1 INTRODUCTION

We are team RN 6 – Members- SHREYASI, SAUMYA, SRISHTI SWARAJ and this is the report of IPL Dashboard.

1.1 Overview

The Indian Premier League is a professional Twenty20 cricket league, contested by eight teams based out of eight different Indian cities. The league was founded by the Board of Control for Cricket in India in 2007.

Since the dawn of the IPL in 2008, it has attracted viewers all around the globe. A high level of uncertainty and last moment nail biters has drawn the fans to watch the matches in large numbers. Within a short period, IPL has become the highest revenue-generating league of cricket. With all this, the amount of data being generated in terms of matches revenue scores, etc has also become huge. Analysing such vast amounts of data would give great insights in forecasting match results, top scores, and wicket-takers, etc.

Our project is to create a dashboard that visualizes the following capabilities and also forecast the future results

1. *To find the team that won the most number of matches in the entire IPL.*
2. *To find the team that lost the most number of matches in the entire IPL.*
3. *Does winning a toss increase the chances of victory.*
4. *To find the player with the most player of the match awards.*
5. *To find the city that hosted the maximum number of IPL matches.*
6. *To find the most winning team for each season.*
7. *To find the on-field umpire with the maximum number of IPL matches.*
8. *To find the biggest victories in IPL while defending a total and while chasing a total.*
9. *Which team won the most matches while batting first*
10. *Which team won the most matches while batting second*
11. *List of teams which have won matches by most runs cumulatively*

1.2 Purpose

The purpose of our project is to analyse the data properly and give great insights in forecasting match results, top scores, chances of victory if a team win a toss etc.

With this project we can analyse different parameters that helps in the victory of a team in a match and the scope of improvement in future matches.

2 LITERATURE SURVEY

2.1 Existing problem , Existing approaches or method to solve this problem

Currently, in Twenty-Twenty (T20) cricket matches first innings score is predicted on the basis of current run-rate which can be calculated as the amount of runs scored per the number of over's bowled. It includes factors like number of wickets fallen, venue of the match, toss and predicts the score in each of the innings and finally the winner of the match using Random Forest algorithm.

To give predictions, we use data analytics and machine learning

2.2 Proposed solution What is the method or solution suggested by you?

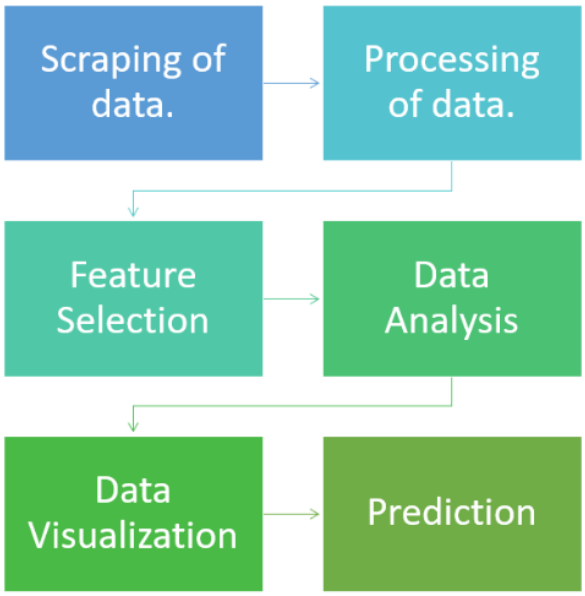
IPL has always attracted viewers all around the globe. High level of uncertainty and last moment nail biters has drawn the fans to watch the matches in large numbers and the data produced during the league is huge.

We converted this huge unstructured IPL data, process it with IBM BI tool and produce structured and clean data. Our project analyses the data properly, and give great insights in forecasting match results, top scores, predicting the winner of the series and many more. We used IBM COGNOS for the data processing job.

This project also aid the users to see the trends in IPL matches till now and predicting a team's performance based on their earlier games.

3 THEORITICAL ANALYSIS

3.1 Block diagram Diagrammatic overview of the project.



Step 1. Scraping of the data from different websites.

Step 2. Processing the unstructured data to structured data and storing it in databases.

Step 3. Team structure is analysed and the strongest and the weakest slots are identified.

Step 4. Analysing the data for accurate result.

Step 5. Preparation of statistical graphs and charts to present the data for comparison and analysis.

Step 6. Based on this, a prediction on which team wins the ongoing match at that particular phase of the match is obtained.

