

Introduction



The Indian Premier League (IPL) has emerged as one of the most popular and lucrative cricket leagues globally, captivating millions of fans. It has also become a goldmine of data, offering valuable insights into player performance, team dynamics, and the evolving landscape of T20 cricket. In this presentation, we will delve into a comprehensive analysis of the IPL dataset, aiming to uncover performance indicators that will provide valuable insights for teams, players, and enthusiasts alike.

The analysis is done using R programming.

Percentage of wins of each team

TEAM	WIN PERCENTAGE
Rajasthan Royals	49.21466
Gujarat Titans	75.00000
Royal Challengers Bangalore	47.78761
Lucknow Super Giants	60.00000
Sunrisers Hyderabad	50.00000
Punjab Kings	46.42857
Delhi Capitals	52.38095
Mumbai Indians	55.84416
Chennai Super Kings	58.17308
Kolkata Knight Riders	49.77578
Kings XI Punjab	44.73684
Delhi Daredevils	44.09938
Rising Pune Supergiant	62.50000
Gujarat Lions	43.33333
Rising Pune Supergiants	28.57143
Pune Warriors	26.66667
Deccan Chargers	38.66667
Kochi Tuskers Kerala	42.85714

The win percentage of a team is calculated by the total number of wins over the total number of matches played in these overall seasons.

Gujarat Titans has the highest win percentage followed by Rising Pune Supergiant, Lucknow Super Giants, Chennai Super Kings, and Mumbai Indians.

Pune Warriors possess the lowest win percentage among all the teams.



List out the most consistent batsman

Batters	Average	RUN
KL Rahul	46.36905	3895
AB de Villiers	41.44800	5181
JP Duminy	41.40816	2029
DA Warner	41.13986	5883
LMP Simmons	39.96296	1079
JC Buttler	39.88732	2832
ML Hayden	39.53571	1107
CH Gayle	39.03906	4997
SE Marsh	38.29231	2489
MEK Hussey	38.01923	1977

The consistency of a batter is compared using the batting average of each batter.

A player's batting average is the total number of runs they have scored divided by the number of times they have been out.

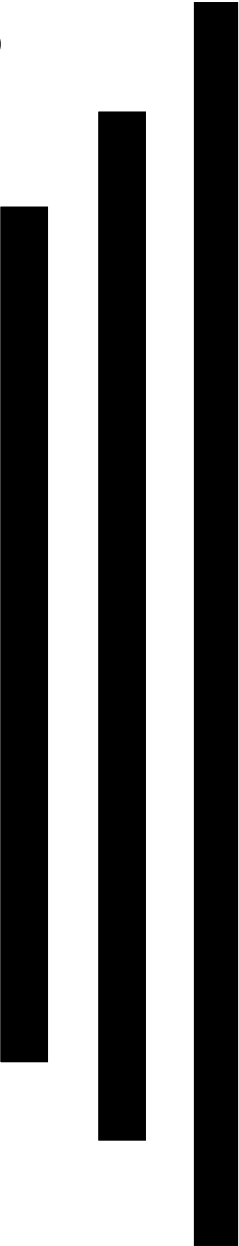
From the analysis of data, KL Rahul has the highest batting average who has scored at least 700 runs. This condition of runs is made to reduce the advantage of tail-end batters.

List out the most consistent bowler

BOWLERS	RUNS	WICKETS	OVERS	AVERAGE	ECONOMY
Rashid Khan	2411	112	372.00000	21.52679	6.481183
A Kumble	1089	45	163.83333	24.20000	6.646999
SP Narine	3907	152	586.00000	25.70395	6.667235
GD McGrath	366	12	54.83333	30.50000	6.674772
M Muralitharan	1765	64	263.50000	27.57812	6.698292

Analyzing about the Economy rate and bowling average we try to make up conclusions about consistent bowlers.

According to our analysis, **Rashid Khan** has less Economic rate maintains a lower bowling average is one of the most consistent bowlers in the league.



List out the most consistent batsman of each team

Team	Player	Average	Run
Rajasthan Royals	JC Butler	39.88732	2832
Gujarat Titans	DA Miller	35.57971	2455
Royal Challengers Bangalore	AB de Villiers	41.44800	5181
Lucknow Super Giants	KL Rahul	46.36905	3895
Sunrisers Hyderabad	DA Warner	41.13986	5883
Punjab Kings	KL Rahul	46.36905	3895
Delhi Capitals	DA Warner	41.13986	5883

List out the most consistent batsman of each team

Mumbai Indians	JP Duminy	41.40816	2029
Chennai Super Kings	ML Hayden	39.53571	1107
Kolkata Knight Riders	CH Gayle	39.03906	4997
Rising Pune Supergiant	F du Plessis	35.08247	3403
Gujarat Lions	SK Raina	32.95238	5536
Deccan Chargers	JP Duminy	41.40816	2029
Kochi Tuskers Kerala	BJ Hodge	30.43478	1400
Pune Warriors	SPD Smith	31.98718	2495

List out the most extra balls delivered bowler and the most extra balls delivered team.

