IPL DASHBOARD USING POWER BI

A minor project report submitted to

DEPARTMENT OF
Computer Data Science and Engineering

By

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Computer Data Science and Engineering

CERTIFICATE

This is to certify that the Minor Project entitled as **"IPL DASHBOARD USING POWER BI"** submitted by **Mr. BOPPUDI HARI RENUKA CHOWDARY (Y21CDS010)** in partial fulfillment for the award of the Minor Project (power bi dashboard work) is a record of bonafied work carried out under my guidance.

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DECLARATION

I **Mr. BOPPUDI HARI RENUKA CHOWADARY (Y21CDS010)** declared that the dissertation report entitled **" IPL DASHBOARD USING POWER BI"** is no more than 1,00,000 words in length including quotes and exclusive of tables, figures, bibliography, and references. This dissertation contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated this dissertation in our own work.

Roll No	**Name**	**Signature**
Y21CDS010	BOPPUDI HARI RENUKA CHOWDARY	

Date :

Place : Guntur, Lam

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ABSTRACT

The Indian Premier League (IPL) has emerged as one of the most popular and dynamic cricket leagues globally, attracting millions of fans worldwide. The IPL Dashboard project aims to provide a comprehensive analysis and visualization platform for IPL enthusiasts, cricket analysts, and team management. Leveraging the Power BI tool, this dashboard offers interactive and insightful visuals, including player performance metrics, team statistics, match analysis, and historical trends. By integrating various data sources such as player statistics, match results, and team performance, this dashboard provides a holistic view of the IPL ecosystem. Users can explore player profiles, team strategies, and match outcomes, facilitating informed decision-making and enhancing the overall IPL experience. It only serves as a valuable tool for cricket enthusiasts but also demonstrates the capabilities of Power BI in data visualization and analytics. Through its intuitive interface and powerful features, the dashboard aims to revolutionize the way IPL data is analyzed, interpreted, and enjoyed by fans and analysts alike.

PROBLEM STATEMENT

The Indian Premier League (IPL) has become a significant sporting event globally, attracting millions of viewers and generating substantial interest among cricket enthusiasts, analysts, and team management. However, the sheer volume and complexity of IPL data present challenges in effectively analyzing and interpreting this information. Current methods of data analysis often lack comprehensive visualization and interactivity, hindering users' ability to derive meaningful insights from IPL data.

FEASIBILITY STUDY

The IPL-themed Power BI project aims to create an interactive and insightful dashboard for cricket enthusiasts, analysts, and team management to explore and analyze IPL data. This feasibility study assesses the viability of the project from technical, economic, operational, legal, and scheduling perspectives

- Technical Feasibility: Evaluate the technical requirements and resources needed to develop and maintain the IPL-themed Power BI dashboard.
- Economic Feasibility: Estimate the costs associated with developing and maintaining the dashboard and assess the potential return on investment (ROI).
- Operational Feasibility: Analyze the impact of the dashboard on daily operations, including user training and support requirements.
- Legal and Regulatory Feasibility: Ensure compliance with relevant laws and regulations related to data privacy, security, and usage.
- Schedule Feasibility: Develop a project timeline and assess the feasibility of meeting project deadlines.

CHAPTER 1

1. INTRODUCTION

The Indian Premier League (IPL) is not just a cricket tournament; it's a cultural phenomenon that captivates millions of fans worldwide. With its unique blend of cricketing prowess, entertainment, and glamour, the IPL has redefined the sports industry landscape. To harness the wealth of data and insights generated by this dynamic tournament, we are embarking on a journey to create an IPL-themed dashboard using Power BI. The IPL project in Power BI represents a significant opportunity to transform how we analyze and experience cricket. By harnessing the power of data and visualization, we aim to create a compelling platform that not only informs but also entertains and engages users. Join us on this exciting journey as we dive into the world of cricket analytics with the IPL dashboard in Power BI.