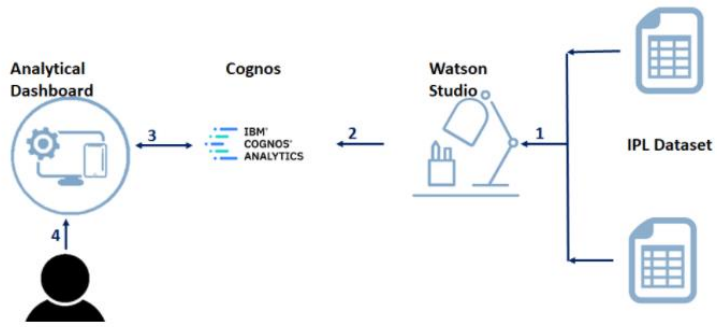
3.2 Hardware / Software designing Hardware and software requirements of the project

To build this project, we used IBM Cognos Analytic technology.

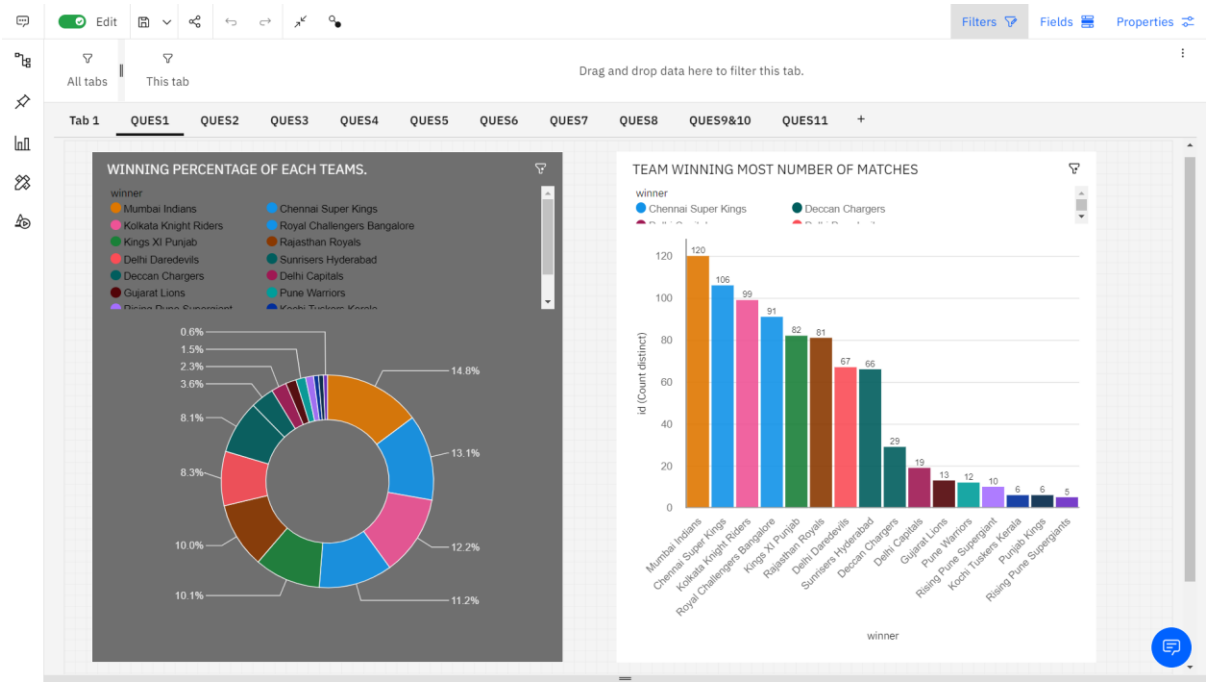
4 EXPERIMENTAL INVESTIGATIONS

We made a dataset that contained every aspect that occurs in a match like- winners of every match, overs of every match, players of the match award winners, wickets taken in a match etc. These datasets gave us an idea about the different aspects that can lead to the victory of team like- if a team won the toss, what are its chances of winning the match.

