SUPER PREDICTOR OF INDIAN PREMIER LEAGUE

Team: TroubleShooters

1. INTRODUCTION

1.1 Overview

We have made dashboard on Super Predictor of Indian Premier League (IPL) using IBM Cognos analytics

IPL has 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.

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.

Data Analytics has been a part of sports entertainment for a long time. In a cricket match, we might have seen the score line showing the probability of the team winning based on the current match situation. This is Data Analytics in action!

1.2 Purpose

Analysing such vast amounts of data would give great insights in forecasting match results, top scores and wicket takers etc.

We have proposed the solution of the following, using given data set of IPL 2008-2019:

1. To find the team that won the greatest 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.

2. LITERATURE SURVEY

2.1 Existing problem

Initially it was very difficult for the users to analyse the result of the IPL in different scenarios hence to overcome this, we came up with a dashboard developed with the help of IBM Cognos Analytics.

Our dashboard helps normal users to analyse situations like to find out:

- most winning/losing team,
- umpire with the maximum no of IPL matches,
- which team won the most matches while batting first/second,
- most winning team of each session,
- best player of the season, etc.

2.2 Proposed solution

We have opted graphical approach to solve the given problem i.e. Super Predictor of Indian Premier League (IPL). Using Cognos analytics we developed the dashboard with the dataset (matches.csv and deliveries.csv). We used various graphs like pie graph, bar graph, line and column graph, stacked bar graph, table etc as visual representation of given problem statements.

3. THEORITICAL ANALYSIS

3.1 Block diagram

Most winning/losing teams	toss winning v/s victory

Tab1

Player with the "most player of the match awards"	City that hosted maximum no. of ipl matches

Tab 2

Most winning team of the season	On-field umpire with maximum no. of IPL matches

Tab 3

Biggest victories while defending a total

Biggest victories while chasing a total

Tab 4

Most winning team while batting first/second.