The IPL Dashboard project aims to address these challenges by developing a dynamic and interactive dashboard using Power BI. This dashboard will provide users with a user-friendly platform to explore and analyze various aspects of the IPL, including player performance, team statistics, match analysis, and historical trends. By integrating diverse data sources and leveraging advanced analytics, the dashboard seeks to offer a comprehensive and insightful view of the IPL ecosystem.

CHAPTER 2

2. MOTIVATION & OBJECTIVE

2.1 MOTIVATION:

The Indian Premier League (IPL) stands as a global cricketing extravaganza, captivating audiences with its blend of sporting prowess, entertainment, and fanfare. As the tournament grows in popularity, so does the volume and complexity of its data. The motivation behind the IPL Project in Power BI is to harness this wealth of data and transform it into actionable insights, providing cricket enthusiasts, analysts, and team management with a comprehensive and interactive platform to explore and understand the intricacies of the IPL.

2.2 OBJECTIVES:

- **Comprehensive Data Analysis**: The primary objective of the IPL Project in Power BI is to offer users a comprehensive analysis of IPL matches, teams, and players. By integrating and visualizing various data sets such as match results, player statistics, and team performances, the dashboard aims to provide a holistic view of the IPL ecosystem.

- **User-Friendly Interface:** The dashboard will be designed with a focus on user experience, offering intuitive navigation and interactive visuals. Users will have the flexibility to customize their views, filter data, and explore insights based on their preferences, enhancing their overall experience.

- **Data Integration**: One of the key objectives of the project is to integrate data from multiple sources into a single, cohesive platform. This will enable users to access and analyze a wide range of data, including historical trends, player performances, and match outcomes, all in one place.

- **Predictive Analytics:** The dashboard will leverage the power of predictive analytics to forecast match outcomes and player performances. By analyzing past data and identifying patterns, the dashboard will provide users with valuable insights that can be used for strategic decision-making.

- **Enhanced Decision-Making**: Through its comprehensive analysis and predictive insights, the IPL Project in Power BI aims to enhance decision-making for cricket analysts, team management, and fantasy league participants. Users will be able to make informed decisions based on data-driven insights, leading to improved performance and outcomes.

- **Engagement and Entertainment:** In addition to providing valuable insights, the dashboard will also focus on engagement and entertainment. Interactive visuals, engaging narratives, and real-time updates will create a dynamic and immersive experience for users, enhancing their overall enjoyment of the IPL

CHAPTER 3

3 SOFTWARE & HARDWARE REQURIMENTS

3.1 SOFTWARE REQURIMENTS

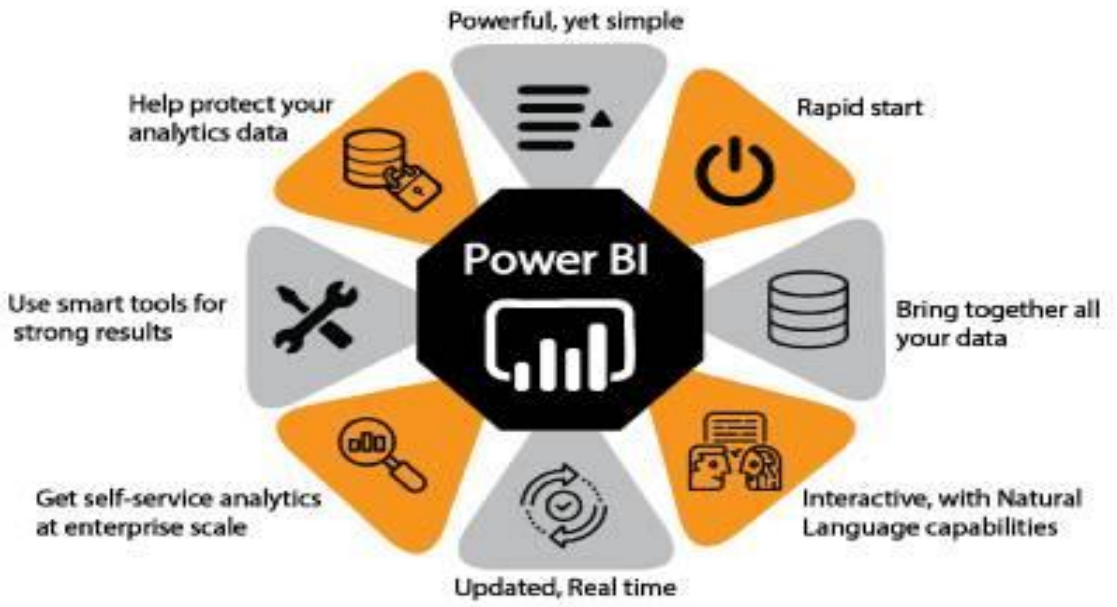
Operating System : Windows
Platform : Power bi
Modules Required : Excel
Modules : Own Modules created by the programmer for the based on the User interface to develop Data Analysis , Here it is a DashBoard