	Bowler	Extra balls
1	DJ Bravo	134
2	UT Yadav	119
3	R Ashwin	112
4	SL Malinga	106
5	DW Steyn	98
6	P Kumar	93
7	SR Watson	91

DJ Bravo is the bowler who has bowled most extra bowls with a count of 134.

List out the batsman who was out mostly by caught.

	Batter Name	Number of times caught
1	RG Sharma	135
2	RV Uthappa	124
3	V Kohli	120
4	SK Raina	116
5	S Dhawan	104
6	KD Karthik	100
7	DA Warner	91
8	MS Dhoni	87

Rohit Sharma is the batsman who got out by being caught most times with a count of 135 followed by Robin Uthappa with 124 times.



List out the batsman who was out mostly by LBW.

	Batter Name	LBW
1	RV Uthappa	18
2	KD Karthik	17
3	BB McCullum	16
4	AM Rahane	15
5	RG Sharma	13
6	S Dhawan	12
7	PA Patel	12
8	DR Smith	12

Robin Uthappa is the batsman who got out by being LBW most times with a count of 18 followed by KD Karthik with 17 times.

List out the batsman who hit more boundaries

	Batsman	Boundaries
1	S Dhawan	838
2	V Kohli	800
3	DA Warner	793
4	CH Gayle	767
5	RG Sharma	760
6	SK Raina	710
7	AB de Villiers	667
8	RV Uthappa	663

Boundaries include both 4 's and 6 's.

S Dhawan leading with 838 boundaries followed by V Kohli with 800 and DA Warner with 793.

List out the batsman who hit more 4's

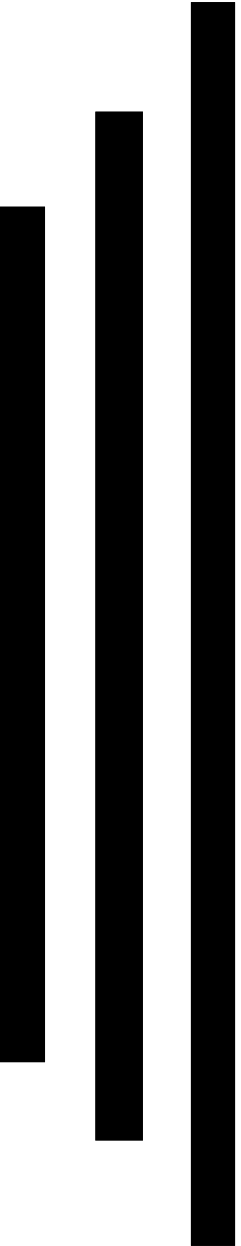
	Batter	Fours
1	S Dhawan	701
2	V Kohli	581
3	DA Warner	577
4	RG Sharma	519
5	SK Raina	506
6	G Gambhir	492
7	RV Uthappa	481
8	AM Rahane	431
9	KD Karthik	426

Team selection

Wicket Keeper

To select a wicketkeeper-batsman we are considering two factors “Number of Stumping” and their “Batting performance”.

We sort out this in two separate lists and compare the players by analyzing it to find the perfect choice to the team.



	Keeper	Runs	Batting Average	Stumpings
1	MS Dhoni	4978	35.05634	39
2	KD Karthik	4377	26.05357	34
3	RV Uthappa	4954	26.92391	32
4	WP Saha	2427	25.28125	22

	Keeper	Runs	Batting average	Stumpings
1	AB de Villiers	5181	41.44800	8
2	MS Dhoni	4978	35.05634	39
3	RV Uthappa	4954	26.92391	32
4	KD Karthik	4377	26.05357	34

The first table is ordered based on Stumpings and the second is based on Batting performance. From the analysis of both MS Dhoni is the first preference.

Batter

Batters	RUN	Average	Strikerate
V Kohli	6634	34.37306	125.9780
S Dhawan	6244	34.88268	122.8408
DA Warner	5883	41.13986	136.4016
RG Sharma	5881	28.97044	126.9646
SK Raina	5536	32.95238	132.5353

Batters	RUN	Average	Strikerate
KL Rahul	3895	46.36905	132.7992
HM Amla	577	44.38462	138.0383
DP Conway	252	42.00000	143.1818
AB de Villiers	5181	41.44800	148.5804
DA Warner	5883	41.13986	136.4016

The highest run scorer **V Kohli** is our first choice of preference in batting performance since his average is also fine.

As a consistent batter, **KL Rahul** maintains the highest batting average with a good strike rate.

Batter

	Batters	RUN	Average	Strikerate
1	AB de Villiers	5181	41.44800	148.5804
2	CH Gayle	4997	39.03906	142.1217
3	JC Buttler	2832	39.88732	144.8593

Sorting out batters with a 140+ strike rate and having good scoring capacity. **AB de Villiers** with a 148.5 strike rate and a 41.4 batting average is first preference.

