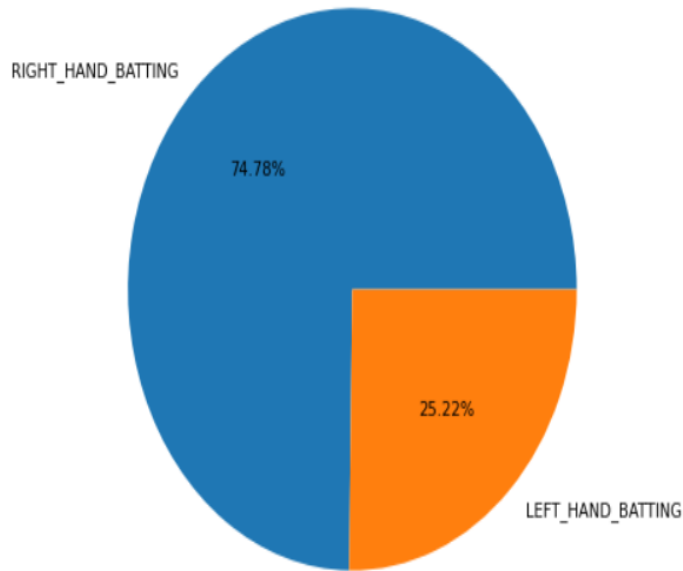
PLAYER ATTRIBUTES AND BELONGING NATIONS

DATA SNAPSHOT

	Player_Name	DOB	Batting_Hand	Bowling_Skill	Country
0	A Ashish Reddy	1991-02-24	Right_Hand	Right-arm medium	India
1	A Chandila	1983-12-05	Right_Hand	Right-arm offbreak	India
2	A Chopra	1977-09-19	Right_Hand	Right-arm offbreak	India
3	A Choudhary	NaT	Right_hand	Left-arm fast-medium	NaN
4	A Dananjaya	NaT	Right_Hand	Right-arm offbreak	NaN
...
561	Younis Khan	1977-11-29	Right_Hand	Right-arm medium	Pakistan
562	YS Chahal	1990-07-23	Right_Hand	Legbreak googly	India
563	Yuvraj Singh	1981-12-12	Left_Hand	Slow left-arm orthodox	India
564	YV Takawale	1984-11-05	Right_Hand	NaN	India
565	Z Khan	1978-10-07	Right_Hand	Left-arm fast-medium	India