5 FLOWCHART

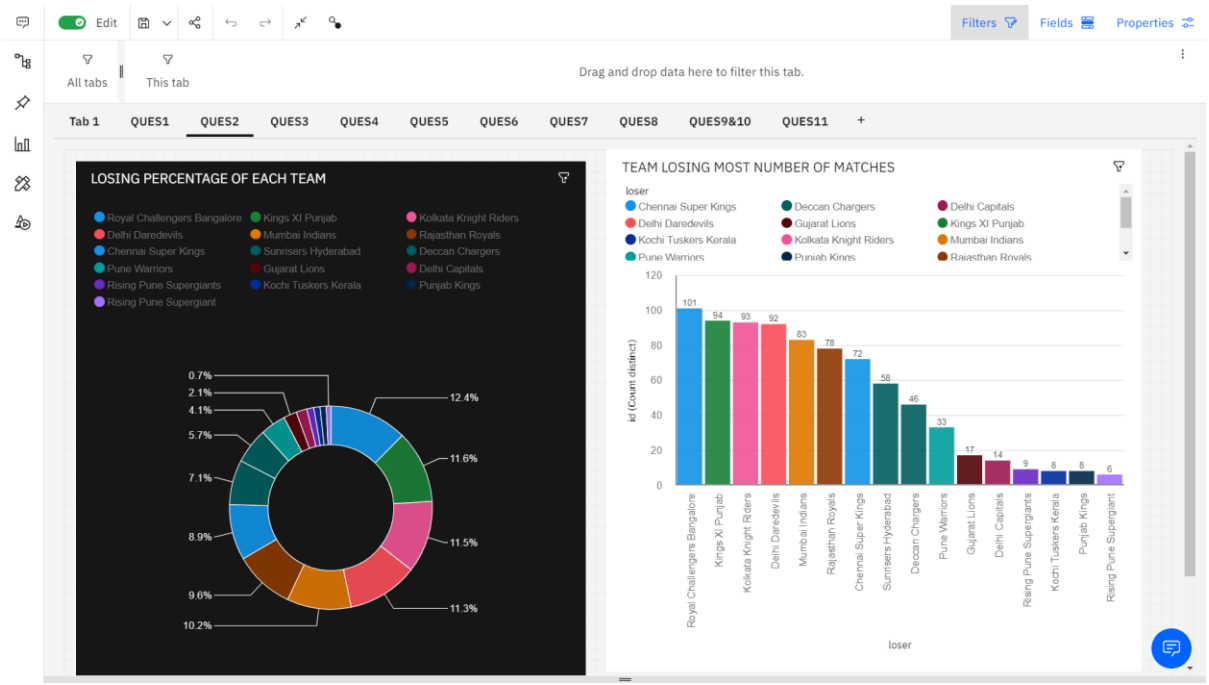


6 RESULT



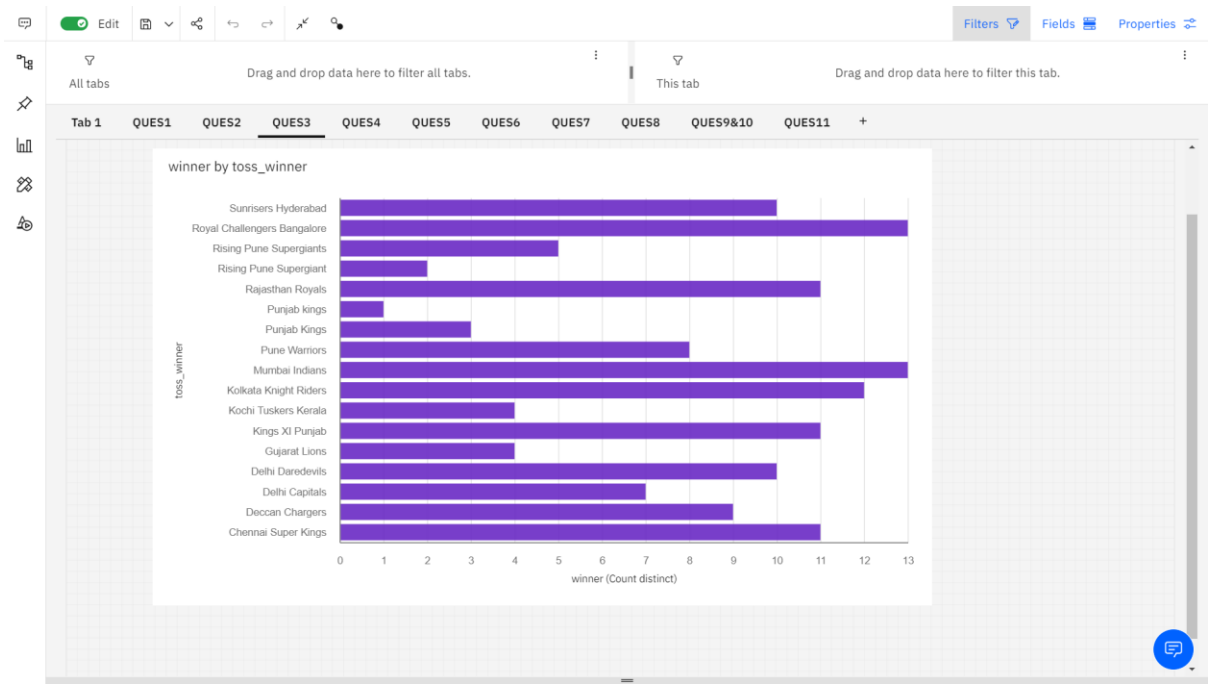
In the above graph, we used column chart and pie chart to show the team that has won the most number of matches in a IPL.

