IPL 2025 Analytics using Power BI

ABSTRACT

The Indian Premier League (IPL) is one of the most data-intensive sporting leagues in the world, generating massive volumes of match, team, venue, and player-level data every season. This project focuses on analyzing IPL 2025 data using Microsoft Power BI to derive meaningful insights about team performance, match outcomes, player contributions, and venue-based trends.

Two interactive dashboards were designed: one focusing on Team Performance & Match Insights, and another emphasizing Teams & Players Information. These dashboards transform raw cricket data into visually rich, interactive reports that support decision-making, performance comparison, and trend analysis. The project demonstrates how data visualization and BI tools can be applied in the sports analytics domain for academic and real-world use.

INTRODUCTION

Sports analytics has become an essential part of modern decision-making in professional sports. In cricket, especially in leagues like the IPL, teams rely heavily on historical and real-time data to evaluate player performance, strategize match plans, and optimize team selection.

The objective of this project is to analyze IPL 2025 data using Power BI and present insights through interactive dashboards. By integrating match-level, team-level, and player-level data, the project provides a comprehensive analytical view of the tournament.

OBJECTIVES OF THE PROJECT

- To analyze IPL 2025 match and player data using Power BI.
- To compare team performance based on runs, wins, toss outcomes, and wickets.
- To analyze player performance using metrics such as runs, balls faced, strike rate, fours, and sixes.
- To visualize venue-based match distribution and outcomes.
- To gain practical experience in dashboard design and business intelligence concepts.

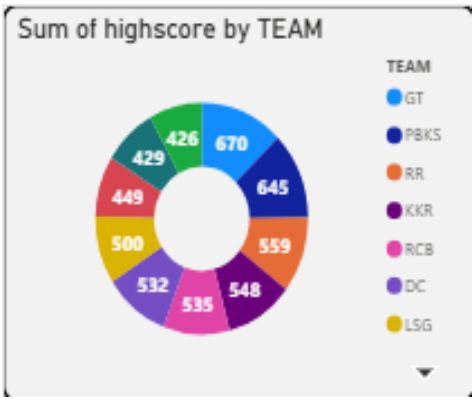
TOOLS & TECHNOLOGY USED

• Microsoft Power BI – Data modeling, DAX calculations, and dashboard development.
• Microsoft Excel / CSV – Source data storage and preprocessing.
• Power Query – Data cleaning and transformation.
• DAX (Data Analysis Expressions) – Calculated measures and KPIs.
• Windows OS – Development environment.

DASHBOARD 1: IPL 2025 Team Performance & Match Insights

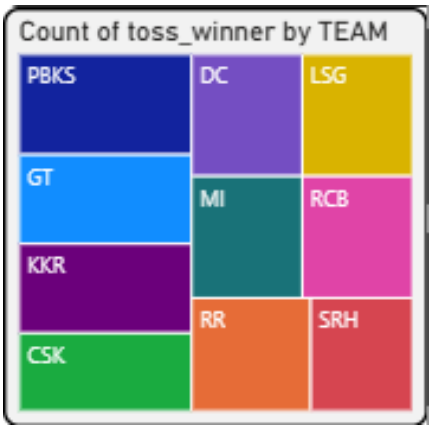
1. Sum of High Score by Team (Donut Chart)

This visual represents the cumulative highest scores achieved by each IPL team. It helps identify teams with strong batting dominance across the season. The donut chart format allows easy percentage comparison between teams.



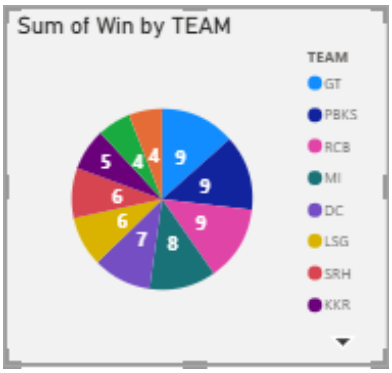
2. Toss Winner Count by Team (Treemap)

This treemap displays how many times each team has won the toss. Toss outcomes play a strategic role in cricket, influencing batting or bowling decisions.



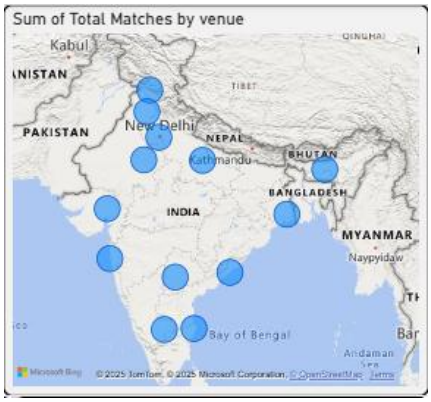
3. Total Wins by Team (Pie Chart)

This chart shows the distribution of match wins across teams. It provides a quick comparison of overall team success in the tournament.