3.2 HARDWARE REQURIMENTS

Processor : 11th Gen Intel(R) core (TM) i5-1155G7@ 2.50GH
RAM : 8.00GB
Version : 22H2

CHAPTER 4

DESIGINING



Designing for the Indian Premier League (IPL) involves creating visually appealing and informative graphics, charts, and dashboards that showcase various aspects of the tournament. Here are some key considerations for designing an IPL dashboard in Power BI

- Visual Elements: Use visuals like bar charts, line charts, pie charts, and maps to represent different aspects of the IPL, such as team performance, player statistics, and match results.

- Interactivity: Make the dashboard interactive by adding slicers, filters, and drill-down options to allow users to explore the data in more detail.

- Real-time Updates: If possible, incorporate real-time data updates to keep the dashboard current with the latest IPL matches and results.

- Branding: Use IPL branding elements such as logos, colors, and graphics to give the dashboard an authentic IPL look and feel.

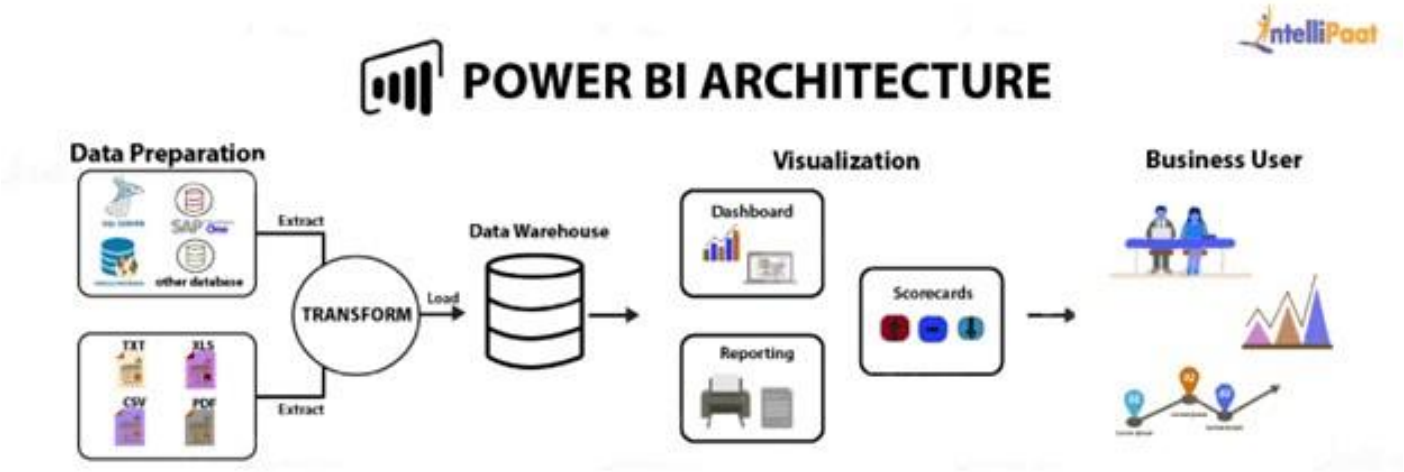
- Mobile Optimization: Ensure that the dashboard is optimized for mobile devices so that users can access it easily on their smartphones or tablets.