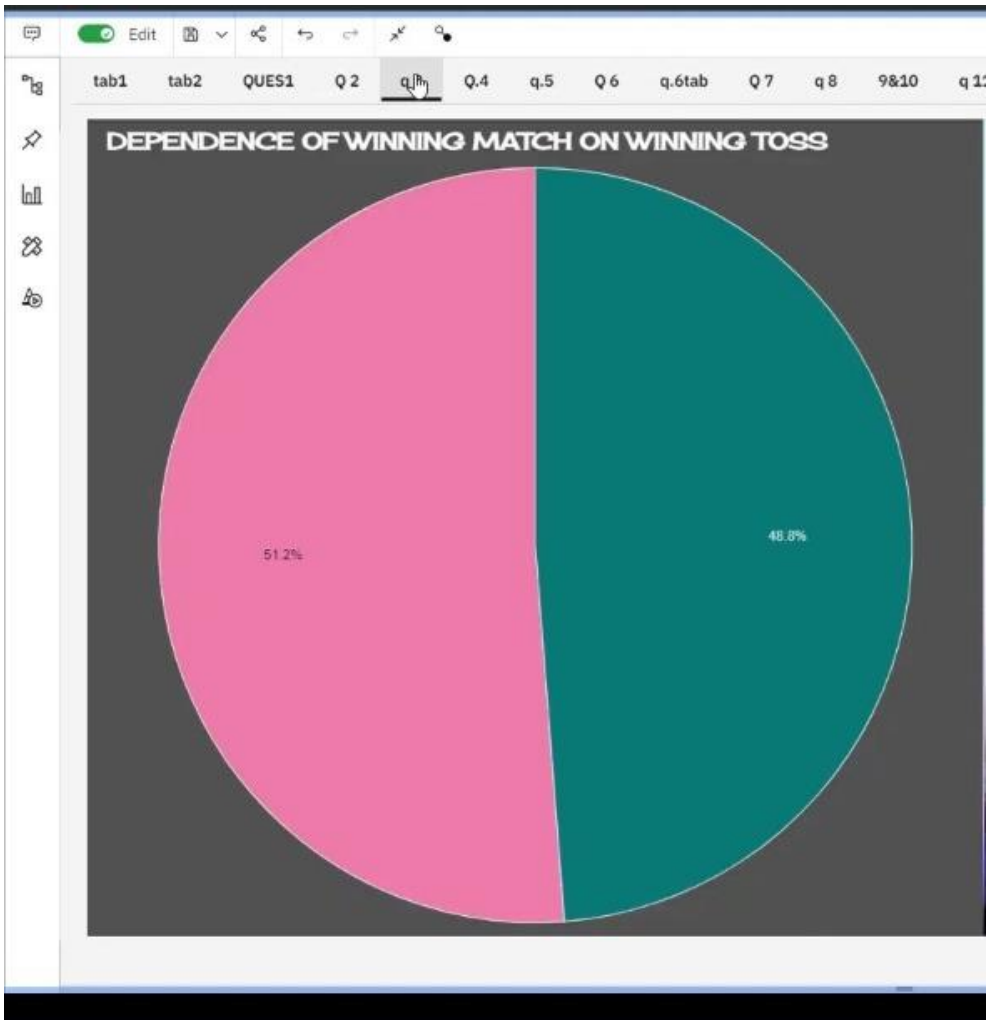
Result- from the graph we can see that Mumbai Indians has won the most number of matches in the IPL by winning 14.8% of the total matches in IPL.



In the above graph, we used column chart and pie chart to show the team that has lost the most number of matches in a IPL.

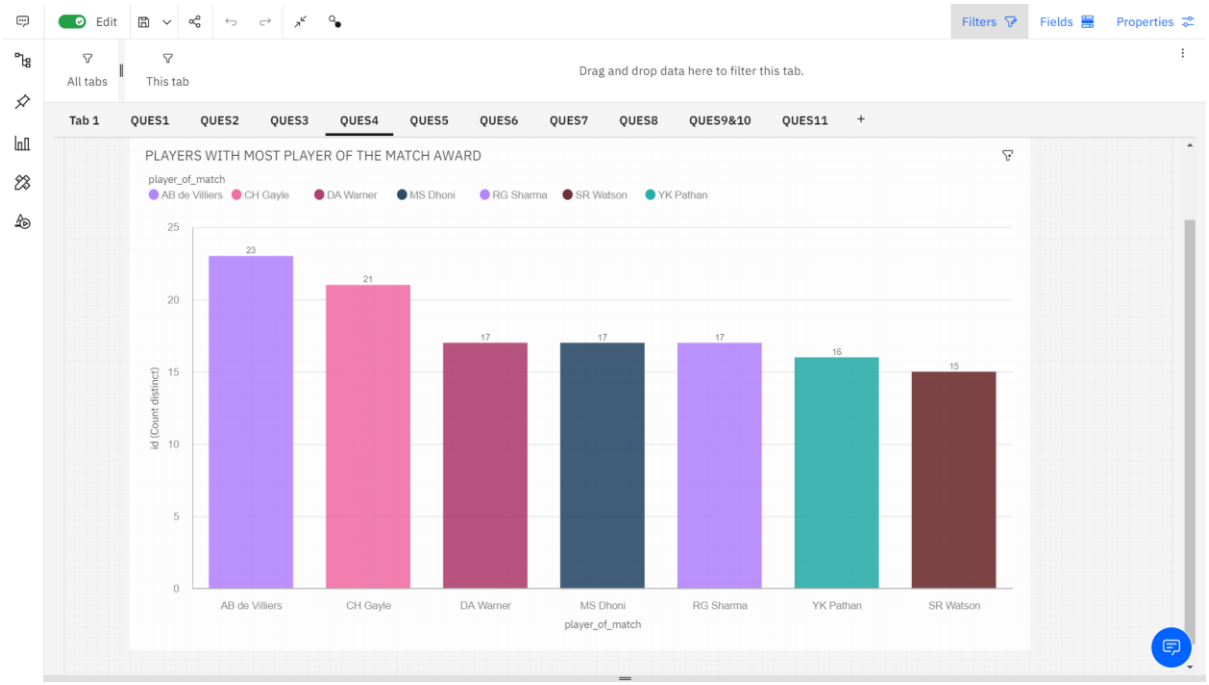
Result- from the graph we can see that Rajasthan Royals has lost the most number of matches in the IPL by losing 12.4% of the total matches in IPL.