Tab 5

Teams won matches by most runs cumulatively

Tab 6

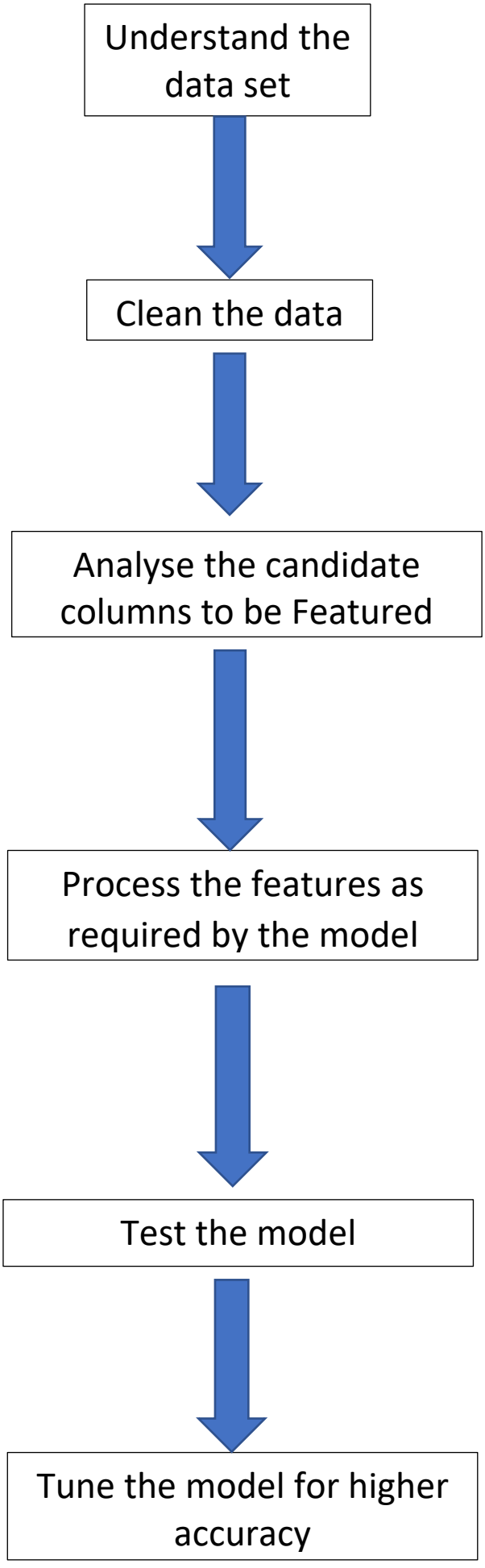
3.2 Hardware / Software designing

1. IBM Cognos Analytics
2. macOS Big Sur/ Windows 10
3. Intel i7/ M1 Silicon Chip
4. Inter-connected network
5. Git

4. EXPERIMENTAL INVESTIGATIONS

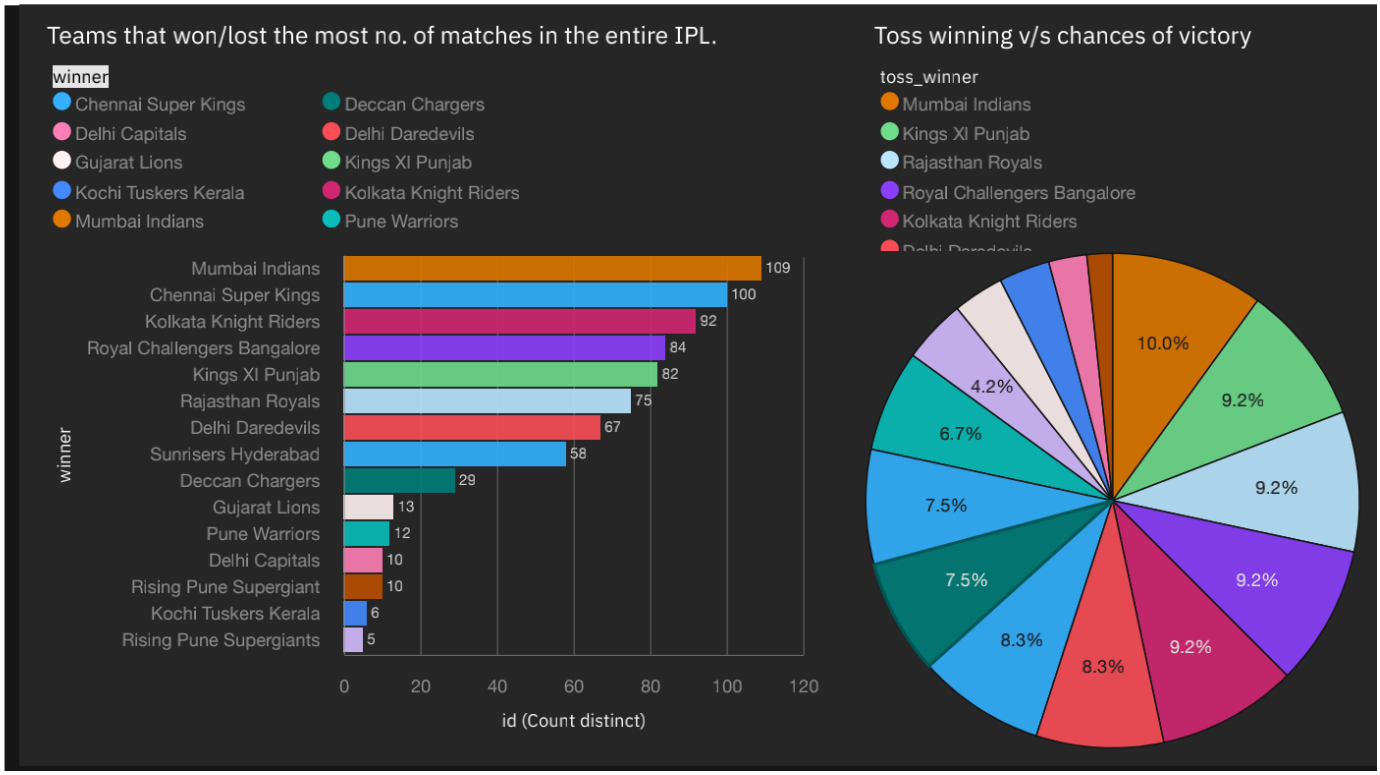
- Accuracy of obtained solutions and its implementations.
- Reliability check for data set used using internet.
- Explored different possibilities for implementation of problem statements in graphical form within IBM Cognos Analytics.
- Determining the final look of the dashboard and various customization we can opt in order to achieve sensational appearance.