- User-Friendly Interface: Design the dashboard with a clean and intuitive interface, making it easy for users to navigate and find the information they need.

- Performance Optimization: Optimize the dashboard's performance by reducing the number of visuals, limiting the use of complex calculations, and using summarization techniques where possible.

PROPOSED SYSTEM

- **Data Sources:** Identify the data sources required for the dashboard, such as match data, player statistics, team information, and historical data. These data sources can include Excel files, databases, APIs, or web scraping tools.
- **Data Preparation:** Clean and transform the data as needed using Power Query Editor in Power BI. This step involves removing duplicates, handling missing data, and formatting the data to suit your analysis needs.
- **Data Modeling:** Create a data model in Power BI using relationships between different tables. This step helps in organizing the data and enabling efficient querying for the dashboard visuals.
- **Dashboard Design:** Design the dashboard layout by selecting appropriate visualizations (e.g., bar charts, line charts, tables, maps) to represent the IPL data. Arrange the visuals in a logical manner to tell a cohesive story.



CHAPTER 5

METHODLOGY:

By Creating the Our Dash Board We follow These Methodologies We Follows:-

Define Objectives and Requirements:

Understand the purpose of your IPL dashboard. Is it for personal use, educational purposes, or business analysis?

Determine the key metrics and KPIs (Key Performance Indicators) you want to showcase on your dashboard. These could include player statistics, team performance, match results, etc.

Data Collection and Preparation:

Gather data from reliable sources such as official IPL websites, APIs, or cricket databases.Extract the necessary data, including match details, player statistics, team information, etc.Cleanse and transform the data as per your requirements using Power Query Editor in Power BI.

Data Modeling:

Design a data model that reflects the relationships between different entities such as matches, teams, players, etc.

Create relationships between tables using common fields like match ID, player ID, team ID, etc.Add calculated columns or measures to derive additional insights from your data.

Dashboard Design:

Sketch out the layout of your dashboard, considering the

placement of visualizations and the overall flow of information.

Choose appropriate visualizations such as bar charts, line charts, pie charts, maps, etc., to represent your data effectively.Ensure that the design is user-friendly and intuitive for easy interpretation.

Visualizations and Interactivity:

Create visualizations for each key metric and KPI identified earlier.

Add interactivity features like slicers, filters, and drill-down options to allow users to explore the data dynamically.Use tooltips and hover effects to provide additional information and context to the visualizations.

Testing and Iteration:

Test your dashboard thoroughly to ensure that all visualizations are functioning correctly and providing accurate insights.Gather feedback from potential users and stakeholders and iterate on the design based on their suggestions.

Maintenance and Updates:

Regularly update your dashboard with new data as the IPL season progresses.Monitor the performance of your dashboard and make adjustments as needed to keep it relevant and effective.

CHAPTER 6

6 .RESULT

DATA SET :