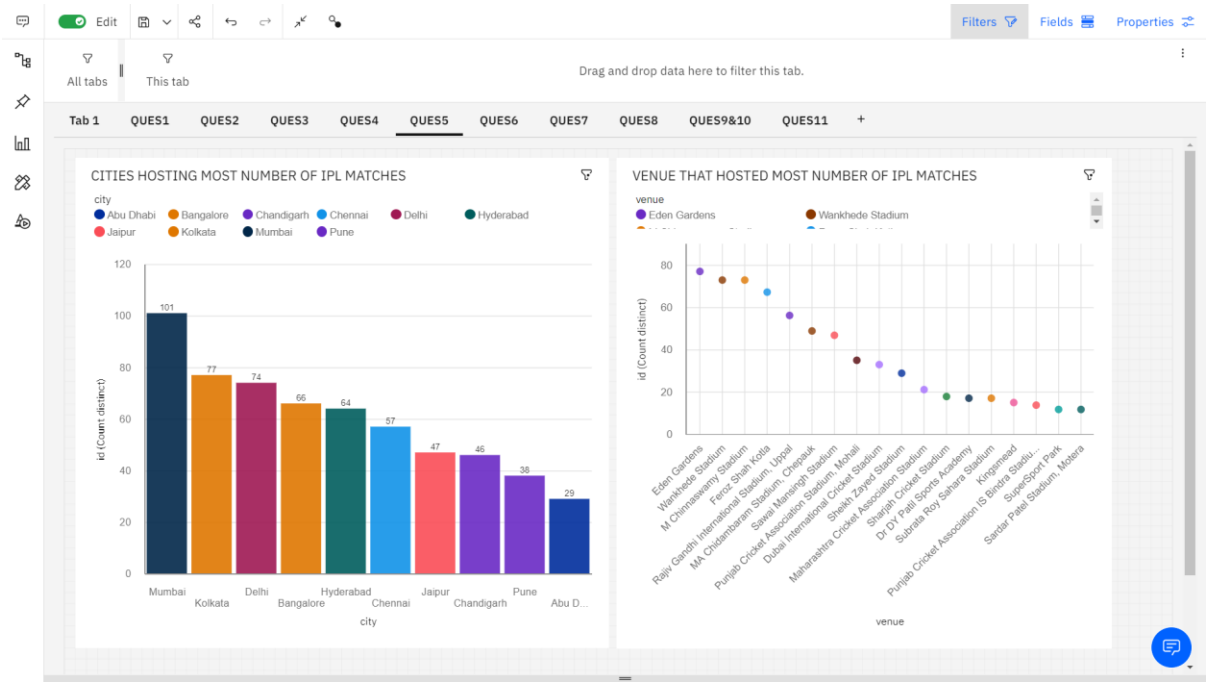
In the above graph we have used bar chart and pie chart.

Result- from the graph we can conclude that winning a toss increases the chances of victory as we can see that most teams that have won the toss have also won the match.