Secondly, we prefer **JC Butler** who maintains a 144 + strike rate with a batting average of 39.8.

Thus 4 options for the batting lineup are **V Kohli, KL Rahul, AB de Villiers and JC Butler** .

All rounder

To select an All-rounder we have to consider their Batting performance as well as bowling performance. Considered at least 2000 runs and 80 wickets.

All rounder	wicket	runs	average
AD Russell	99	2039	30.8939 4
KA Pollard	81	3437	26.64341
RA Jadeja	141	2502	25.0200 0
SR Watson	107	3880	30.7936 5

The first preference for the all-rounder is **RA Jadeja** as his bowling performance is impressive with 141 wickets and average batting performance.

The next we go with **AD Russel** who has 99 wickets and a good batting average. Also while considering his strike rate it is 168 highest among all the batters.

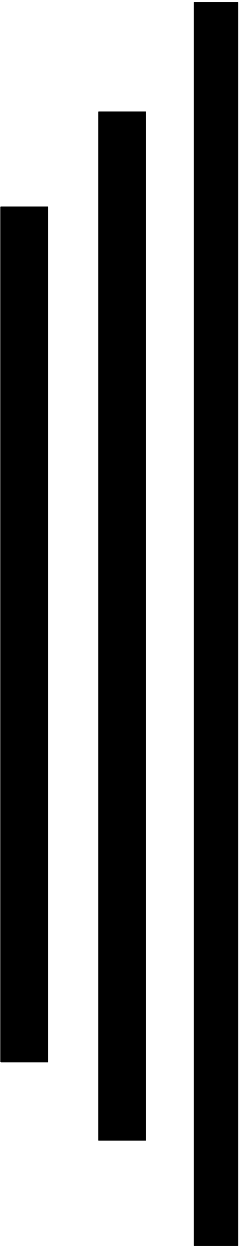
Bowler

To select a bowler we have to consider their economy as well as wicket taking ability and bowling average.

BOWLERS	RUNS Conceeded	WICKETS	Overs	Bowling AVERAGE	ECONOMY
Rashid Khan	2411	112	372.00000	21.52679	6.481183
A Kumble	1089	45	163.83333	24.20000	6.646999
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Based on wickets.

BOWLERS	RUNS Conceded	WICKETS	Overs	Bowling AVERAGE	ECONOMY
DJ Bravo	4436	183	549.3333	24.24044	8.075243
SL Malinga	3486	170	495.6667	20.50588	7.032952
YS Chahal	3699	166	490.0000	22.28313	7.548980
A Mishra	4022	166	552.8333	24.22892	7.275249
R Ashwin	4596	157	670.6667	29.27389	6.852883
PP Chawla	4368	157	551.5000	27.82166	7.920218
B Kumar	4064	154	564.0000	26.38961	7.205674
SP Narine	3907	152	586.0000	25.70395	6.667235



Bowler

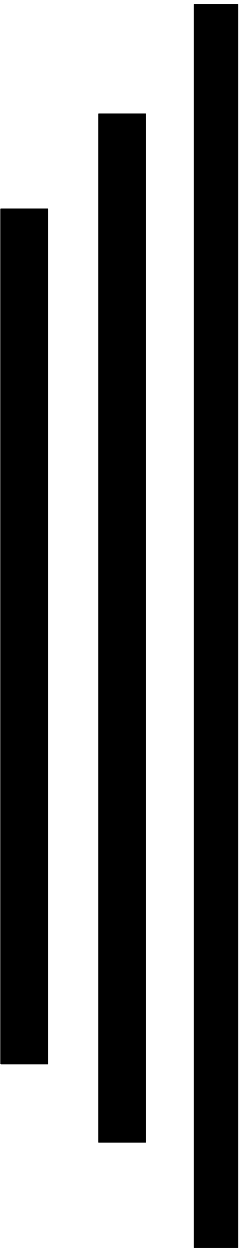
The first table represents the bowlers with the lowest economy rate and the second is of most wicket takers.

Since in limited-over cricket both economy and wicket-taking ability to be considered.

Thus the most economical bowler **Rashid Khan** is a good option in bowling.

Secondly we consider **SP Narine** since he is the third least economical bowler as well as 8 th most wicket-taker in the entire league.

The next two options we consider are **DJ Bravo** and **SL Malinga** as the highest wicket-takers of the league throughout while maintaining a good economy rate.



Analysis of this dataset and provide input for 2024 IPL matches.

Gujarat Titans has the highest win percentage followed by Rising Pune Supergiant, Lucknow Super Giants, Chennai Super Kings, and Mumbai Indians. Likely to have good performance according to their previous performances.

Key players to be noted are V Kohli (Most runs), KL Rahul (Most batting average), Rashid Khan and Narine (least economic and wicket-taking bowlers), AD Russel (most strike rate), DJ Bravo, L Malinga, Y Chahal (most wicket takers).

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