

# Exploratory Data Analysis of Indian Premier League



# Indian Premier League (IPL) Overview

The Indian Premier League (IPL) is a professional Twenty20 cricket league in India that commenced in 2008. Over the years, it has evolved into one of the most popular and lucrative T20 tournaments globally.

## Key Points

- **Teams:** Multiple franchises participate, including Mumbai Indians, Chennai Super Kings, Kolkata Knight Riders, and others.
- **Format:** The league follows a round-robin format, leading to playoffs (Eliminator, Qualifier 1, Qualifier 2) and culminating in a final to determine the champion.
- **Successive Champions:** Mumbai Indians and Chennai Super Kings stand out as the most successful teams, clinching multiple titles each.
- **International Stars:** The IPL attracts top cricket talent from around the world, making it a high-octane and competitive tournament.
- **Entertainment:** Renowned for its entertainment value, the IPL features elements such as cheerleaders, music, and a festive atmosphere alongside the intense cricket action.
- **Individual Awards:** Players have the opportunity to win awards such as the Orange Cap for the leading run-scorer and the Purple Cap for the highest wicket-taker in a season.

The IPL has significantly contributed to the global popularity of T20 cricket, establishing itself as an annual cricketing extravaganza eagerly anticipated by fans worldwide.

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# Introduction

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Embarking on the fascinating journey of exploring IPL data, we're diving into the world of cricket magic that's been captivating fans worldwide since 2008. The IPL isn't just a sports event; it's a rich tapestry of stats, strategies, and pure cricketing genius.

In this analysis, our goal is to unravel the layers of data that capture team performances, player stats, and the ever-evolving nature of the league. From heart-stopping moments to historic innings, the IPL dataset is a goldmine of insights waiting to be uncovered.

As we sift through the numbers, let's discover the patterns, anomalies, and trends that shape the narrative of this cricket extravaganza. The IPL isn't just about scores and wickets; it's a mirror reflecting the dynamic essence of the game, where analytics blends seamlessly with the spirit of competition.

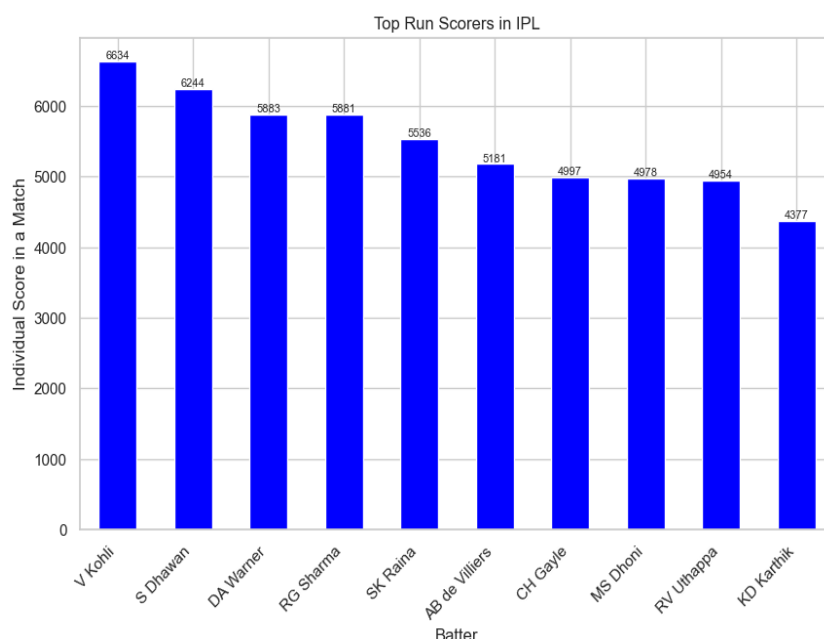
Get ready to witness the tales behind the stats as we embark on a data-driven journey through the IPL, where each run narrates a story and every dismissal adds a new chapter to the narrative.