Column1	season	id	name	short_name	description	home_team	away_team
6	2023	1359542	Kolkata Knight Riders v Lucknow Super Giants	KKR v LSG	68th Match (N), Indian Premier League at Kolkata, May 20 2023	KKR	LSG
10	2023	1359538	Punjab Kings v Delhi Capitals	PBKS v DC	64th Match (N), Indian Premier League at Dharamsala, May 17 2023	PBKS	DC
11	2023	1359537	Lucknow Super Giants v Mumbai Indians	LSG v MI	63rd Match (N), Indian Premier League at Lucknow, May 16 2023	LSG	MI
12	2023	1359536	Gujarat Titans v Sunrisers Hyderabad	GT v SRH	62nd Match (N), Indian Premier League at Ahmedabad, May 15 2023	GT	SRH
15	2023	1359533	Delhi Capitals v Punjab Kings	DC v PBKS	59th Match (N), Indian Premier League at Delhi, May 13 2023	DC	PBKS
17	2023	1359531	Mumbai Indians v Gujarat Titans	MI v GT	57th Match (N), Indian Premier League at Mumbai, May 12 2023	MI	GT
23	2023	1359525	Gujarat Titans v Lucknow Super Giants	GT v LSG	51st Match (D/N), Indian Premier League at Ahmedabad, May 7 2023	GT	LSG
38	2023	1359510	Royal Challengers Bangalore v Kolkata Knight Riders	RCB v KKR	36th Match (N), Indian Premier League at Bengaluru, Apr 26 2023	RCB	KKR
39	2023	1359509	Gujarat Titans v Mumbai Indians	GT v MI	35th Match (N), Indian Premier League at Ahmedabad, Apr 25 2023	GT	MI
41	2023	1359507	Kolkata Knight Riders v Chennai Super Kings	KKR v CSK	33rd Match (N), Indian Premier League at Kolkata, Apr 23 2023	KKR	CSK
42	2023	1359506	Royal Challengers Bangalore v Rajasthan Royals	RCB v RR	32nd Match (D/N), Indian Premier League at Bengaluru, Apr 23 2023	RCB	RR
43	2023	1359505	Mumbai Indians v Punjab Kings	MI v PBKS	31st Match (N), Indian Premier League at Mumbai, Apr 22 2023	MI	PBKS
48	2023	1359500	Rajasthan Royals v Lucknow Super Giants	RR v LSG	26th Match (N), Indian Premier League at Jaipur, Apr 19 2023	RR	LSG
50	2023	1359498	Royal Challengers Bangalore v Chennai Super Kings	RCB v CSK	24th Match (N), Indian Premier League at Bengaluru, Apr 17 2023	RCB	CSK
54	2023	1359494	Royal Challengers Bangalore v Delhi Capitals	RCB v DC	20th Match (D/N), Indian Premier League at Bengaluru, Apr 15 2023	RCB	DC
55	2023	1359493	Kolkata Knight Riders v Sunrisers Hyderabad	KKR v SRH	19th Match (N), Indian Premier League at Kolkata, Apr 14 2023	KKR	SRH
57	2023	1359491	Chennai Super Kings v Rajasthan Royals	CSK v RR	17th Match (N), Indian Premier League at Chennai, Apr 12 2023	CSK	RR
59	2023	1359489	Royal Challengers Bangalore v Lucknow Super Giants	RCB v LSG	15th Match (N), Indian Premier League at Bengaluru, Apr 10 2023	RCB	LSG
63	2023	1359485	Rajasthan Royals v Delhi Capitals	RR v DC	11th Match (D/N), Indian Premier League at Guwahati, Apr 8 2023	RR	DC
66	2023	1359482	Rajasthan Royals v Punjab Kings	RR v PBKS	8th Match (N), Indian Premier League at Guwahati, Apr 5 2023	RR	PBKS
68	2023	1359480	Chennai Super Kings v Lucknow Super Giants	CSK v LSG	6th Match (N), Indian Premier League at Chennai, Apr 3 2023	CSK	LSG
70	2023	1359478	Sunrisers Hyderabad v Rajasthan Royals	SRH v RR	4th Match (D/N), Indian Premier League at Hyderabad, Apr 2 2023	SRH	RR
71	2023	1359477	Lucknow Super Giants v Delhi Capitals	LSG v DC	3rd Match (N), Indian Premier League at Lucknow, Apr 1 2023	LSG	DC
78	2022	1304051	Sunrisers Hyderabad v Rajasthan Royals	SRH v RR	5th Match (N), Indian Premier League at Pune, Mar 29 2022	SRH	RR
82	2022	1304055	Mumbai Indians v Rajasthan Royals	MI v RR	9th Match (D/N), Indian Premier League at Navi Mumbai, Apr 2 2022	MI	RR

