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🏏 IPL (2008-2024) MATCH ANALYSIS

INTRODUCTION OF THE PROJECT

This project analyzes **IPL** match data from **2008 to 2024** to identify trends in team performances, players, venues, and match-winning factors

Source : **Kaggle** (Download Dataset)

PROJECT OBJECTIVES

- Identify team performances over the years
- Analyze player statistics
- Extract insights from venue-based matches
- Determine toss impact on match results

PROJECT ROADMAP

1. Load and clean dataset
2. Perform exploratory data analysis (EDA)
3. Visualize key insights
4. Summarize findings

TOOLS & TECHNOLOGIES USED

- PYTHON
- PANDAS
- MATPLOTLIB
- SEABORN
- NUMPY
- JUPYTER NOTEBOOK

DATASET OVERVIEW

The dataset contains IPL match records from 2008 to 2024. It includes the columns like:

- **id** - A unique identifier for each match.
- **season** - The year in which the IPL season was held.
- **date** - The date when the match was played.
- **city** - The city where the match was played.
- **venue** - The stadium where the match took place.
- **team1** - The first team playing in the match.
- **team2** - The second team playing in the match.
- **toss_winner** - The team that won the toss.
- **toss_decision** - The decision made by the toss-winning team (batting or fielding).
- **winner** - The team that won the match.
- **result** - The match result type (e.g., normal, tie, no result)

DATASET OVERVIEW

- **result_margin** - The margin by which the match was won (runs or wickets).
- **method** - The method used in case of rain-affected matches (e.g., DLS).
- **player_of_match** - The player awarded "Man of the Match."
- **target_runs** - Target runs set for the chasing team (if applicable).
- **target_overs** - Number of overs assigned to the chasing team.
- **umpire1** - The first umpire officiating the match.
- **umpire2** - The second umpire officiating the match.

DATA CLEANING & PREPROCESSING

- Handled missing values in key columns
- Checked outliers and treated them.
- Found shape of the data
- Described data
- Standardized data for consistency

QUESTIONNAIRE SECTION

TEAM PERFORMANCE

Sec 1

PLAYER PERFORMANCE

Sec 2

VENUE INSIGHTS

Sec 3

TOSS AND WINNING PATTERNS

Sec 4

MATCH RESULTS ANALYSIS

Sec 5

SECTION - 1
TEAM PERFORMANCE

Ques1. Which team has won most finals?
Ans. **Chennai Super Kings** and **Mumbai Indian** have won most i.e., **5 Titles**.

Ques2. Which team has won the most matches overall?
Ans. Team **Mumbai Indians** has won the most matches i.e., **142** matches in the IPL history

