

Indian Premier League

Boda Surya Venkata Jyothi Sowmya

ABSTRACT

This project analyzes data from the Indian Premier League (IPL) from 2008 to 2019 using different visualizations. It looks at team performances, match results, player statistics, and trends related to venues. The graphs help identify patterns like which teams performed well, how the toss decision impacted results, and the role of home ground advantage. The project also highlights key players, top bowlers, and batsmen. The goal is to make IPL data easier to understand by using clear and simple visualizations to show important trends and insights from the matches.

INTRODUCTION

Launched in 2008, the Indian Premier League (IPL) is a world-renowned Twenty20 cricket tournament that has generated a lot of statistics over the times. The data set of IPL matches from 2008 to 2019 contains basic information such as tournament results, team names, cities, toss winners, decisions and final results.

In this data visualization project, we'll analyze the total matches won by each team, identify the top batsmen by runs, and highlight the highest individual scores in a match. Additionally, we'll examine the most effective bowlers, the cities and stadiums with the most matches, and the players with the most Man of the Match awards. Our goal is to uncover insights into the competitive nature of the IPL and its standout performances.

DATA DESCRIPTION

Column Name	Description
id	Unique id allotted to each match
city	City where match was played
season	In which year the match was played
date	Date on which match was played
player_of_match	Man of the Match
venue	Stadium where match was played
team1	First of the two teams competing
team2	Second of the two teams competing
toss_winner	Team which won the toss
toss_decision	Batting or bowling decision made by the toss winning team
winner	Team which won the match
result	Winning Factor which is either by runs or wickets
dl_applied	Duckworth-Lewis method adjusts target in rain-affected matches.
win_by_runs	First team wins by run difference
win_by_wickets	Second team wins with remaining wickets
umpire1	Main on-field official overseeing match rules.
umpire2	Secondary on-field official assisting main umpire.

	mean	sd	2.5%	25%	50%	75%	97.5%
win_by_runs	13.28	23.47	0.00	0.00	0.00	19.00	85.00
win_by_wickets	3.35	3.39	0.00	0.00	4.00	6.00	9.00