# Exploratory Data Analysis

## ❖ Data Analysis of Batsmen

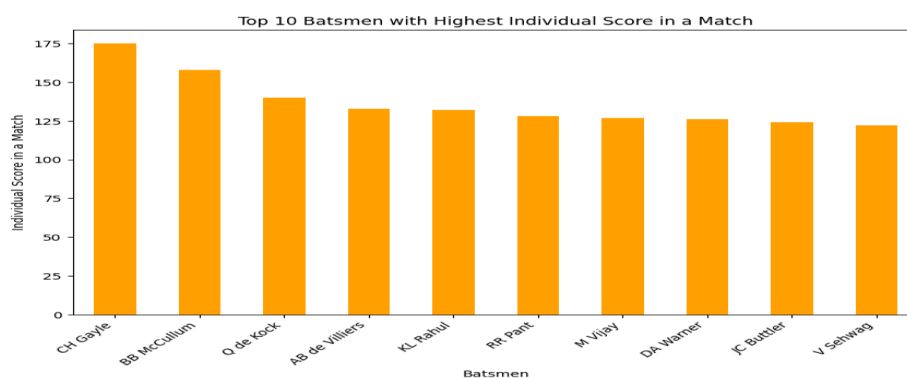
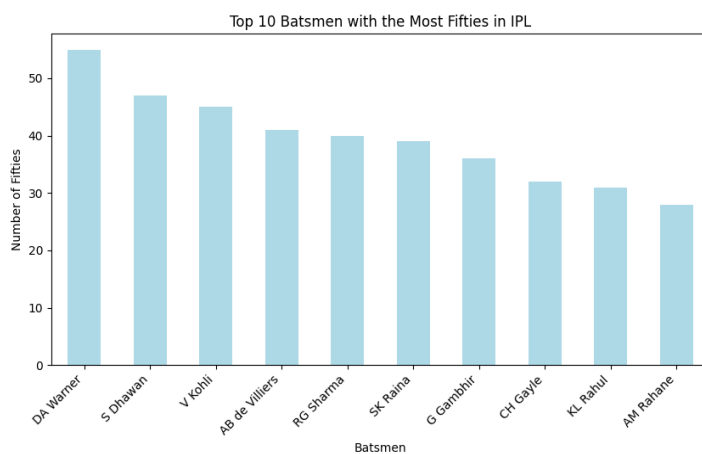
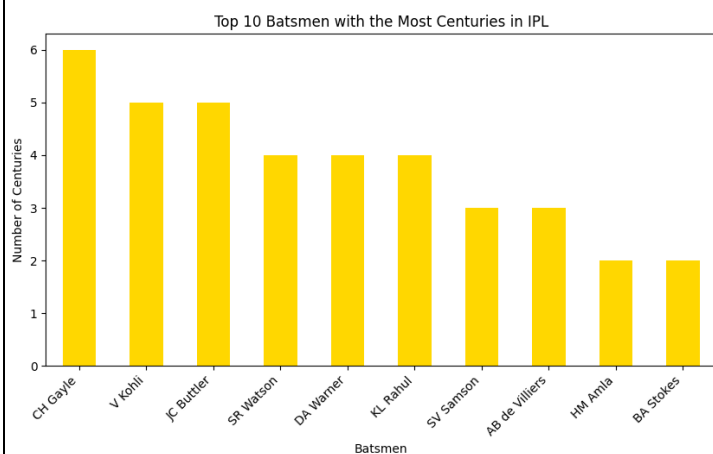
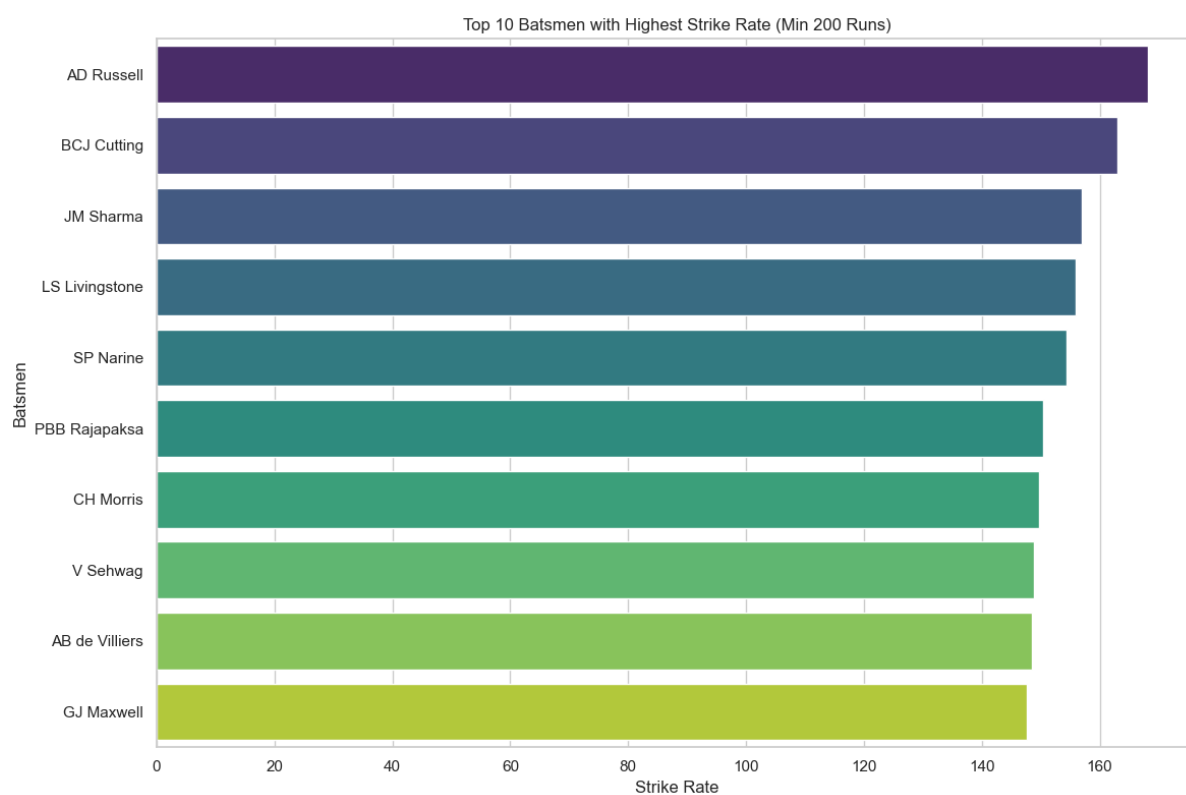
➤ Top run-scorers in IPL history?