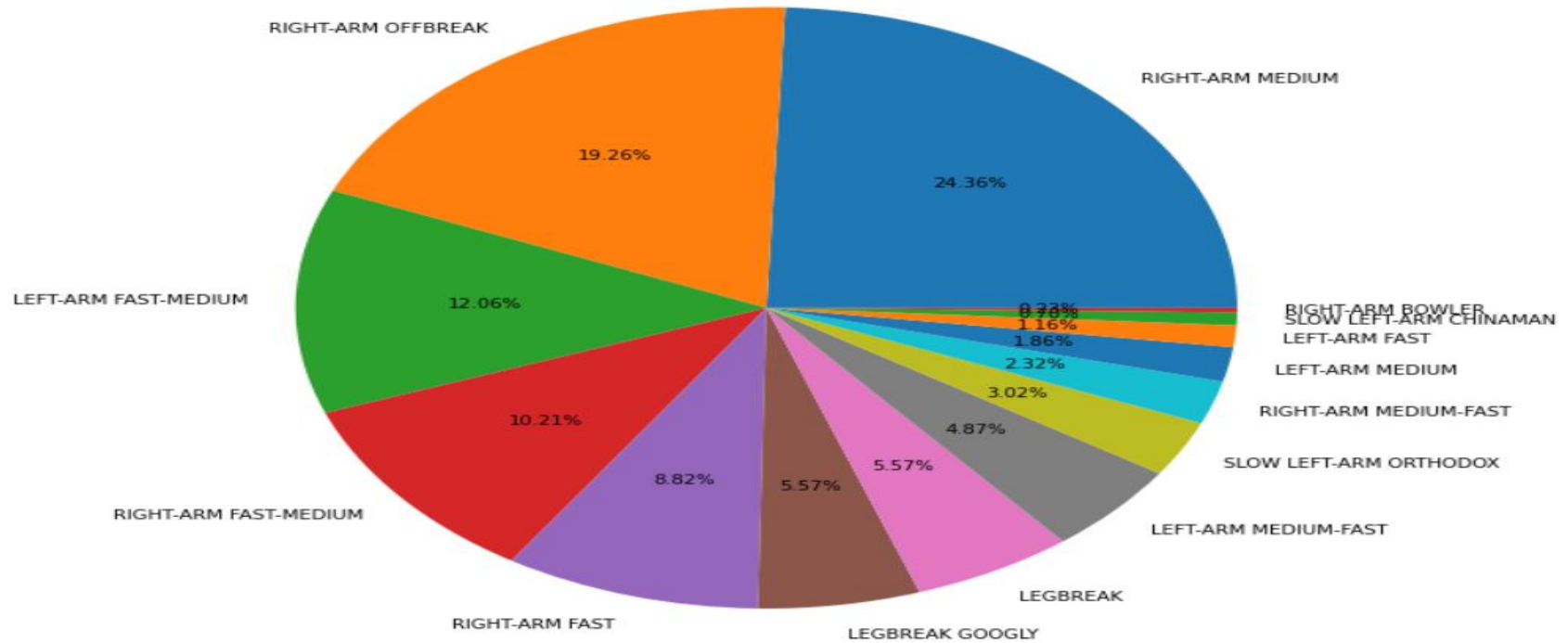
566 rows × 5 columns

COMPARISON OF LEFT HAND, RIGHT HAND BATSMEN IN IPL



- The pie chart depicts the percentage difference between the right handed batsmen to the left handed batsmen that has debuted in IPL till now.
- It can be seen that, almost $\frac{3}{4}$ th of the batsmen are right handed while only $\frac{1}{4}$ th have left dominant hand.

BOWLING SKILLS (FREQUENTLY USED VARIATIONS)

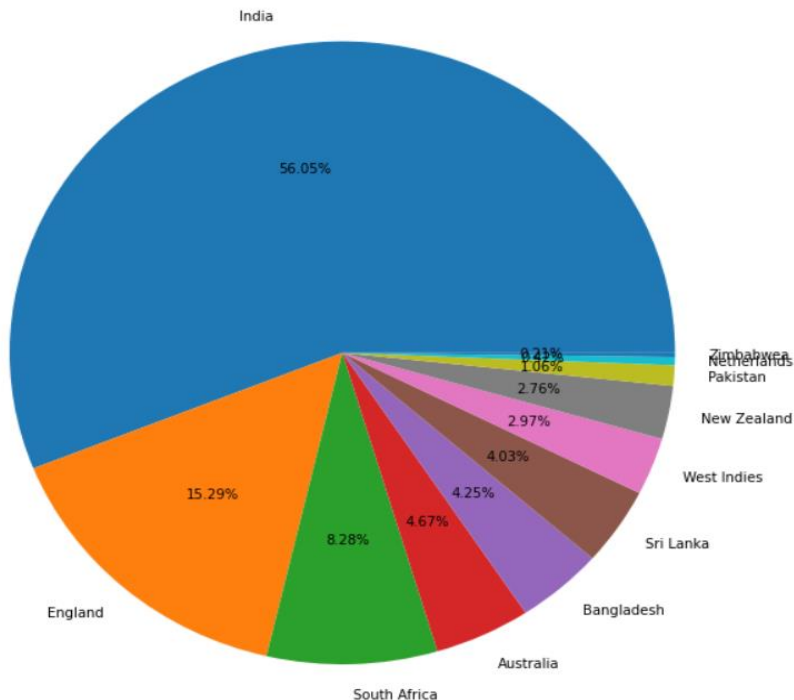




CONTINUED..