5. FLOWCHART

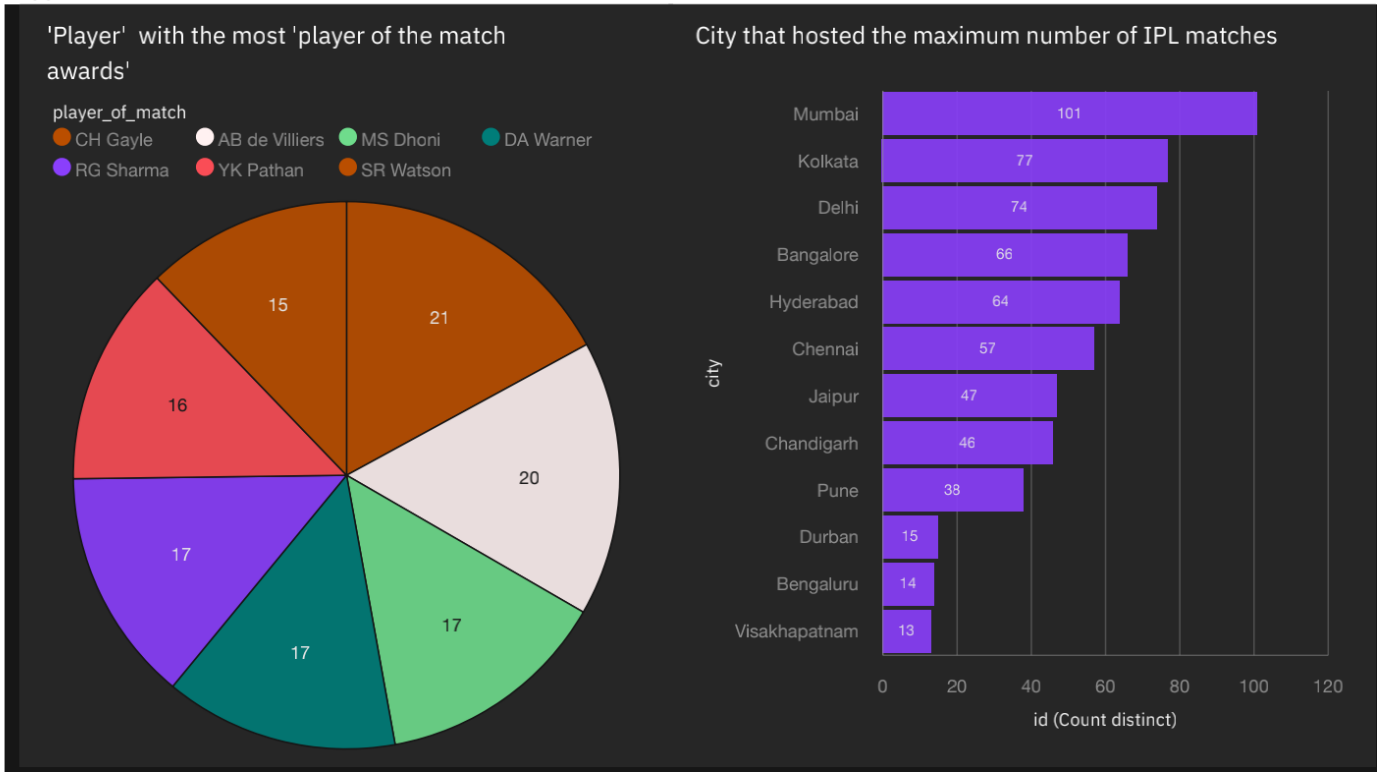

Understand the data set
Clean the data
Analyse the candidate columns to be Featured
Process the features as required by the model
Test the model
Tune the model for higher accuracy