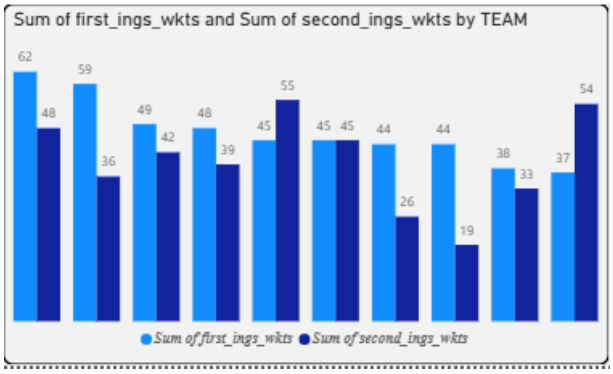
4. Matches by Venue (Map Visual)

The map visualization highlights match distribution across different Indian venues. It helps understand geographic spread and venue utilization during the IPL season.



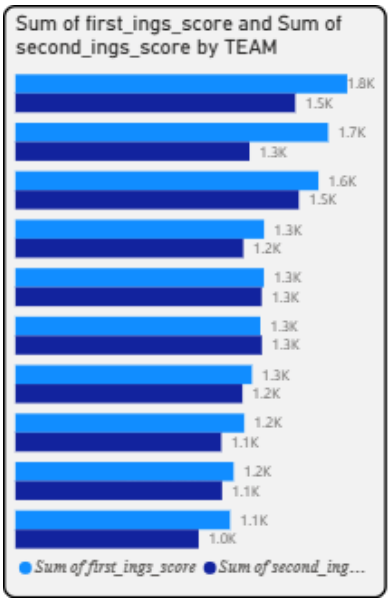
5. Wickets in First vs Second Innings (Clustered Bar Chart)

This visual compares wickets lost in first and second innings for each team. It provides insight into bowling strength and match pressure situations.



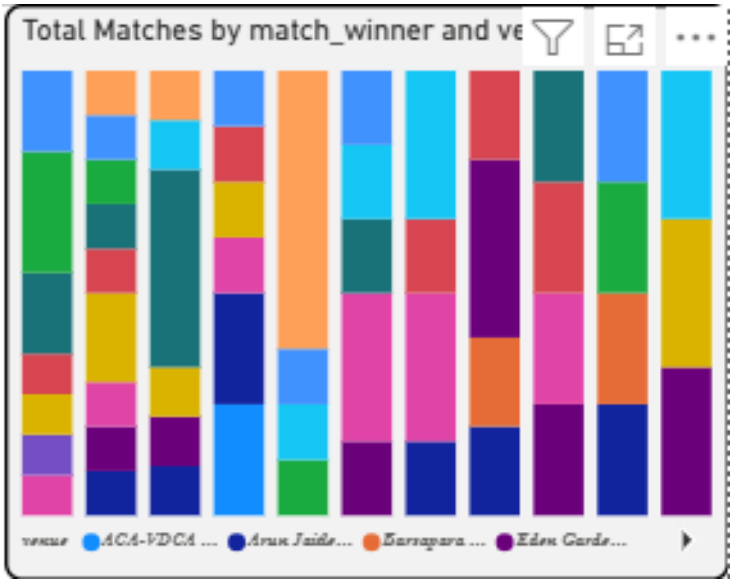
6. First Innings vs Second Innings Score by Team (Bar Chart)

This chart compares first-innings and second-innings total scores by team. It helps analyze whether teams perform better while setting a target or while chasing.



7. Matches Won by Venue & Team (Stacked Bar Chart)

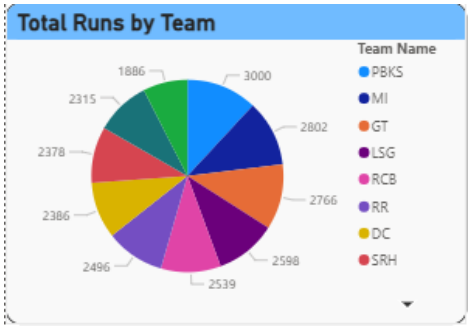
This chart shows how different teams perform across venues. It helps identify venue-specific strengths and weaknesses.



DASHBOARD 2: IPL Teams and Players Information

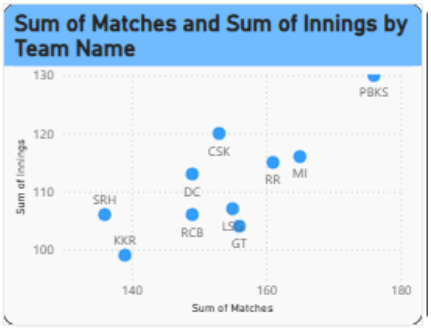
1. Total Runs by Team (Pie Chart)

This chart represents the total runs scored by each team in IPL 2025. It helps identify high-scoring teams and overall batting consistency.