- Right Arm Off-break and Right Arm Medium constitutes for almost 42% of total bowlers.
- Around 1/4th of bowlers are Left Arm Fast Medium and Right Arm Fast Medium pacers.
- Only 0.20% of bowlers are basic Right Arm Bowler, followed by second least which is Slow Left Arm Chinaman ,at 0.80%

COMPARISON OF NUMBER OF PLAYERS DEBUTED FROM EACH NATION



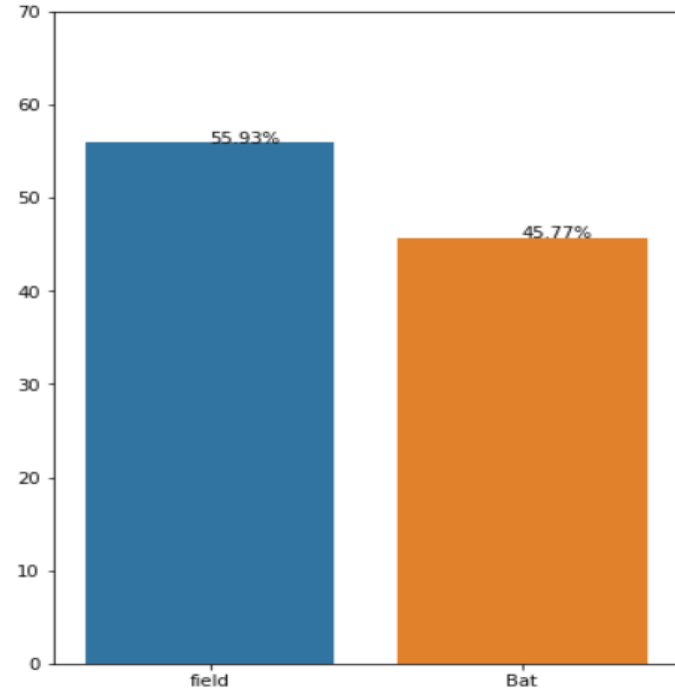
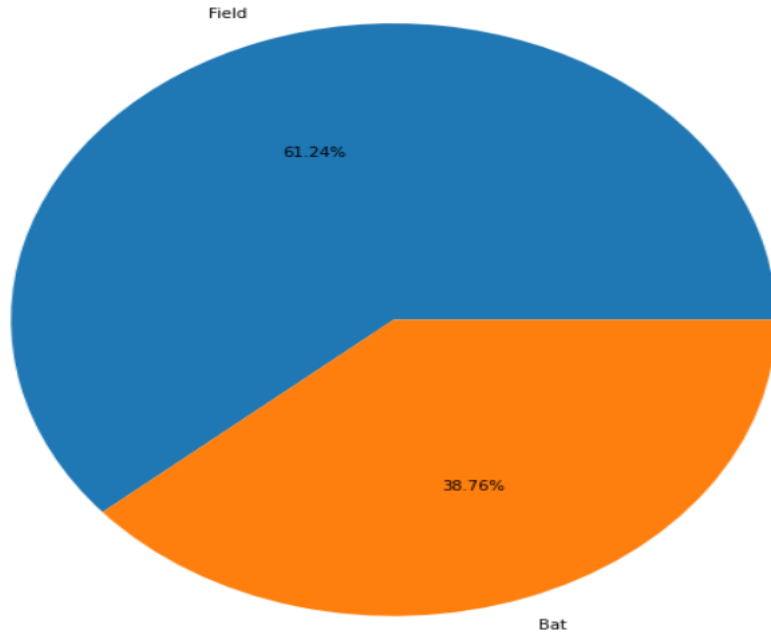
- There is no surprise that India constitutes for almost half of the total debuted players, there's a reason why its called INIDAN PREMIER LEAGUE.
- England is the 2nd highest contributor of the players with sum of 15.29% debuts, followed by Australia with 8.28%.
- On the contrary, only 0.21% of players have participated from Zimbabwe which is the least amongst all the nations.