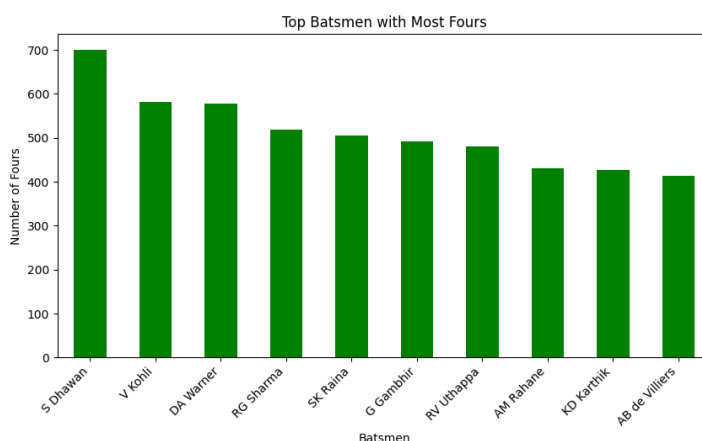
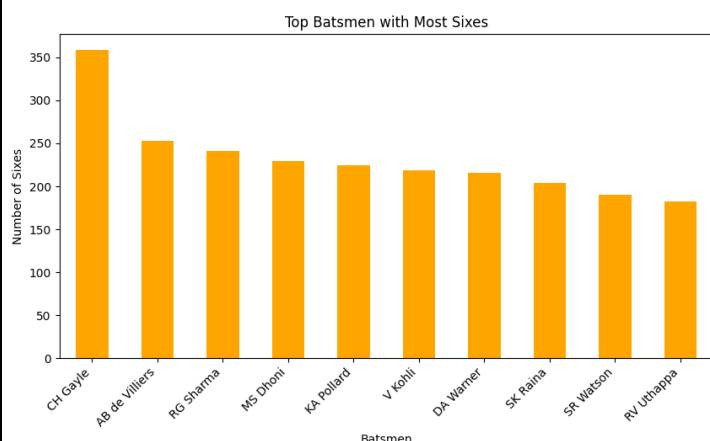
Top Run Scorers in IPL:	
Batsmen	Scorer
1. V Kohli	6634
2. S Dhawan	6244
3. DA Warner	5883
4. RG Sharma	5881
5. SK Raina	5536
6. AB de Villiers	5181
7. CH Gayle	4997
8. MS Dhoni	4978
9. RV Uthappa	4954
10. KD Karthik	4377



- In our exploration of IPL batsmen, the top 10 run-scorers emerge as cricketing icons, each making significant contributions to the league's vibrant history. Leading the pack is Virat Kohli, with an impressive tally of 6634 runs, demonstrating not only consistent brilliance with the bat but also effective captaincy.
- Shikhar Dhawan claims the second spot with his aggressive yet reliable batting style, while David Warner secures the third position with his explosive batting and leadership prowess.
- Following closely are Rohit Sharma, Suresh Raina, and AB de Villiers, each adding a unique blend of flair and innovation to the game. Chris Gayle's power-hitting, MS Dhoni's legendary captaincy, and the dynamic performances of Robin Uthappa and Dinesh Karthik round off the top 10, showcasing a diverse array of talents that have made a lasting impact on the cricketing canvas of the IPL.