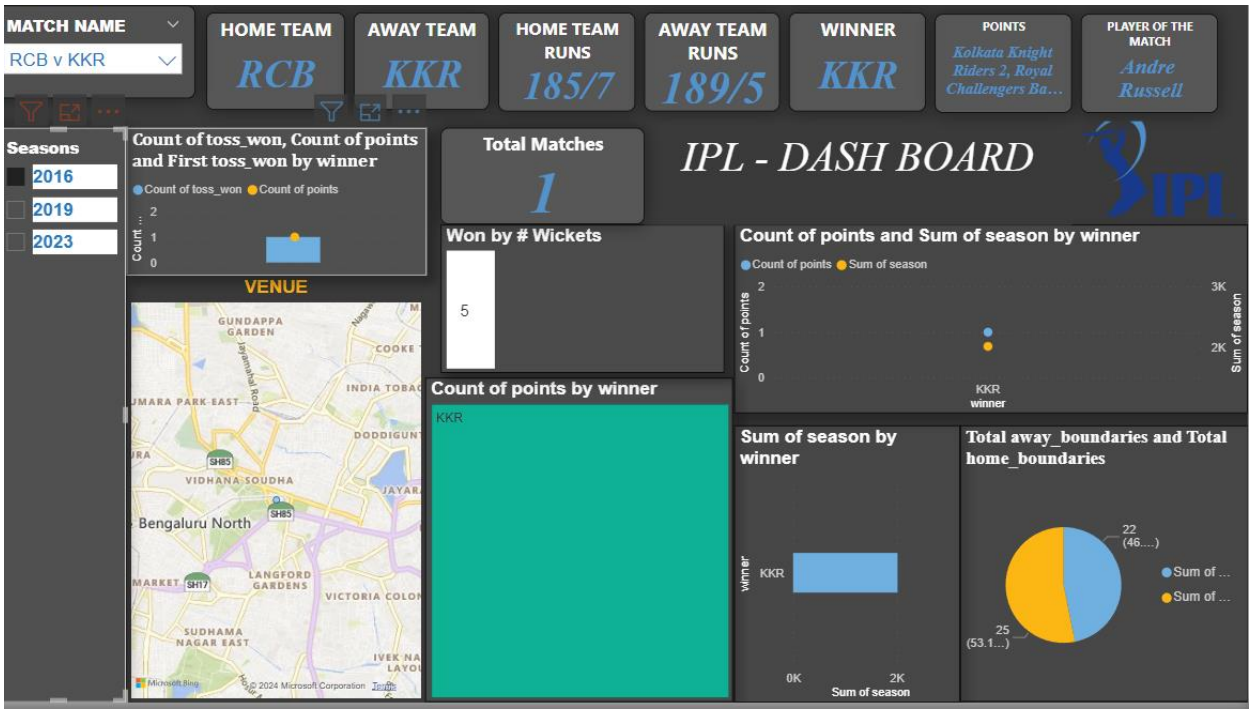
357	2018	1136590	Chennai Super Kings v Delhi Daredevils	CSK v DC	30th match (N), Indian Premier League at Pune, Apr 30 2018	CSK	DC
358	2018	1136591	Royal Challengers Bangalore v Mumbai Indians	RCB v MI	31st match (N), Indian Premier League at Bengaluru, May 1 2018	RCB	MI
364	2018	1136597	Mumba	v KKR	37th match (D/N), Indian Premier League at Mumbai, May 6 2018	MI	KKR
366	2018	1136599	Sunrisers Hyderabad v Royal Challengers Bangalore	SRH v RCB	39th match (N), Indian Premier League at Hyderabad (Deccan), May 7	SRH	RCB
371	2018	1136604	Kings XI Punjab v Kolkata Knight Riders	KXIP v KKR	44th match (D/N), Indian Premier League at Indore, May 12 2018	KXIP	KKR
377	2018	1136610	Mumbai Indians v Kings XI Punjab	MI v KXIP	50th match (N), Indian Premier League at Mumbai, May 16 2018	MI	KXIP
378	2018	1136611	Royal Challengers Bangalore v Sunrisers Hyderabad	RCB v SRH	51st match (N), Indian Premier League at Bengaluru, May 17 2018	RCB	SRH
379	2018	1136612	Delhi Daredevils v Chennai Super Kings	DC v CSK	52nd match (N), Indian Premier League at Delhi, May 18 2018	DC	CSK
401	2017	1082604	Kolkata Knight Riders v Sunrisers Hyderabad	KKR v SRH	14th match (D/N), Indian Premier League at Kolkata, Apr 15 2017	KKR	SRH
404	2017	1082607	Royal Challengers Bangalore v Rising Pune Supergian	RCB v RPS	17th match (N), Indian Premier League at Bengaluru, Apr 16 2017	RCB	RPS