Table 2: Summary Statistics of Win by runs, Win by wickets

EXPLORATORY DATA ANALYSIS

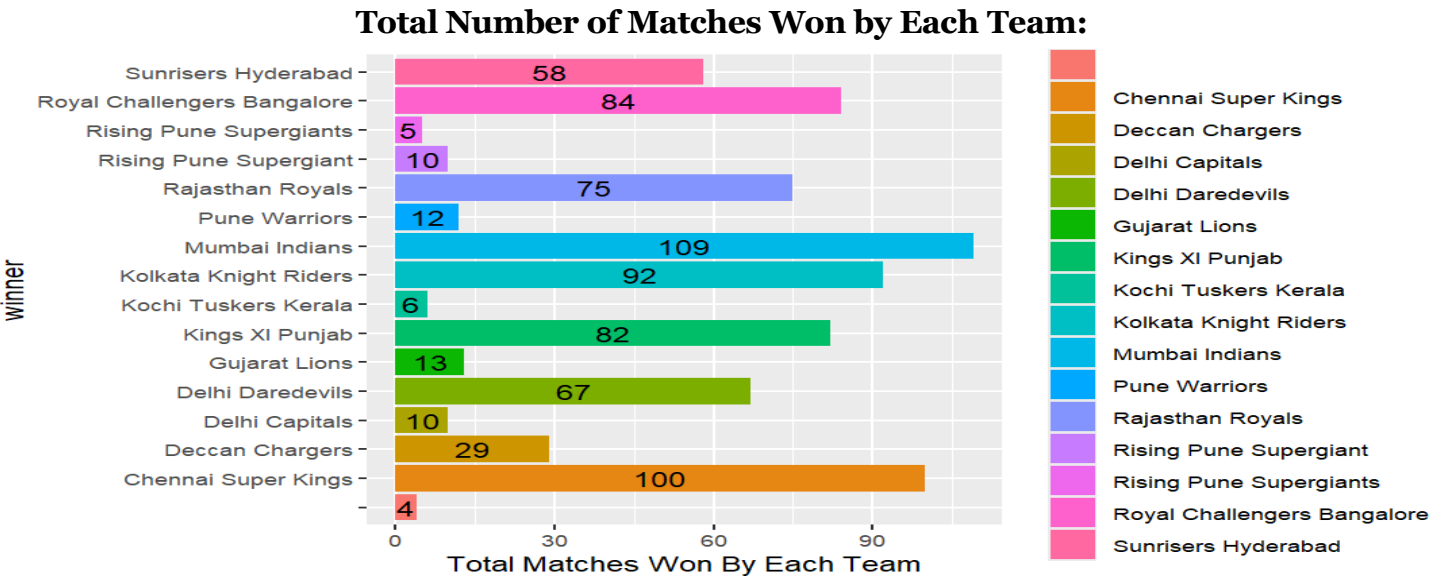


Figure 1: No of Matches won by each team

Understanding team performance over time gives insights into their consistency and competitiveness. Identifies dominant teams and allows comparisons of team success across seasons, highlighting trends in performance.

Percentage of captains choosing Batting or Fielding after winning the toss

Toss Decision in percent

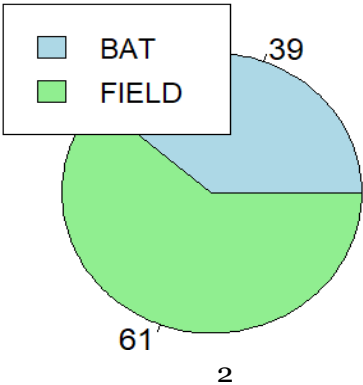


Figure 2: Toss Decision

A majority of captains(61%) prefer to field first, suggesting they believe it's advantageous to chase a target. Only 39% choose to bat first, which may indicate a strategy to assess conditions and opponent performance before setting a target. This trend highlights a common strategy in cricket where teams feel more confident in chasing runs rather than setting them.

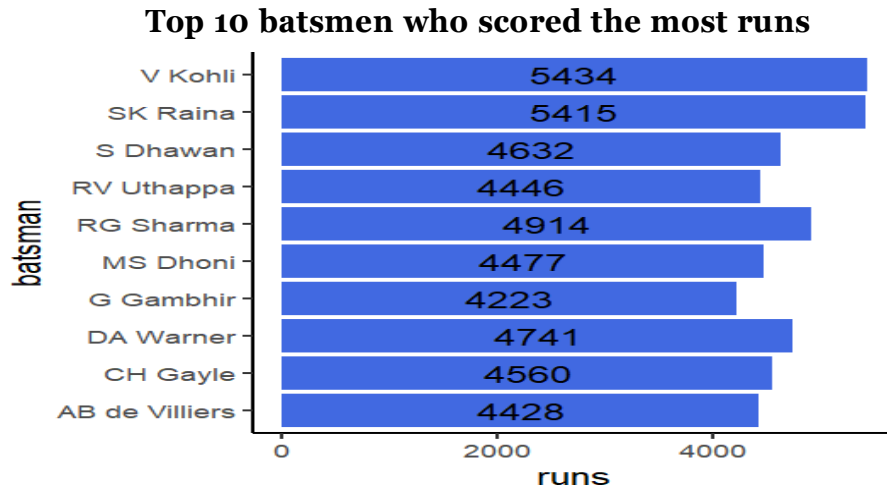


Figure 3: Top 10 batsmen scoring most runs

The graph highlights the leading batsmen, showing who scored the most runs overall. This will highlight extraordinary individual performances, identifying matches where batsmen played a crucial role by scoring big.