SECTION - 1
TEAM PERFORMANCE

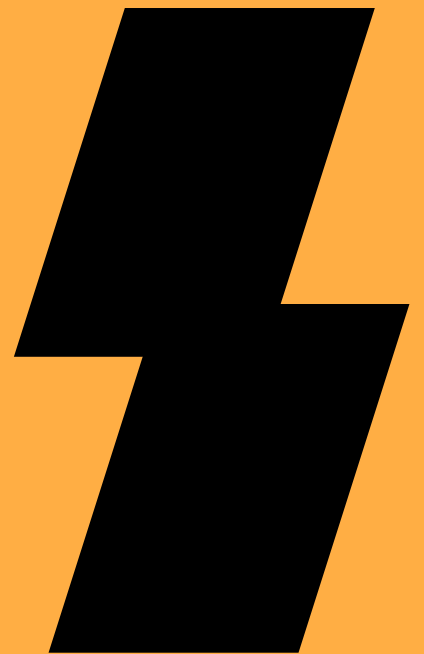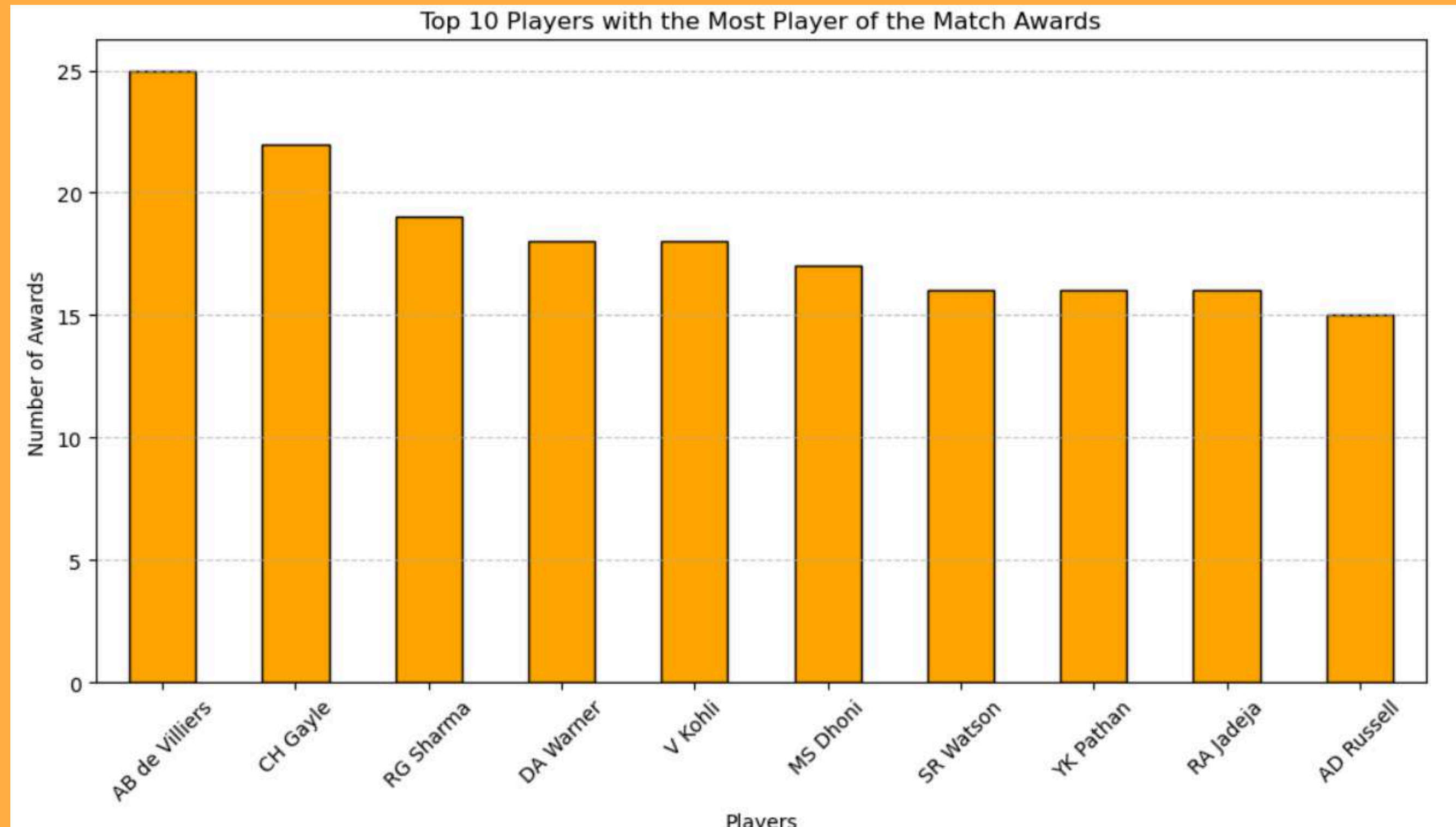Ques3. Highest win percentage of team?
Ans. **Gujarat Titans** with the winning percentage of **62%.**

Ques4. Which team performs best at their home ground?
Ans. Team **Mumbai Indians** performs best at their home grounds.

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SECTION 2: PLAYER PERFORMANCE

Ques1. Who are the top players with the most "Player of the Match" awards?

Top 10 Players with the Most Player of the Match Awards

SECTION 2: PLAYER PERFORMANCE

Ques 2. Does a particular player's performance correlate with team victories in certain venues or cities?

Ans. Here we can say that if the venue is **M Chinnaswamy Stadium** and if the **CH Gayle** is in the team, it is more likely that the team is going to win and the player of the match award is more likely to go to **CH Gayle**.

SECTION3: VENUE INSIGHTS

Ques1. Which venue hosts the most matches?
Ans. **Eden Gardens** hosts the most matches i.e, **77**.

Ques2. Which is the most top scored venue in the history of the IPL?
Ans. **M Chinnaswamy Stadium, Bengaluru** with the highest ever total of **288** runs.