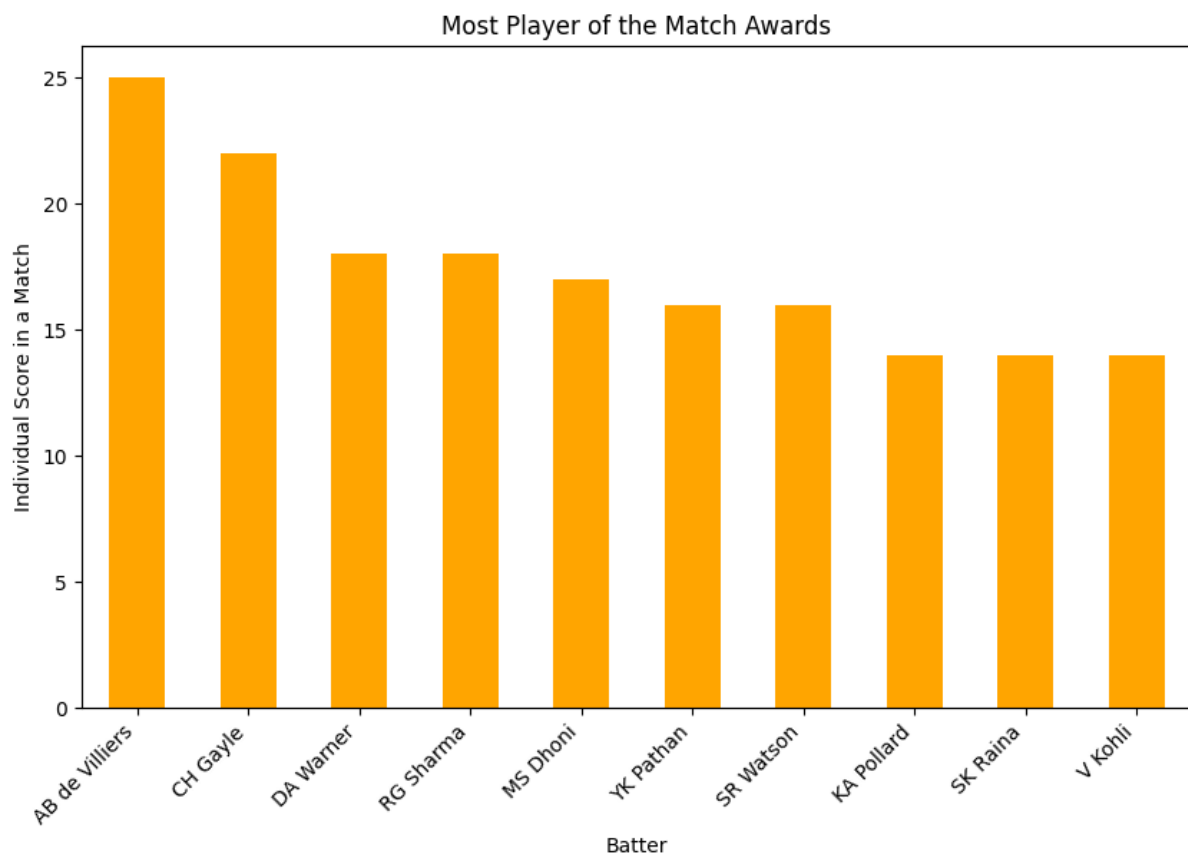
## ➤ Top 10 Batsmen Performance





- In the analysis of the top-performing batsmen in the Indian Premier League (IPL), it is evident that certain players have consistently excelled in various aspects of batting.
- The list of the Top 10 Batsmen with the Highest Individual Score in a Match showcases remarkable innings, with CH Gayle leading with an extraordinary score of 175, followed by BB McCullum, Q de Kock, and others.
- In terms of centuries, CH Gayle stands out, having secured six centuries, followed by V Kohli and JC Buttler with five each.
- The Top 10 Batsmen with the Most Fifties highlights the consistent performance of DA Warner, leading with 55 half-centuries, followed by S Dhawan and V Kohli.
- The category of Top Batsmen with Most Sixes reflects the power-hitting prowess of players like CH Gayle and AB de Villiers.
- While the Top Batsmen with Most Fours emphasizes the adept placement and boundary-hitting skills of S Dhawan, V Kohli, and others.
- Adding to this comprehensive analysis, the list of Top Batsmen with the Highest Strike Rates sheds light on the explosive batting performances of players like AD Russell, BCJ Cutting, SP Narine, LS Livingstone, JM Sharma, and others. AD Russell leads with an impressive strike rate of 177, closely followed by other power hitters like BCJ Cutting, SP Narine, and LS Livingstone.
- This comprehensive analysis illustrates the diverse strengths of these top batsmen in different aspects of the game, showcasing their ability to score big, build partnerships, and contribute significantly to their teams over multiple IPL seasons.