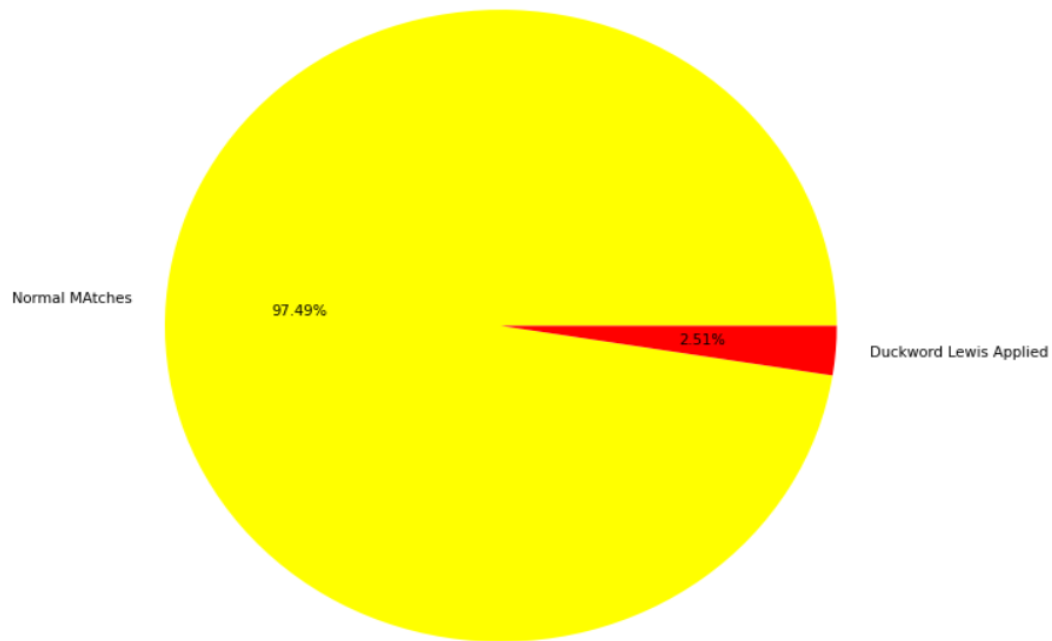
DELIVERY WISE ANALYSIS

TEAM DECISION AFTER WINNING TOSS

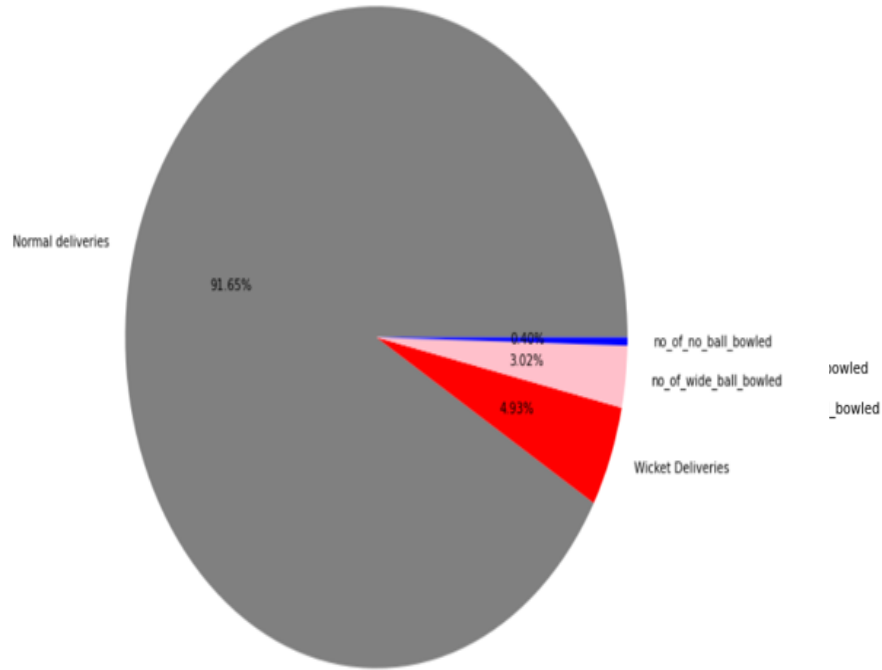
Toss decisions