SECTION4: TOSS AND WINNING PATTERNS

Ques1. What are the most common toss decisions (bat/field)?
Ans. The winner of the toss most of the times **choses to field first.**

Ques2. Is batting first or chasing more successful in finals?
Ans. **Batting first** proves to be more **successful** than chasing in finals.

Ques3. What is the percentage of matches won while chasing and while defending?
Ans. **While Chasing - 53.72 %**
While Defending - 46.28 %

SECTION4: TOSS AND WINNING PATTERNS

Ques4. Which team wins matches more often when they win the toss?

Ans. **Mumbai Indians** has won **77** which is the maximum when they win the toss.

Ques5. Which team has the highest win percentage when they win the toss?

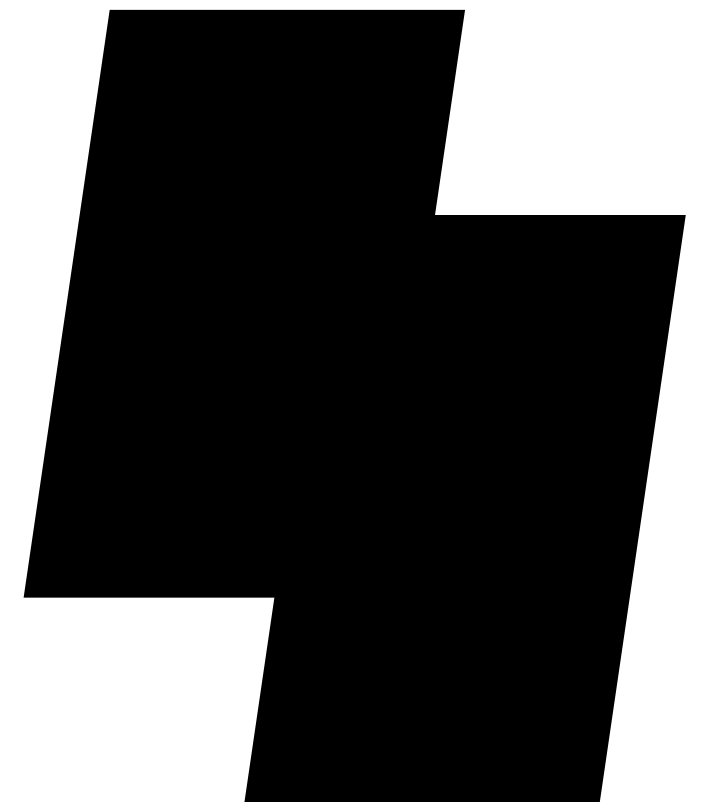Ans. **Gujarat Lions**, with a win percentage of **71.43 %**

SECTION5 - MATCH RESULTS ANALYSIS AND TRENDS

Ques1. What is the highest team score in IPL history?

Ans. **288 runs** is the highest ever total in the IPL history

Ques2. How many matches in IPL history encountered super-over and which team has won the most super-overs?