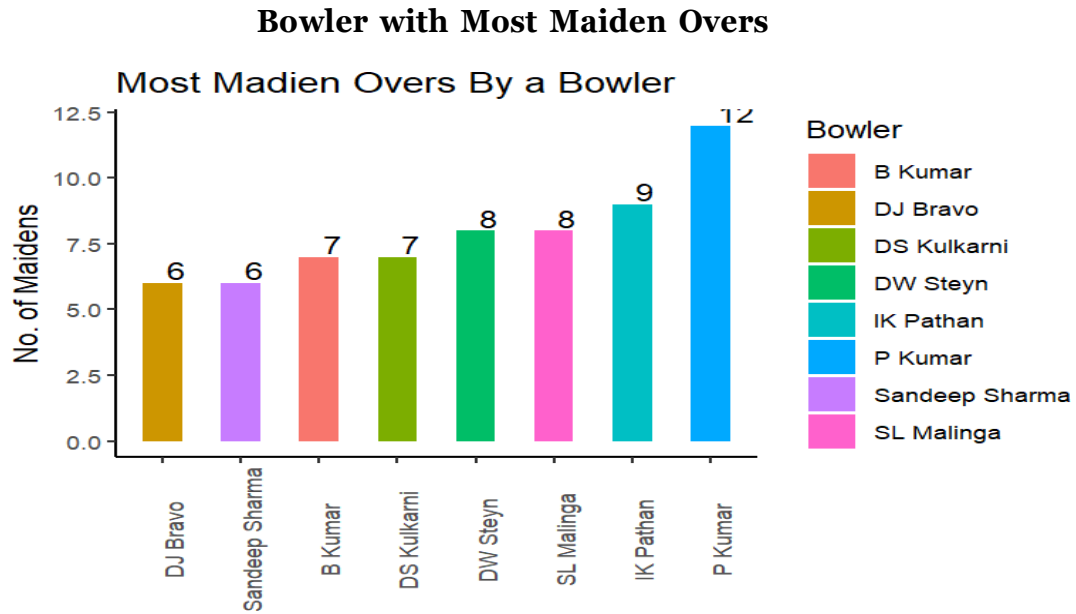


Figure 4: Bowler with most maiden overs

The bar graph shows bowlers with the highest number of maiden overs. Bowlers with the most maidens have a significant impact on controlling the game's momentum.

Most wicket Taking Bowlers

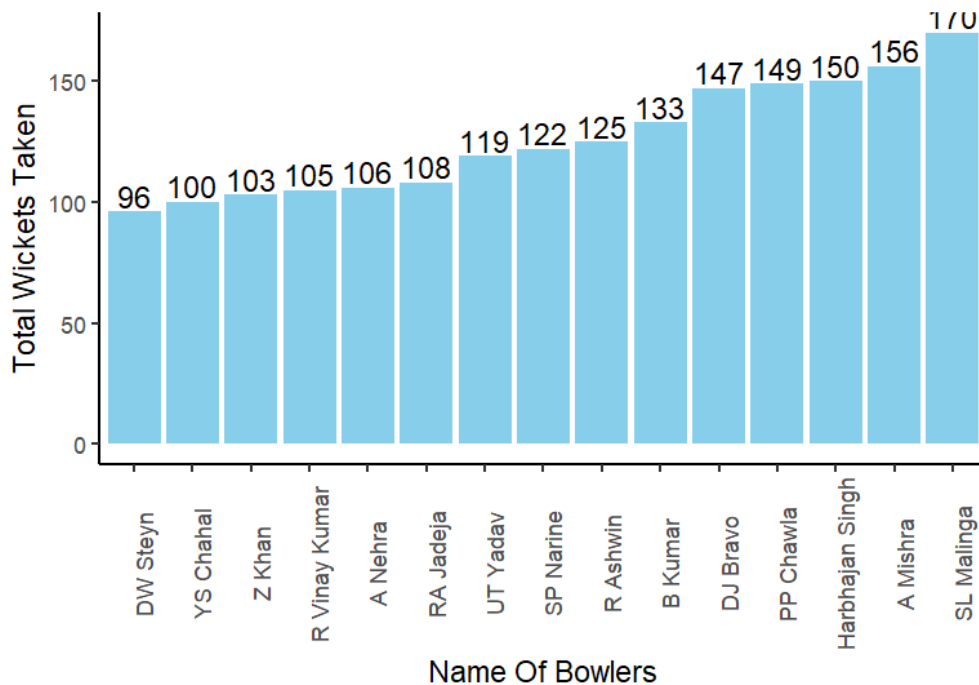


Figure 5: Most wicket Taking Bowler

The bar graph shows the top wicket-taking bowlers in the IPL. Higher bars indicate significant contributions to their teams.