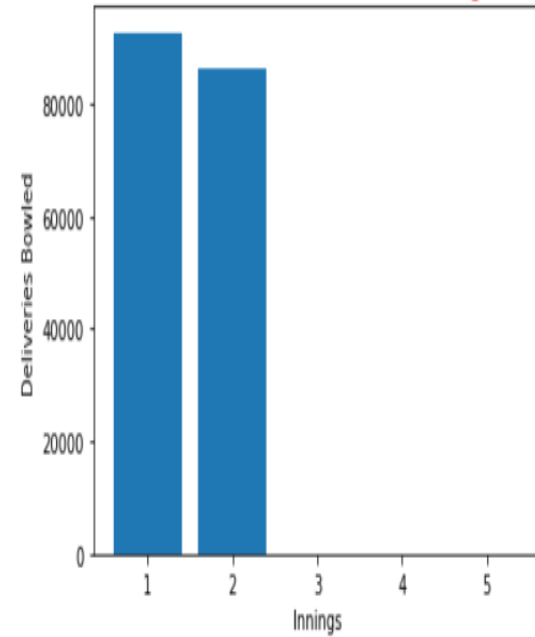
RAIN AFFECTED MATCHES



ANALYSIS OF DELIVERIES



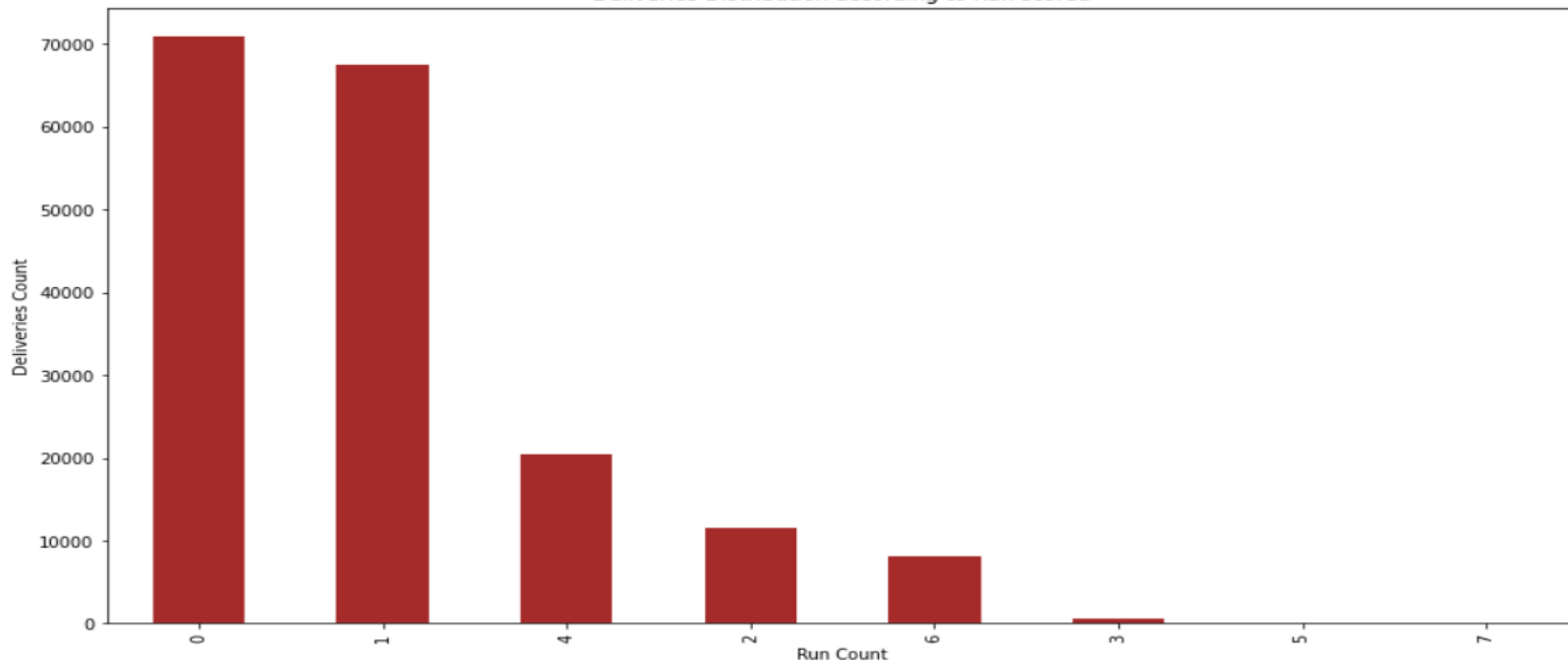