## ➤ Top 'Player of Match' Awards



- **Dominance of AB de Villiers:**

AB de Villiers stands out as the top performer with 25 'Player of Match' awards, showcasing his exceptional contributions and impact on match outcomes.

- **Consistent Performers:**

CH Gayle, DA Warner, and RG Sharma share a close competition with 22, 18, and 18 awards, respectively. Their consistent presence among the top award winners highlights their reliability and influence in matches.

- **Captaincy Brilliance:**

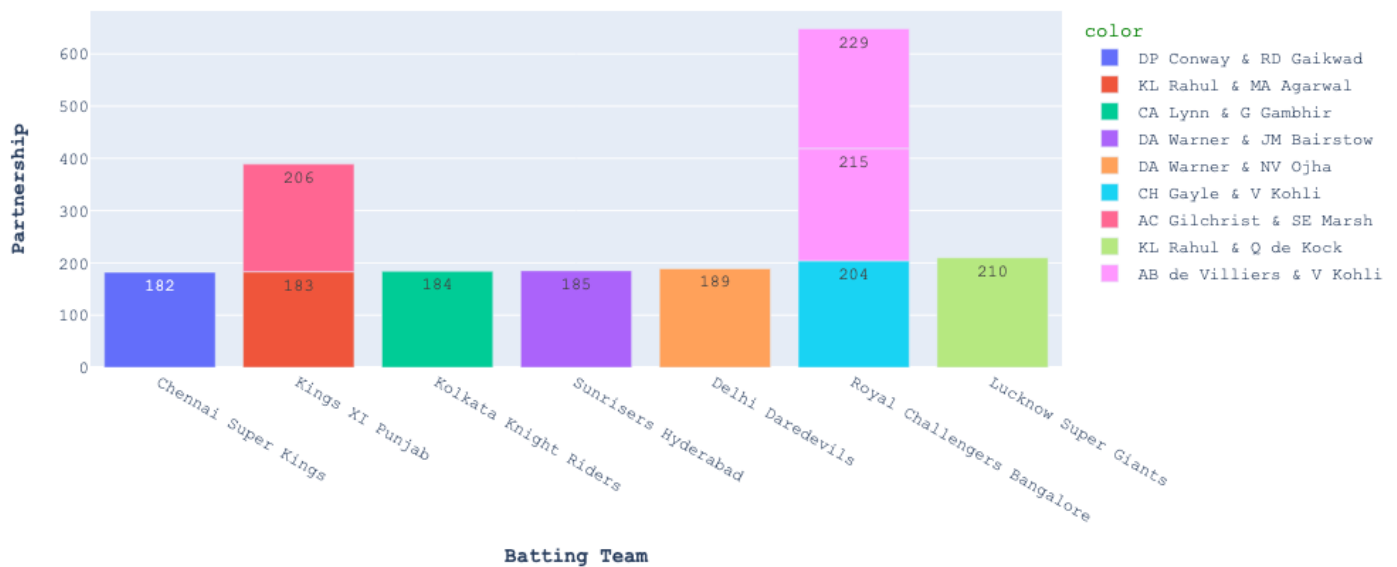
MS Dhoni, known for his leadership skills, has secured 17 'Player of Match' awards, reflecting his pivotal role not only as a player but also as a captain who contributes significantly to his team's success.