407	2017	1082610	Gujarat Lions v Royal Challengers Bangalore	GL v RCB	20th match (N), Indian Premier League at Rajkot, Apr 18 2017	GL	RCB
411	2017	1082615	Rising Pune Supergiant v Sunrisers Hyderabad	RPS v SRH	24th match (D/N), Indian Premier League at Pune, Apr 22 2017	RPS	SRH
412	2017	1082614	Mumbai Indians v Delhi Daredevils	MI v DC	25th match (N), Indian Premier League at Mumbai, Apr 22 2017	MI	DC
413	2017	1082616	Gujarat Lions v Kings XI Punjab	GL v KXIP	26th match (D/N), Indian Premier League at Rajkot, Apr 23 2017	GL	KXIP
415	2017	1082618	Mumbai Indians v Rising Pune Supergiant	MI v RPS	28th match (N), Indian Premier League at Mumbai, Apr 24 2017	MI	RPS
420	2017	1082623	Kings XI Punjab v Sunrisers Hyderabad	KXIP v SRH	33rd match (N), Indian Premier League at Mohali, Apr 28 2017	KXIP	SRH
421	2017	1082624	Rising Pune Supergiant v Royal Challengers Bangalor	RPS v RCB	34th match (D/N), Indian Premier League at Pune, Apr 29 2017	RPS	RCB
424	2017	1082627	Sunrisers Hyderabad v Kolkata Knight Riders	SRH v KKR	37th match (N), Indian Premier League at Hyderabad (Deccan), Apr 30	SRH	KKR
431	2017	1082634	Sunrisers Hyderabad v Rising Pune Supergiant	SRH v RPS	44th match (D/N), Indian Premier League at Hyderabad (Deccan), May	SRH	RPS
436	2017	1082639	Kings XI Punjab v Kolkata Knight Riders	KXIP v KKR	49th match (N), Indian Premier League at Mohali, May 9 2017	KXIP	KKR
438	2017	1082641	Mumbai Indians v Kings XI Punjab	MI v KXIP	51st match (N), Indian Premier League at Mumbai, May 11 2017	MI	KXIP