Deliveries Bowled in each inning



BOWLING FIGURES

Runs Scored on Balls

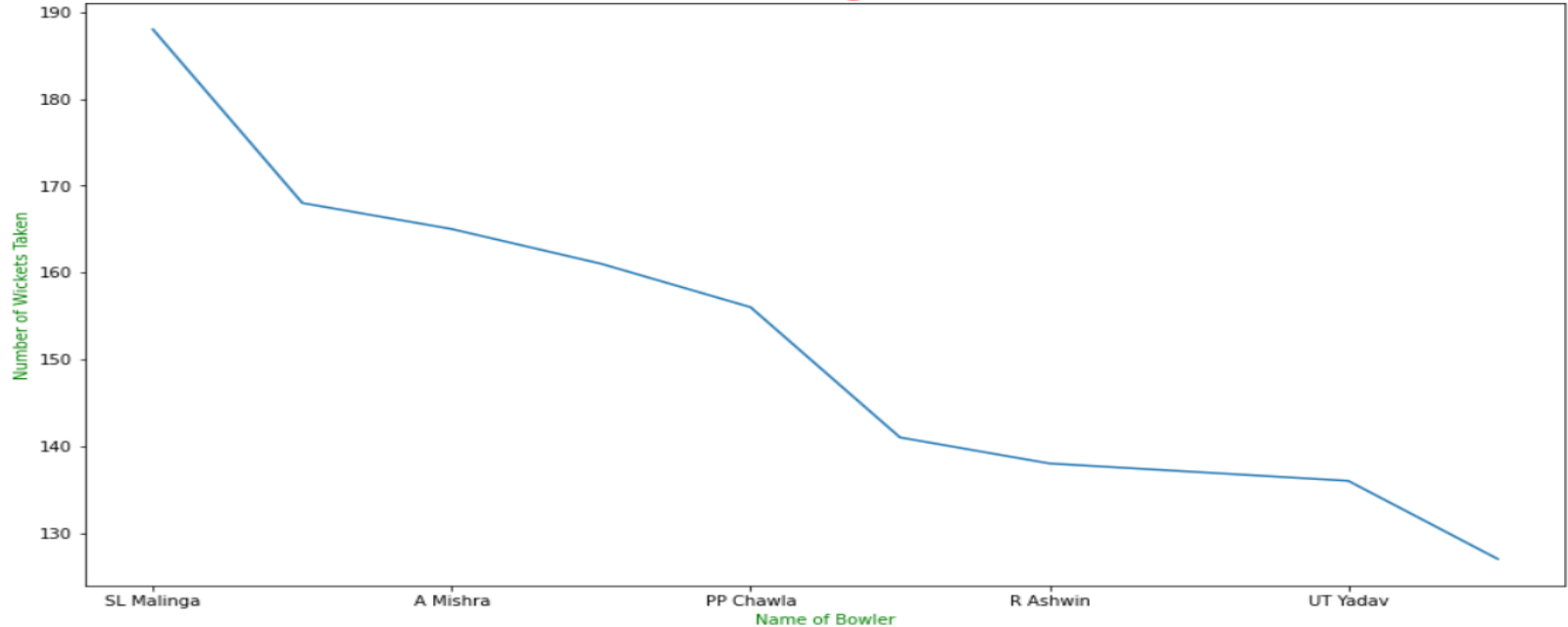
Deliveries Distribution according to Run scored