## ❖ Data Analysis of Partnership

### ➤ Top Ten Partnership in IPL

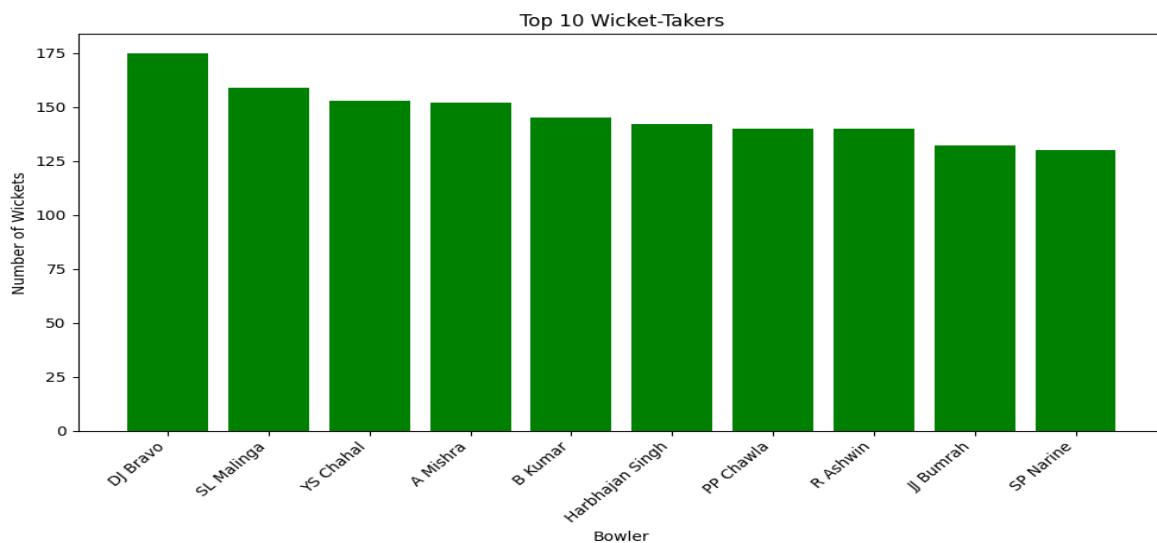
#### Top 10 Partnerships in IPL



- Royal Challengers Bangalore holds three of the top 10 partnerships in IPL history, with the highest partnership being 229 runs made by AB de Villiers and V Kohli.
- This shows how amazingly they worked together, using their skills and teamwork. It's not just a great achievement for the team but also highlights how awesome de Villiers and Kohli are individually. They played a huge part in creating this fantastic record.

## ❖ Data Analysis of Baller

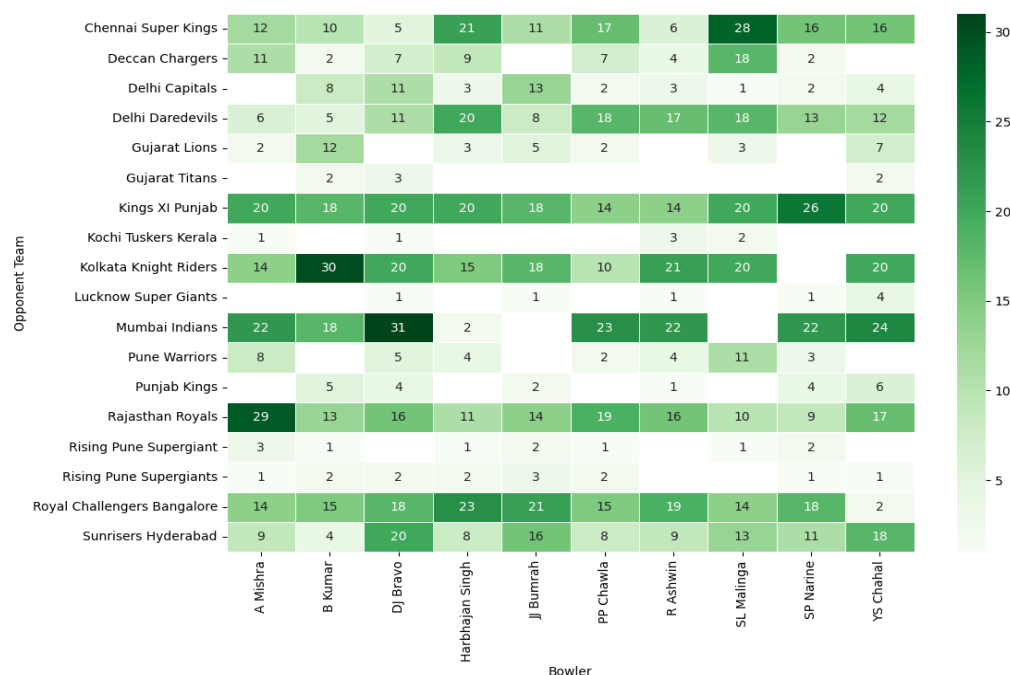
### ➤ Baller performance



Top 10 wicket-takers in the Indian Premier League: This graph displays the number of wickets taken by the top 10 bowlers in the IPL.

1. Dominant bowlers: DJ Bravo leads the pack with 175 wickets, followed by Lasith Malinga with 150 wickets. Ashwin, Mishra, and Harbhajan Singh also perform consistently with over 100 wickets each.
2. Wicket-taking trends: The graph suggests a decline in wicket-taking as bowlers rank lower. While the top bowlers have over 150 wickets, the bottom bowlers have between 25 and 75 wickets.