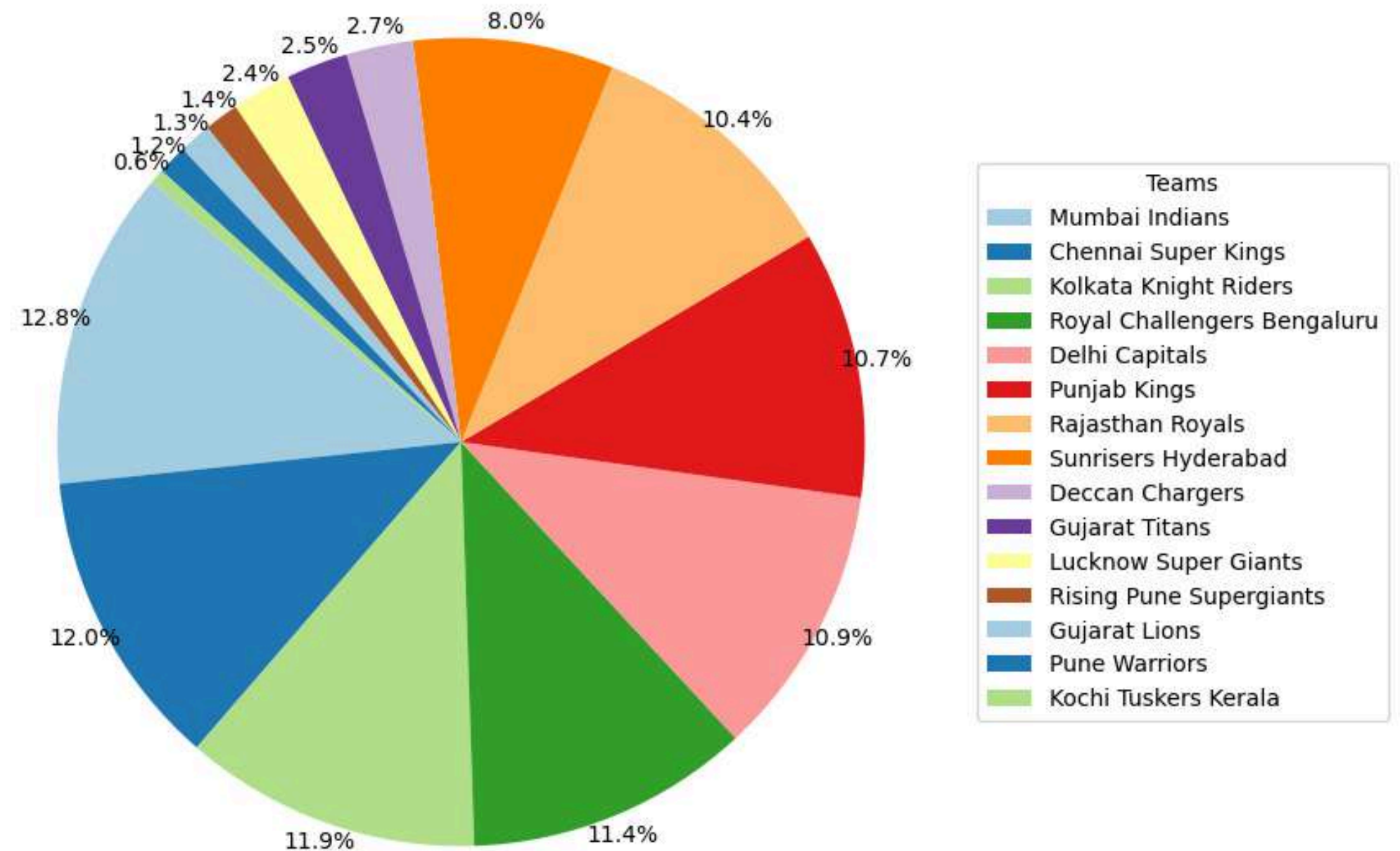Ans. **Punjab Kings** have won the most super overs i.e., **3 matches.**

SECTION5 - MATCH RESULTS ANALYSIS AND TRENDS

Ques3. Which type of match (e.g., league, playoff) has the most number of wins by a specific team?

Ans. **Mumbai Indians** have won the maximum **129 League Matches**

Teams with Most Wins in Different Match Types

Legend — Teams:
- Mumbai Indians
- Chennai Super Kings
- Kolkata Knight Riders
- Royal Challengers Bengaluru
- Delhi Capitals
- Punjab Kings
- Rajasthan Royals
- Sunrisers Hyderabad
- Deccan Chargers
- Gujarat Titans
- Lucknow Super Giants
- Rising Pune Supergiants
- Gujarat Lions
- Pune Warriors
- Kochi Tuskers Kerala

Pie chart percentages: 8.0%, 10.4%, 10.7%, 10.9%, 11.4%, 11.9%, 12.0%, 12.8%, 2.7%, 2.5%, 2.4%, 1.4%, 1.3%, 1.2%, 0.6%