Bowling Figures

Text(0,0, 100, 100, Most Wicket Taking Bowlers in IPL)

Most Wicket Taking Bowlers in IPL

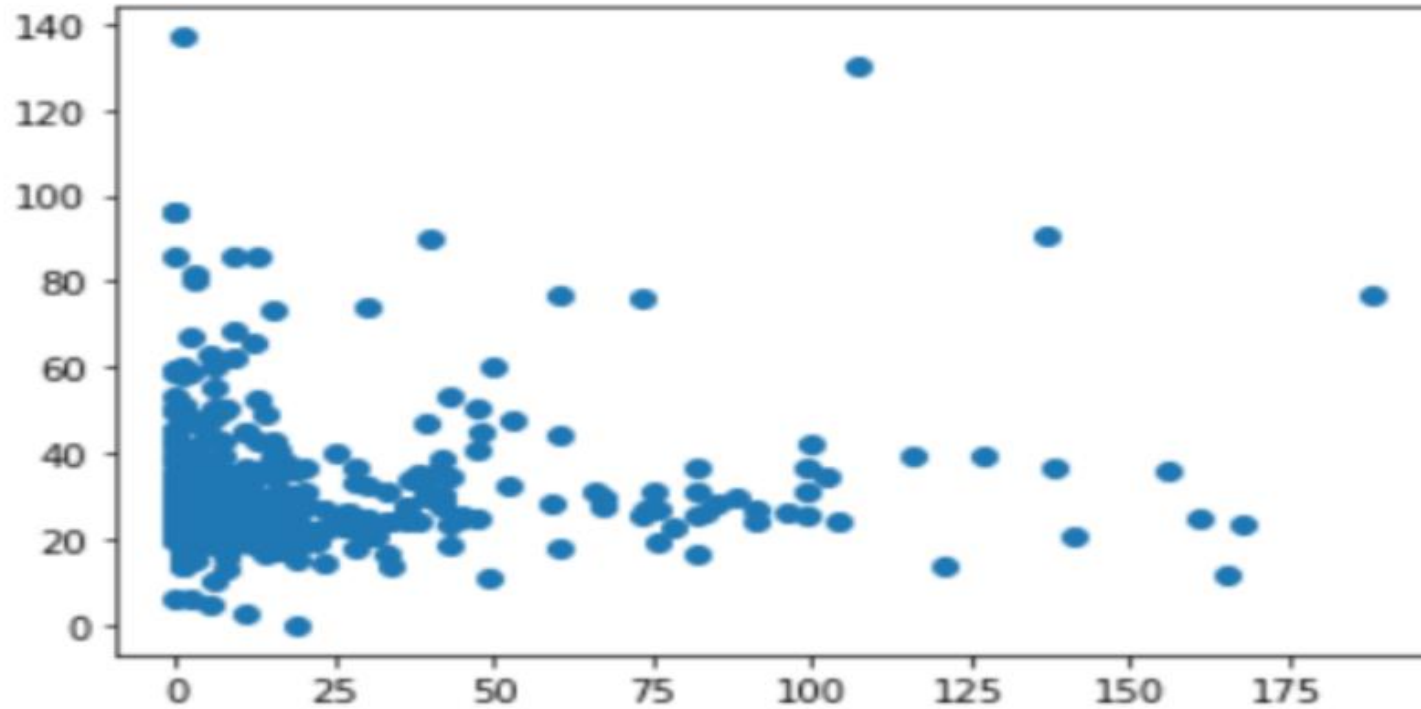




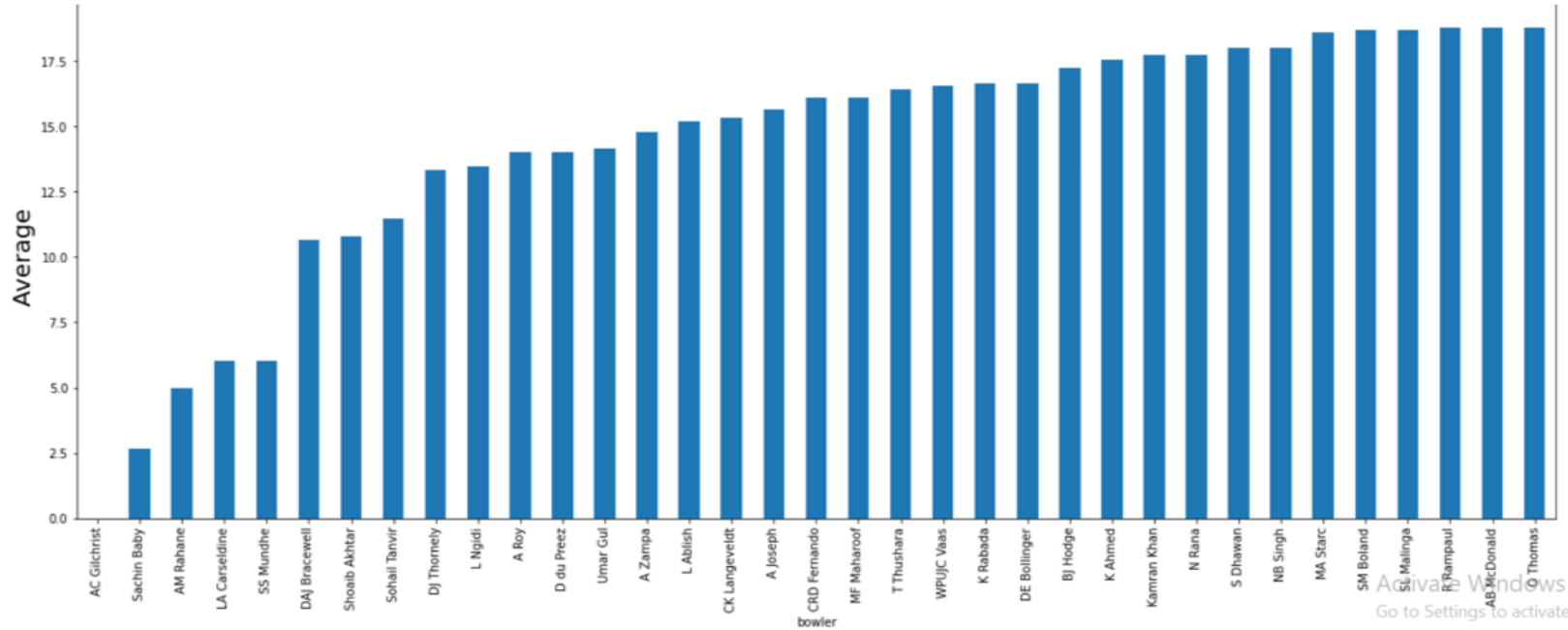
ARRIER

SAY

BOWLING FIGURES CONTINUED...



BOWLING FIGURES CONTINUED....



CONCLUSION

- Side who had won the toss has opted to field first comparatively more times than to bat.
- Mumbai Indians is the most successful team in the history of IPL.
- Virat Kohli, Suresh Raina, Rohit Sharma are dominating in all the batting records.
- Lasith Malinga, K Rabada, K Ahmed , R Ashwin are key bowlers.
- Almost, $3/4^{\text{th}}$ of the batsmen are right handed while only $1/4^{\text{th}}$ have left dominant hand.



THANK YOU