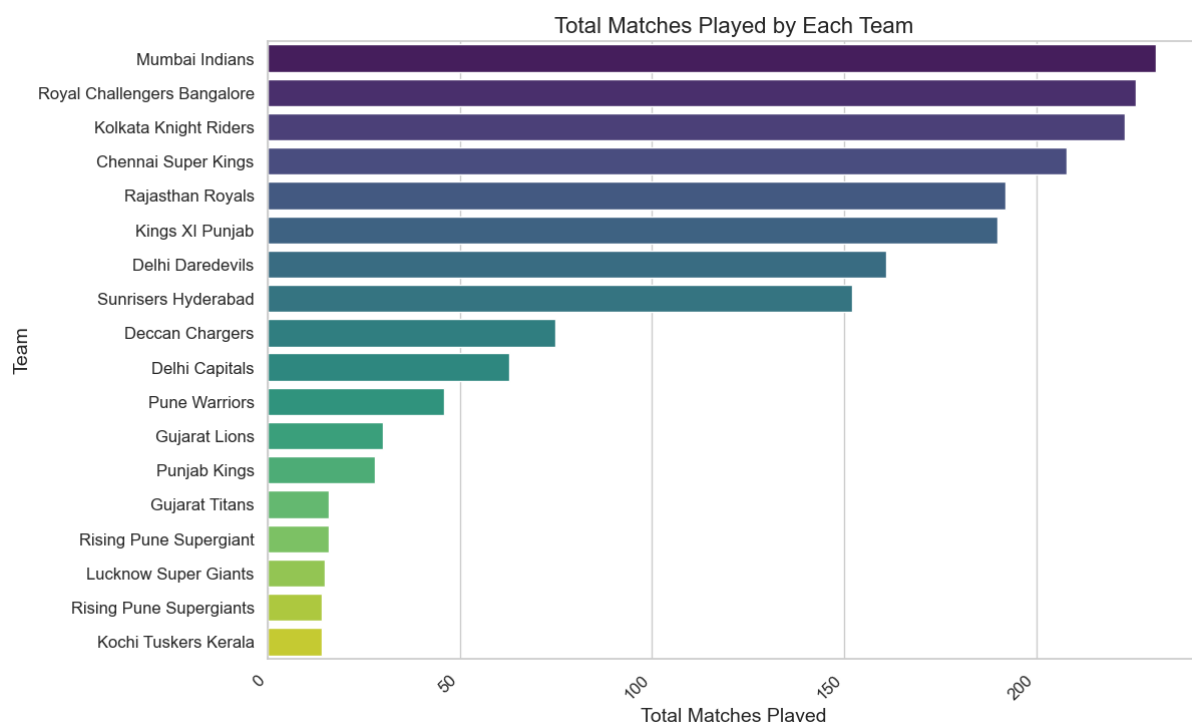
### ➤ Bowler Performance Against Opponent Teams:



- Bowler performance against opponent teams: This graph shows the average wicket count of each bowler against different teams in the Indian Premier League.
- Variations in success: Bowlers have varying average wicket counts depending on the opponent. For instance, A Mishra has a high average against Chennai Super Kings (12 wickets), while Harbhajan Singh has a high average against Rajasthan Royals (19 wickets).

