# IPL Analysis Dashboard (2008–2019) – Project Documentation

## 1. Problem Statement

The Indian Premier League (IPL), being one of the most popular cricket tournaments globally, has accumulated extensive data over the years from 2008 to 2019. However, the raw match data—including team performances, player statistics, and match decisions—was difficult to interpret due to lack of organization and interactive tools. The challenge was to transform this data into a meaningful format that offers clear insights into team consistency, player performances, and match trends to aid analysts, fans, and strategists.

## 2. Project Abstract

This project was designed to build a visually engaging, interactive IPL analysis dashboard using Microsoft Power BI. The dataset included attributes like match winners, total runs, top batsmen, bowlers, toss decisions, and match awards. Through data transformation, cleansing, and visualization in Power BI, the final report allows dynamic exploration across seasons, teams, and players.

Data Preparation Included:

* Data source: Cleaned IPL dataset (CSV/Excel) for seasons 2008 to 2019.
* Missing or inconsistent values were handled (e.g., blank player of the match, standardizing team names).
* Added calculated columns/measures using DAX (Data Analysis Expressions).

## 3. Proposed Solution

The IPL Dashboard was built using Power BI, covering the following components:

* Data Transformation and Modeling:
* Cleaned columns: Removed null values from match-winner, player of the match, etc.
* Calculated fields: Total Runs, Season filters, Strike Rate & Economy Rate
* Relationships established between match, delivery, and player tables
* Power BI Visualizations:
* Bar Charts: Top teams, runs by team, top batsmen
* Column Charts: Top bowlers by wickets and economy
* Pie Charts: Toss decision distribution
* Card Visuals: Latest match winner, Player of the match, Total runs
* Slicers: Season selection
* Tooltips: Player/team stats on hover

## 4. Flow Chart – Step-by-Step Process

Data Collection  
↓  
Raw IPL data from Kaggle/API/CSV (2008–2019)  
↓  
Data Cleaning & Transformation (in Power BI)  
→ Handling nulls  
→ Creating calculated fields  
→ Creating lookup tables  
↓  
Data Modeling  
→ Setting table relationships  
↓  
Dashboard Creation  
→ Cards, Bar Charts, Pie Charts  
→ Slicers for season filtering  
↓  
Final Output  
→ Fully interactive IPL dashboard

## 5. Output / Dashboard Insights

Key insights derived from the IPL dashboard:

Team Performance:

* Mumbai Indians have the highest count of wins and lead in total team runs.
* Chennai Super Kings and Kolkata Knight Riders are consistently in the top 3.

Player Analysis:

* Top Batsmen: Virat Kohli, Suresh Raina, Rohit Sharma.
* Top Bowlers: Malinga, Bhuvneshwar Kumar, Yuzvendra Chahal.
* Strike Rate Insight: Warner and Gayle have explosive strike rates.

Toss & Match Decisions:

* 61.24% teams opt to field first.
* Player of the Match (latest): JJ Bumrah

Run Totals:

* Total runs across seasons: 235K+

## 6. Future Scope

This project opens up possibilities for deeper cricket analytics:

* Advanced Performance Trends:
* Season-over-season player comparisons  
  Venue-wise win ratios
* Predictive Analysis (Power BI with Python/R):
* Forecast runs or win probabilities
* Team/Player Profiling:
* Cluster players by role/performance
* Live Match Integration:
* Connect to live data feeds for real-time dashboards
* Fan Engagement Dashboards:
* Fantasy league data integration and insights

## 6. Screenshot