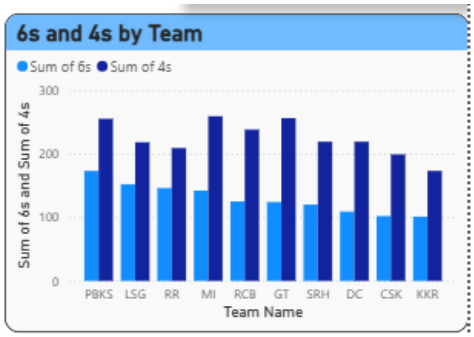
2. Matches vs Innings by Team (Scatter Plot)

The scatter plot compares the number of matches played against innings batted by teams. It provides insights into team utilization and consistency.



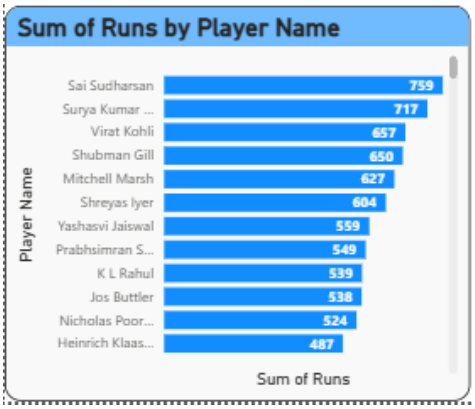
3. Total Sixes and Fours by Team (Bar Chart)

This visual highlights aggressive batting performance by comparing total sixes and fours hit by each team.



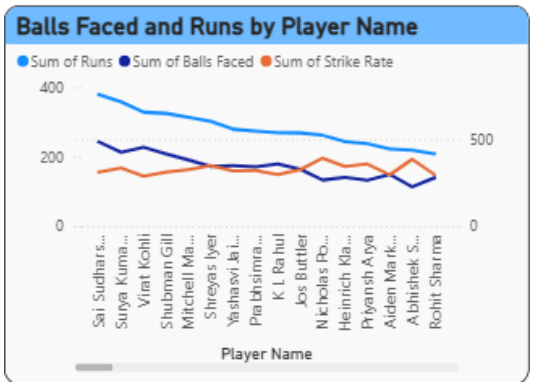
4. Total Runs by Player (Horizontal Bar Chart)

This chart ranks players based on total runs scored. It helps identify top-performing batsmen of the season.



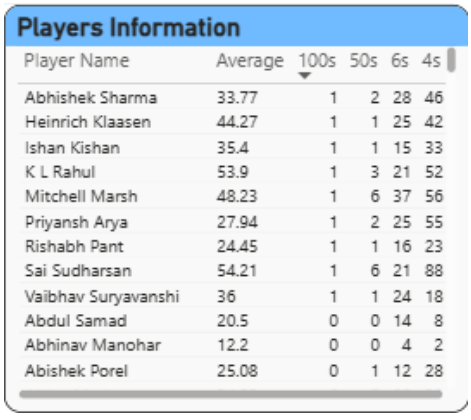
5. Balls Faced vs Runs vs Strike Rate (Line Chart)

This multi-metric chart compares balls faced, runs scored, and strike rate for players. It provides a balanced view of consistency and scoring speed.



6. Player Information Table

The table displays detailed player statistics such as average, hundreds, fifties, fours, and sixes. It allows detailed player-level analysis.



Players Information

Player Name	Average	100s	50s	6s	4s
Abhishek Sharma	33.77	1	2	28	46
Heinrich Klaasen	44.27	1	1	25	42
Ishan Kishan	35.4	1	1	15	33
K L Rahul	53.9	1	3	21	52
Mitchell Marsh	48.23	1	6	37	56
Priyansh Arya	27.94	1	2	25	55
Rishabh Pant	24.45	1	1	16	23
Sai Sudharsan	54.21	1	6	21	88
Vaibhav Suryavanshi	36	1	1	24	18
Abdul Samad	20.5	0	0	14	8
Abhinav Manohar	12.2	0	0	4	2
Abishek Porel	25.08	0	1	12	28

WHY THIS PROJECT IS IMPORTANT

- Demonstrates practical use of Power BI in sports analytics.
- Enhances understanding of data visualization and storytelling.
- Useful for academic evaluation and portfolio building.
- Helps understand real-world analytical use cases.

APPLICATIONS OF THE PROJECT

- Team performance evaluation.
- Player selection and scouting analysis.
- Venue-based strategy planning.
- Sports journalism and fan engagement.
- Academic learning and research.

CHALLENGES FACED

- Data cleaning and consistency issues.
- Handling multiple metrics in a single dashboard.
- Choosing appropriate visualizations.

FUTURE ENHANCEMENTS

- Integration of live IPL data using APIs.
- Player prediction and performance forecasting.
- Advanced DAX measures and AI visuals.
- Separate dashboards for bowling and fielding analytics.

CONCLUSION

This project successfully demonstrates how Power BI can be used to analyze and visualize IPL cricket data. By converting raw data into interactive dashboards, the project provides valuable insights into team performance, player contributions, and venue trends. The project serves as a strong academic submission and a foundation for advanced sports analytics work.