## ❖ Data Analysis of Teams

### ➤ Total Match Played by Each Team



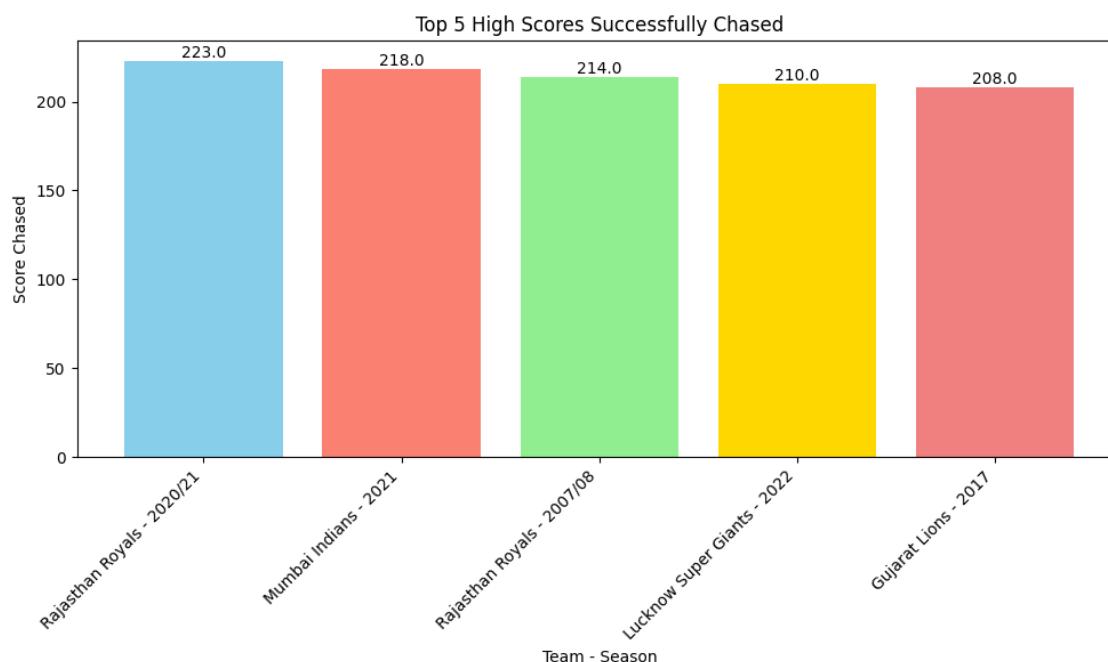
- **Mumbai Indians Lead the Chart:**

Mumbai Indians have participated in the highest number of matches, with a total of 231 appearances. Their consistent presence underscores their strong and enduring performance in the IPL.

- **Close Competition Among Top Teams:**

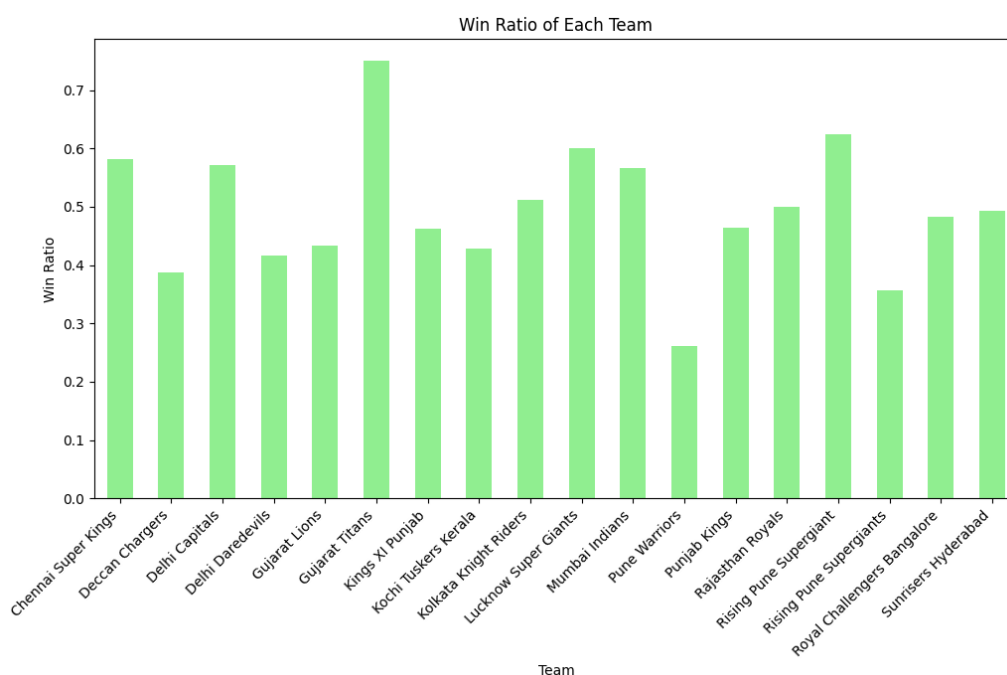
Royal Challengers Bangalore (226) and Kolkata Knight Riders (223) closely follow Mumbai Indians, indicating a competitive landscape among the top-performing teams in terms of match participation.

## ➤ High scores Successfully Chased



- Rajasthan Royals showcased their batting strength by successfully pursuing targets of 223 against Kings XI Punjab in 2020/21 and 214 against Deccan Chargers in 2007/08. Mumbai Indians displayed their chase-master skills with a successful pursuit of 218 against Chennai Super Kings in 2021. Additionally, Lucknow Super Giants and Gujarat Lions demonstrated their prowess by successfully chasing targets of 210 against Chennai Super Kings in 2022 and 208 against Delhi Daredevils in 2017, respectively. These instances underscore the resilience and batting capabilities of these IPL teams across various seasons.

## ➤ Win Ratio of Each Team



- Top Performers:

The teams with the highest win ratios are Gujarat Titans (75.00%), Rising Pune Supergiant (62.50%), and Lucknow Super Giants (60.00%). These teams have consistently performed well in terms of winning matches.

- Mid-Range Performers:

Teams like Chennai Super Kings (58.17%), Mumbai Indians (56.71%), and Sunrisers Hyderabad (49.34%) fall in the mid-range win ratio category. They have achieved a balanced performance with a notable number of victories.

- Struggling Teams:

Pune Warriors (26.09%) and Rising Pune Supergiants (35.71%) have struggled to maintain a high win ratio.

- Consistency in the Middle:

Teams like Delhi Capitals (57.14%), Kolkata Knight Riders (51.12%), and Rajasthan Royals (50.00%) have displayed consistent performances in the middle range.