Batsman with high strike rate

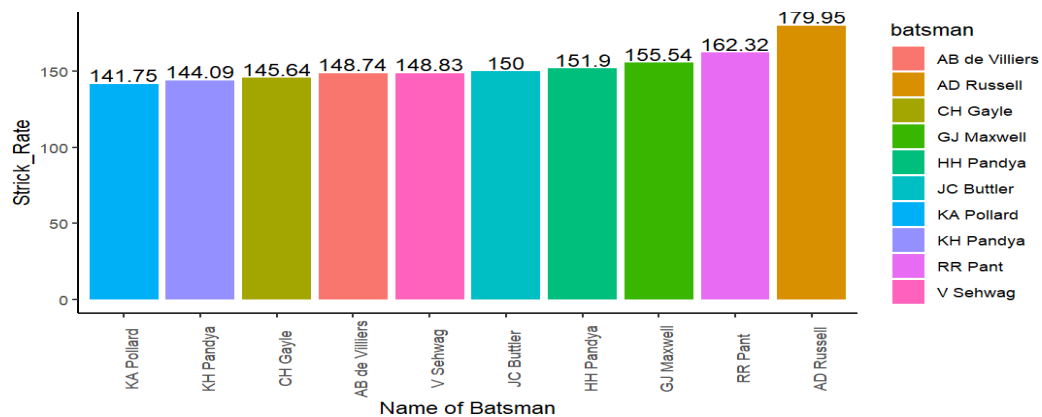


Figure 6: Batsmen with Highest Strike Rate

The bar graph shows the top 10 batsmen with the highest strike rates in the IPL, highlighting their scoring efficiency. It allows for easy comparison among players, identifying those who excel at quick scoring, contributing significantly to their teams.

Who has got the most number of Man of the match awards

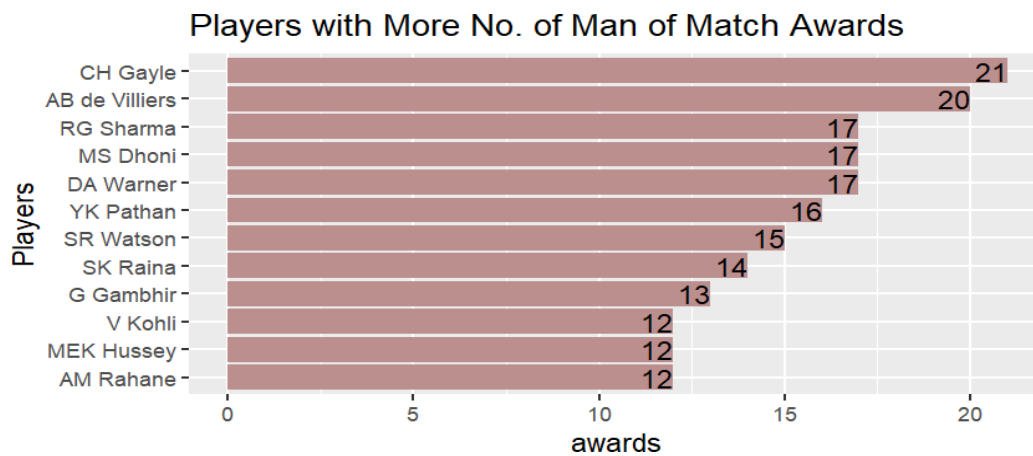


Figure 7: Player with Man of the Match Awards

The bar graph highlights the top players with the most “Man of the Match” awards in the IPL, showcasing their impact in crucial games. It allows for easy comparison, identifying standout performers recognized for their exceptional contributions to matches.

RESULT

- 1. Total Number of Matches Won by Each Team:** This analysis shows which teams have won the most matches. Teams like Mumbai Indians and Chennai Super Kings have been the most successful, winning the most games over the years, because of their strong players and good strategies.
- 2. Percentage of Captains Choosing Batting or Fielding After Winning the Toss:** Captains usually choose to field first after winning the toss. This is because they prefer to know the target score when chasing. However, their decision often depends on the pitch conditions and their team’s strengths.
- 3. Top 10 Batsmen Who Scored the Most Runs:** Players with most runs are consistent and reliable for their teams. These batsmen have made a big impact by scoring lots of runs in many IPL seasons.
- 4. Bowler with Most Maiden Overs:** Bowlers who bowled the most maiden overs, are excellent at stopping the flow of runs. Bowling a maiden over is important in T20 cricket because it builds pressure on the batting side.
- 5. Most Wicket-Taking Bowlers:** Bowlers have taken the most wickets, are great at breaking partnerships and changing the course of matches by getting crucial wickets at key moments.
- 6. Batsman with High Strike Rate:** Batsmen with high strike rates, are known for their aggressive style. They can score runs quickly and change the momentum of the game in a short time, which is very important in T20 cricket.
- 7. Players with the Most Number of Man of the Match Awards:** Players like Chris Gayle and AB de Villiers have won the most Man of the Match awards. This shows that they have delivered game-changing performances many times and have been key players for their teams.

CONCLUSION

This analysis highlights that success in the IPL relies on several key factors, such as good batting, efficient bowling, and wise toss decisions. Teams that consistently perform well across these areas tend to win more matches. Batsmen with high strike rates and bowlers who take key wickets play crucial roles in their teams’ victories. Additionally, players who deliver standout performances often receive recognition, which significantly influences match outcomes. Smart strategies and consistent performance are essential for success in T20 cricket.