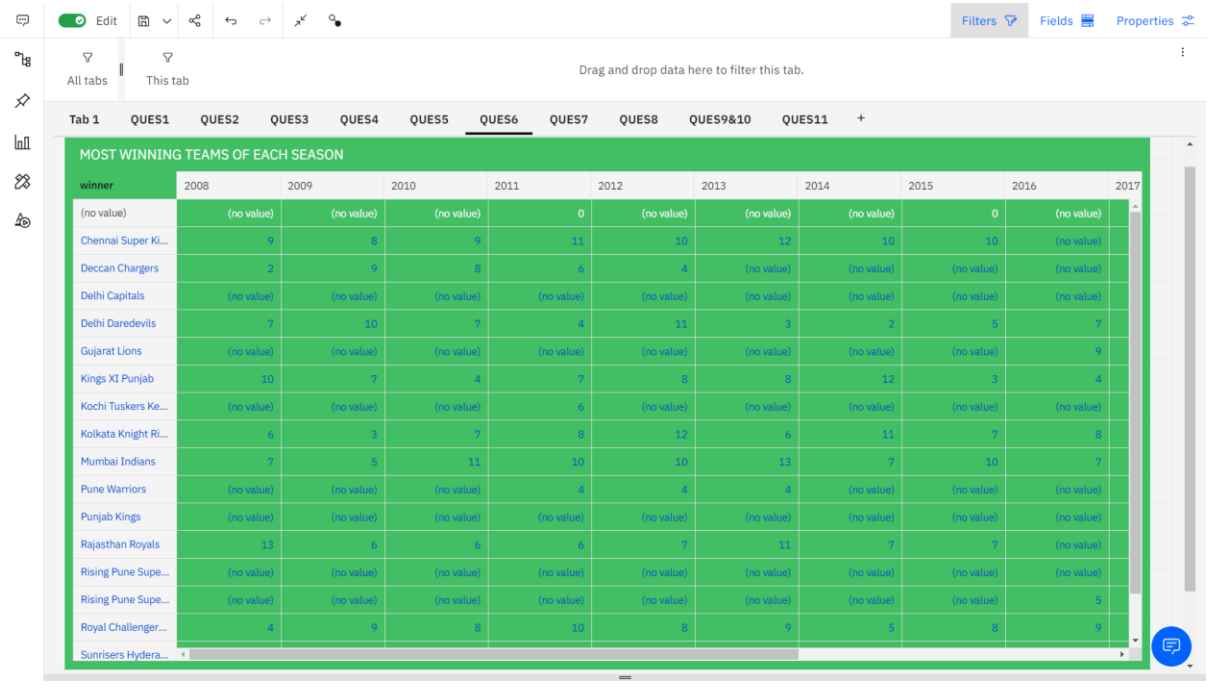
In the above graph, we used column chart to determine the player with most number of player of the match award.

Result- from the graph, we can conclude that AB De Villers has got the most number of player of the match award in the entire IPL.



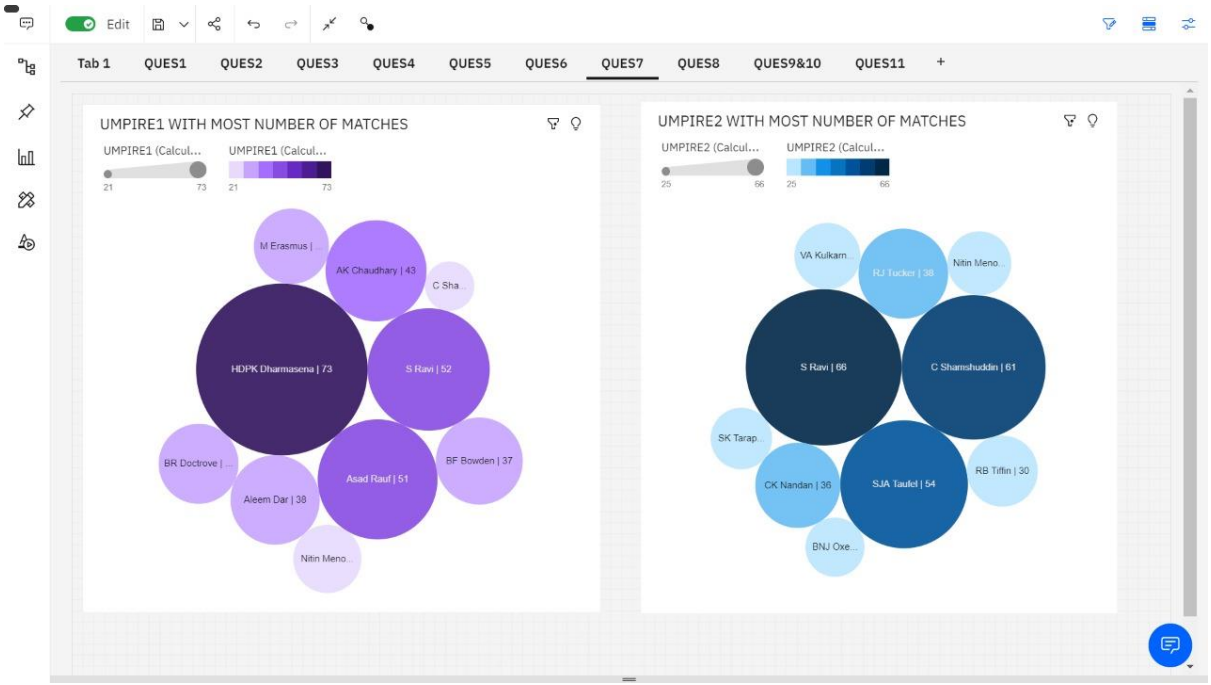
In the above graph , we used column chart and point chart to show the cities that hosted the most number of IPL matches and the venue that hosted the most number of IPL matches respectively.

