

# INDIAN PREMIER LEAGUE DATA ANALYSIS



## PROBLEM STATEMENT

To perform exploratory data analysis on Indian Premier League (IPL) matches data in order to gain insights and understand the key trends, patterns, and factors that contribute to the success or failure of teams in the tournament. A comprehensive overview of the IPL matches, including team performance, player statistics, match outcomes, and other relevant factors, with the goal of identifying the key drivers of success and informing strategic decision-making for teams, players in the IPL ecosystem.

## DATASET DESCRIPTION

**Source:ESPN**  
The dataset appears to be a collection of records related to Indian Premier League (IPL) matches held from 2008- 2022 season. Each row in the dataset represents a single match, and the columns contain various attributes and information about each match. The data has 19 features.

## PRE PROCESSING

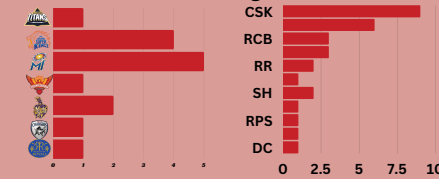
**Data cleaning**  
Importing all required libraries and reading the dataset file and displaying the info:</div>

**Data standardization:**  
Renaming the columns.

Checking whether there are any missing values in the dataset.

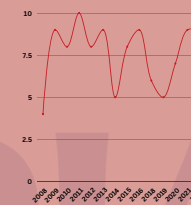
Dropping unwanted rows or columns.

1)Comparing the barplots of number of final appearances of a team and winning the final



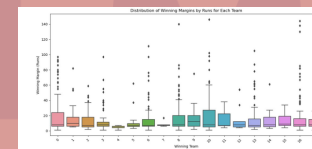
Inference: Shows the teams consistency and success

3) Performance of a particular team(RCB) every season



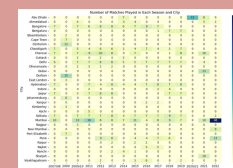
Inference: If team is under acheiever

5)What is the distribution of winning margins (by runs) for matches won by each team



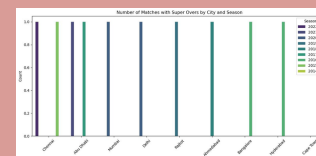
Inference:Strength of Bowling and Batting,Impact of Toss and Fielding First

7)How does the number of matches played in each season and city change over the years?



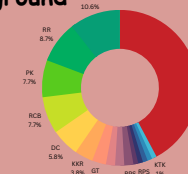
Inference:Seasonal Variations,Shifts in Popularity

9)How does the number of matches with Super Overs vary across different cities and seasons



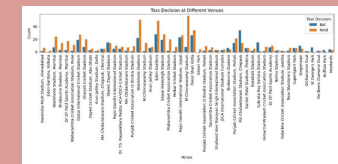
Inference: Entertainment factor, superover frequency

2)Total matches won and total percentage of matches won in home ground



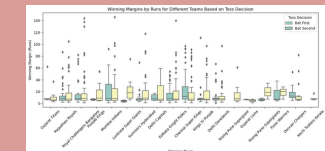
Inference: Checking for Home ground advantage

4)How does the toss-winning decision vary across venues?



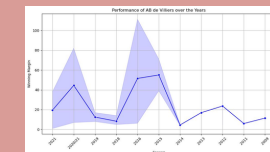
Inference:Pitch and Weather Conditions,Home Advantage.

6)How does the performance of teams vary when they win the toss and bat first vs. bat second?



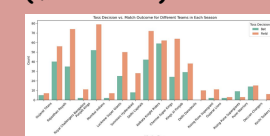
Inference:Team Preferences,Winning Streaks

8)How does the performance of the top player (by "Player of the Match" awards) change over the years



Inference:Emergence of New Talents,All-Round Performances

10)How does the toss decision (batting/fielding) influence the match outcome (win/loss) for different teams in each season?(multivariate)



Inference:Toss Decision Impact