Royal Challengers Bangalore v Mumbai Indians

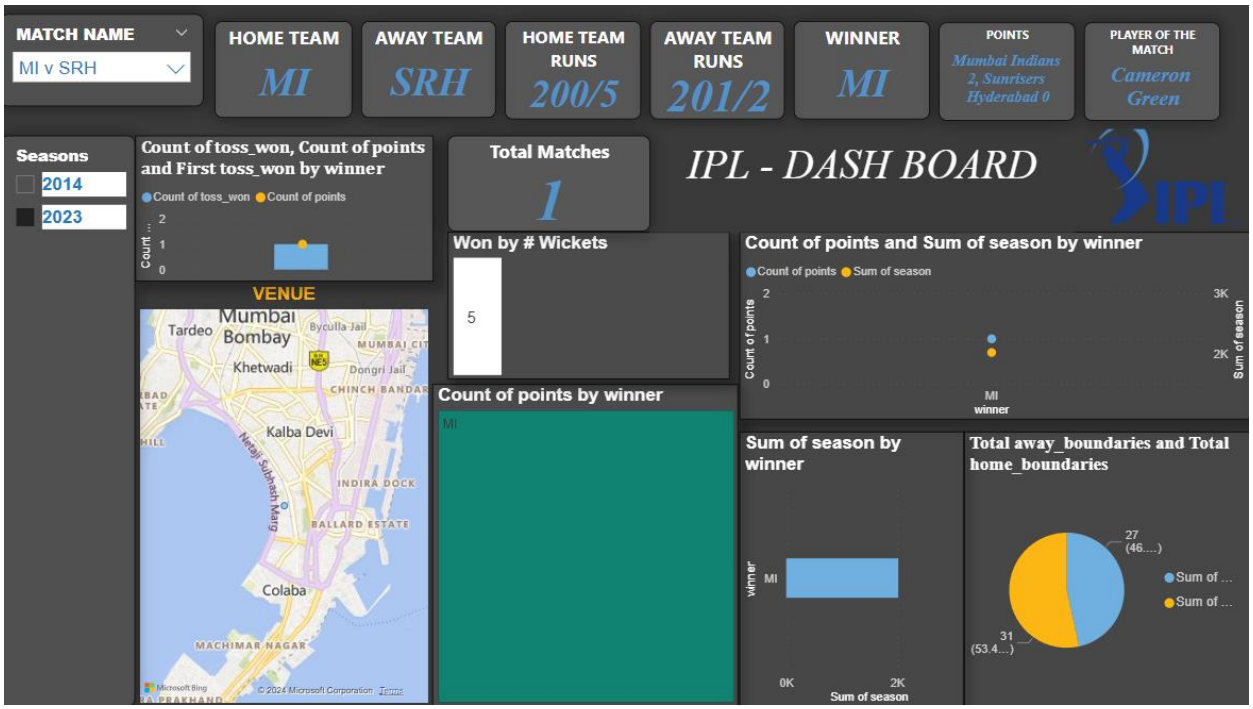
DASH BOARD:

Ex:1 – By givings the More Points in a Single Team

Ex:2 – Playing in Different Venue Places



Ex-3: Points Increase Which Match is Won



CHAPTER 7

CONCLUSION :

The IPL dashboard created with Power BI offers comprehensive insights into team and player performance throughout the IPL season. Through detailed visualization and analysis, the dashboard highlights key trends and patterns, empowering users to make informed decisions and predictions.

By examining team performance metrics, individual player statistics, and match analysis, the dashboard provides a holistic view of the IPL landscape. Interactive features enhance user engagement, allowing for dynamic exploration of the data.

Overall, the IPL dashboard serves as a valuable tool for stakeholders, analysts, and enthusiasts, enabling them to derive actionable insights and enhance their understanding of the IPL dynamics.

CHAPTER 8

FUTURE SCOPE :

Integration of Real-Time Data: Incorporating real-time data feeds during live matches would provide users with up-to-the-minute insights and analysis. Implementing APIs or streaming services to update the dashboard in real-time could significantly enhance its utility and relevance during the IPL season.

Predictive Analytics: Leveraging machine learning algorithms to predict match outcomes, player performance, and team strategies could be a valuable addition to the dashboard. By analyzing historical data and incorporating predictive models, users could gain valuable insights for making informed decisions and predictions.

Social Media Analysis: Integrating social media data analysis into the dashboard could provide insights into fan sentiment, player popularity, and team engagement. By monitoring social media platforms and analyzing trends, users could better understand the broader impact of IPL matches and events.

CHAPTER 9

REFERENCES:

Reference 1 : https://www.kaggle.com/datasets/utkarshtomar736/ipl-mens-cricket-matches-data-2008-2023

Reference 2: Power BI for Data Analysis and Visualization" by Dan Clark

Reference 3 : Micro Soft Power bi Tool