Result- from the graph, we can conclude that Mumbai city has hosted most number of IPL matches and Eden Gardens stadium has hosted most number of IPL matches.



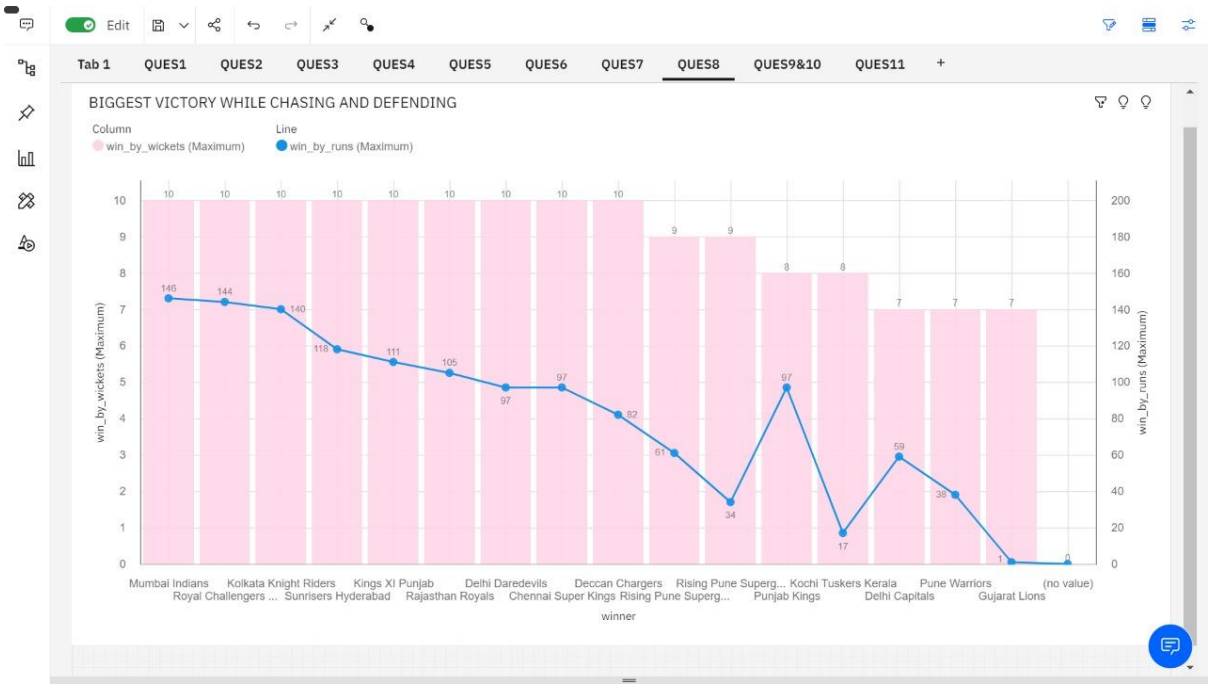
winner	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
(no value)	(no value)	(no value)	(no value)	0	(no value)	(no value)	(no value)	0	(no value)	
Chennai Super Ki...	9	8	9	11	10	12	10	10	(no value)	
Deccan Chargers	2	9	8	6	4	(no value)	(no value)	(no value)	(no value)	
Delhi Capitals	(no value)	(no value)	(no value)	(no value)	(no value)	(no value)	(no value)	(no value)	(no value)	
Delhi Daredevils	7	10	7	4	11	3	2	5	7	
Gujarat Lions	(no value)	(no value)	(no value)	(no value)	(no value)	(no value)	(no value)	(no value)	9	
Kings XI Punjab	10	7	4	7	8	8	12	3	4	
Kochi Tuskers Ke...	(no value)	(no value)	(no value)	6	(no value)	(no value)	(no value)	(no value)	(no value)	
Kolkata Knight Ri...	6	3	7	8	12	6	11	7	8	
Mumbai Indians	7	5	11	10	10	13	7	10	7	
Pune Warriors	(no value)	(no value)	(no value)	4	4	4	(no value)	(no value)	(no value)	
Punjab Kings	(no value)	(no value)	(no value)	(no value)	(no value)	(no value)	(no value)	(no value)	(no value)	
Rajasthan Royals	13	6	6	6	7	11	7	7	(no value)	
Rising Pune Supe...	(no value)	(no value)	(no value)	(no value)	(no value)	(no value)	(no value)	(no value)	(no value)	
Rising Pune Supe...	(no value)	(no value)	(no value)	(no value)	(no value)	(no value)	(no value)	(no value)	5	
Royal Challenger...	4	9	8	10	8	9	5	8	9	
Sunrisers Hydera...										