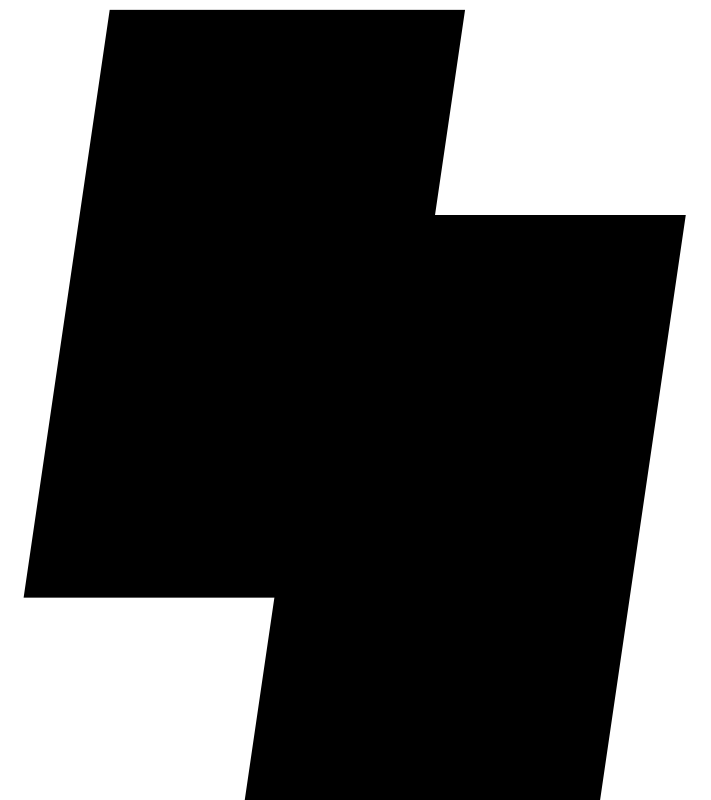# SECTION5 - MATCH RESULTS ANALYSIS AND TRENDS

Ques4. What are the most common winning margins (by runs/wickets)?

Ans. **By runs - 10 runs** with maximum of **17 results**.

By wickets - 6 wickets with maximum of **120 results**.

Ques5. Which team has won most matches and how many times when the match proceeds with D/L method?

Ans. **Kolkata Knight Riders** and has won total **4 matches**

SECTION5 - MATCH RESULTS ANALYSIS AND TRENDS

Ques6. Which team has the most dramatic wins (highest result margin)?
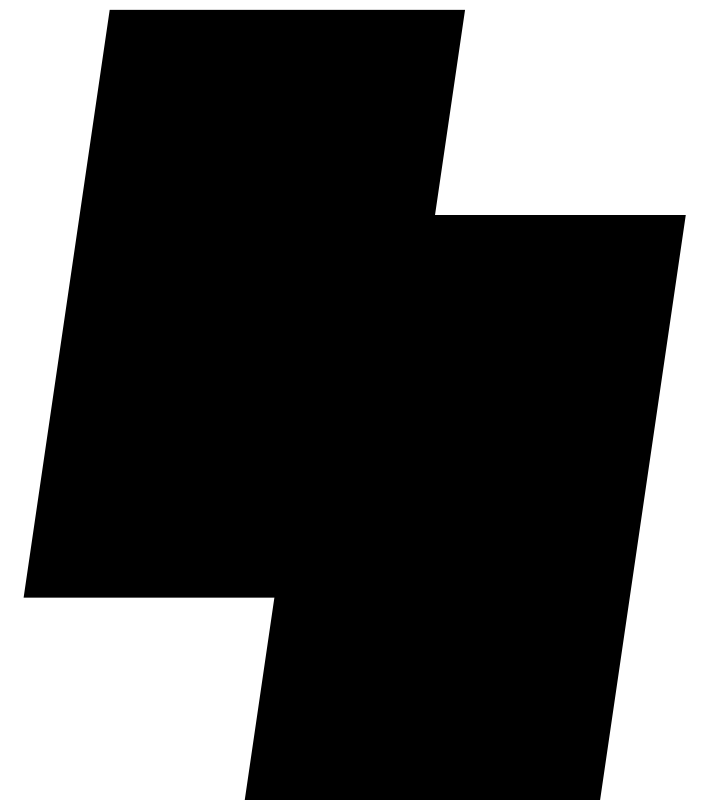
Ans. **Mumbai Indians** with margin of **146 runs**

Ques7. What is the average margin of victory for each team?

Ans. **By runs** : **30 runs**

By wickets : **6 wickets**

Ques8. What is the success rate of toss winners?

Ans. **50.93%**

CONCLUSIONS

The analysis provides valuable insights into IPL match trends, helping teams strategize better for future seasons. Some of the insights are as follows:

- Chasing is more successful in the matches apart from the final, whereas Batting first is more successful in finals

- Success Rate of toss winner is almost same as those who lose the toss.

THANK YOU