

Project Title	IPL Data Analysis Using Power BI/Tableau
Skills take away From This Project	Data Visualization using Power BI/Tableau Dashboard Creation Exploratory Data Analysis (EDA) Generating Insights from Data Interactive Reporting Data Validation Techniques
Domain	Sports Analytics

 **IPL_ANALYSIS-ORIENTATION-VIDEO.mp4**

Problem Statement:

The aim of the project is to analyze the data of the Indian Premier League (IPL) to gain insights into the game using Power BI or Tableau

Business Use Cases:

- Identifying the most successful teams and players in the IPL.
- Determining the factors that contribute to a team's or player's success.
- Analyzing the impact of different playing conditions on the outcome of matches.
- Identifying trends in IPL data over time.
- Generating insights that can be used to improve the performance of IPL teams and players.
- Player selection and auction strategies.
- Performance analysis and optimization.
- Augmented coaching and data-driven analysis.
- Enhancing fan engagement.

- Improving broadcasting strategies.

Approach:

1. **Data Collection:** Use the provided IPL datasets.
2. **Data Cleaning and Preparation:**
 - Use Power BI or Tableau to handle missing values and ensure data consistency.
3. **Data Analysis and Visualization:**
 - Create visual representations of the following:
 - Highest and lowest scorers in the IPL.
 - Bowlers with the most wickets and those with zero wickets.
 - Stats of the top 5 bowlers.
 - Top fielders based on catches and run-outs.
 - Number of tosses won by each team and match winners after winning the toss.
 - Most successful IPL teams.
 - Most sixes and fours by individuals and teams.
 - Decisions made after winning the toss, both overall and team-wise.
 - Number of matches hosted by different cities and identify the lucky stadium for the top team.
4. **Insights Generation:** Use Power BI/Tableau features to draw meaningful insights and conclusions.

Results:

By the end of the project, learners should be able to:

- Identify the top performers in the IPL.
- Understand the factors contributing to the success of teams and players.
- Recognize the impact of toss decisions on match outcomes.
- Generate actionable insights to help IPL teams improve their strategies.

- Create interactive dashboards to visualize the analysis using Power BI or Tableau.

Project Evaluation metrics:

- Accuracy of data cleaning and preprocessing steps.
- Quality and clarity of data visualizations.
- Depth and accuracy of insights generated.
- Ability to answer the specific analysis questions provided.
- Proficiency in creating and interpreting Power BI/Tableau dashboards.

Technical Tags:

Power BI

Tableau

Data Visualization

Sports Analytics

IPL

Data Analysis

Dashboard Creation

EDA

Data Set:

Source:  matches (1)

 deliveries

Format: CSV files

Variables: Player names, team names, match details, scores, wickets, catches, run-outs, city names, stadium names, toss details, match results, etc.

Data Set Explanation:

Matches Dataset Columns

id: Unique identifier for each match.

season: The year the IPL season took place.

city: The city where the match was played.

date: The date on which the match was played.

team1: The name of one of the teams that played the match.

team2: The name of the other team that played the match.

toss_winner: The team that won the toss.

toss_decision: The decision made by the toss-winning team (field or bat).

result: The result of the match (e.g., normal, tie).

dl_applied: Indicates if the Duckworth-Lewis method was applied (1 if applied, 0 if not).

winner: The team that won the match.

win_by_runs: Margin of victory in runs if the match was won by runs.

win_by_wickets: Margin of victory in wickets if the match was won by wickets.

player_of_match: The player who was awarded the Player of the Match.

venue: The name of the stadium where the match was played.

umpire1: The name of the first umpire.

umpire2: The name of the second umpire.

umpire3: The name of the third umpire (if any).

Deliveries Dataset Columns

match_id: Unique identifier for each match (same as in the matches dataset).

inning: The inning number (1 or 2).

batting_team: The team that is currently batting.

bowling_team: The team that is currently bowling.

over: The over number in the current inning.

ball: The ball number in the current over.

batsman: The name of the batsman facing the delivery.

non_striker: The name of the batsman at the non-striker end.

bowler: The name of the bowler delivering the ball.

is_super_over: Indicates if the ball was delivered in a Super Over (1 if true, 0 if not).

wide_runs: Number of runs scored as wides in the delivery.

bye_runs: Number of runs scored as byes in the delivery.

legbye_runs: Number of runs scored as leg byes in the delivery.

noball_runs: Number of runs scored as no-balls in the delivery.

penalty_runs: Number of penalty runs awarded in the delivery.

batsman_runs: Number of runs scored by the batsman on the delivery.

extra_runs: Total extra runs awarded in the delivery (sum of wide, bye, legbye, noball, and penalty runs).

total_runs: Total runs scored in the delivery (sum of batsman runs and extra runs).

player_dismissed: Name of the player dismissed in the delivery (if any).

dismissal_kind: The method of dismissal (e.g., caught, bowled, run-out).

fielder: Name of the fielder involved in the dismissal (if any).

Project Deliverables:

A Power BI or Tableau dashboard with the following:

- Visualizations showcasing the top performers in various categories.
- Analysis of match outcomes, toss decisions, and trends over seasons.
- Interactive filters to explore the data by team, player, season, and match venue.
- Insights and conclusions drawn from the data.

A report summarizing the analysis, insights, and recommendations.

Project Guidelines:

- Follow best practices for data visualization and dashboard design.
- Ensure data accuracy and consistency.
- Use interactive features of Power BI/Tableau to make the dashboard user-friendly.
- Document any assumptions or data cleaning steps.

Timeline: 7 Days (31st August)