In the above table, we used cross-table to determine the teams that have won most number of matches in a particular season.



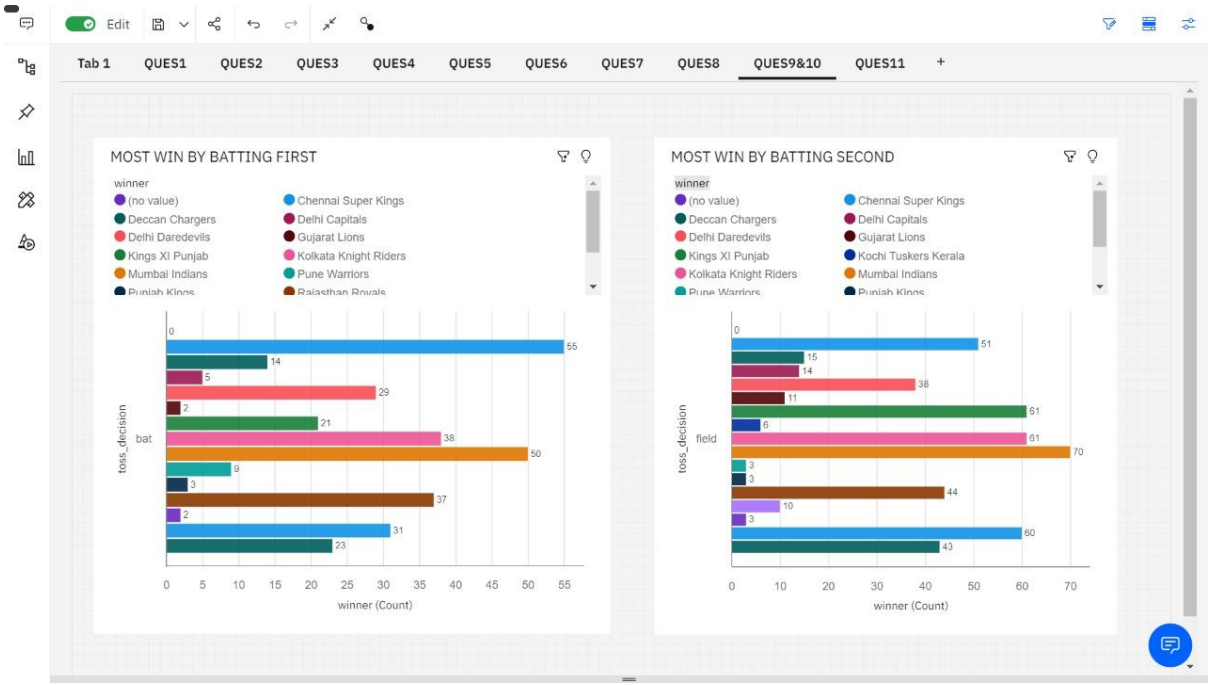
In the above graph, we used packed bubbles to show the most number of matches that were umpired by umpire1 and umpire 2 respectively.

Result- from the bubble, we can see that HDPK Dharmasena has umpired most number of matches as umpire 1 and S Ravi has umpired most number of matches as umpire 2.



In the given graph, we used line and column chart to determine the biggest victories while defending and while chasing the score.

Result- from the graph we can conclude that Mumbai Indians has had the biggest victory in this case.



In the given graph, we used bar chart to show the teams that have won a match when the chose to bat first and bat second respectively.

Result- we can see from the graph that CSK has won most number of matches while batting first and Mumbai Indians has won most number of matches while batting second.

In the given column graph, we used win by runs and winners to find the team that won by most cumulative runs.

Result- from the graph, we can conclude that Mumbai Indians has the most cumulative runs that is 2111.

7 APPLICATIONS

- *The strengths and weaknesses of the order of the bowling and batting of the team can be obtained to improve team performance.*
- *It would help team captain, coaches, and management to choose the players in that match, to increase their win probability.*
- *Predicting the outcomes before the match will help the players and coaches to analyse the weak areas and train accordingly.*

- *We utilize career statistics and also the team performances like batting and bowling performances so as to train the models.*
- *The parameters that resulted in highest probability of winning are our recommendation to the team, so that team can improve their chances of winning.*
- *Most suitable alternative to an injured player can also be decided based on this.*

8 CONCLUSION

From this project, we can conclude that having good players with most number of runs and most number of player of the match cannot determine the victory of team. There are different parameters that should be taken into consideration like winning a toss etc to determine the victory of a team.

9 FUTURE SCOPE

There are many other factors affecting the outcome of a match like weather, the form of player, home ground advantage, etc which are not included here. These factors varies greatly and no consistency can be found. Therefore for more advanced predictions, we can include these parameters and give accurate results in the future.

10 BIBILOGRAPHY

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