6. RESULT

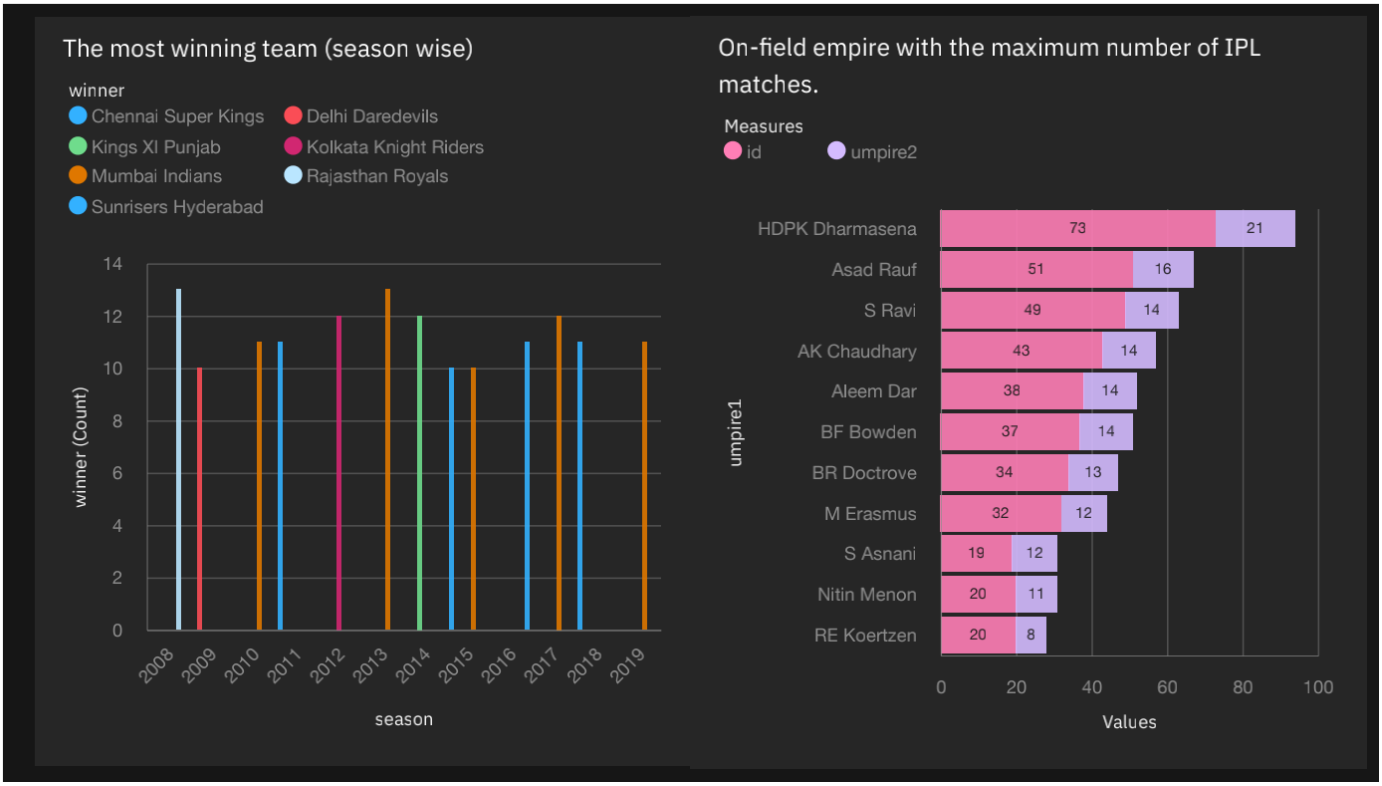
Tab 1



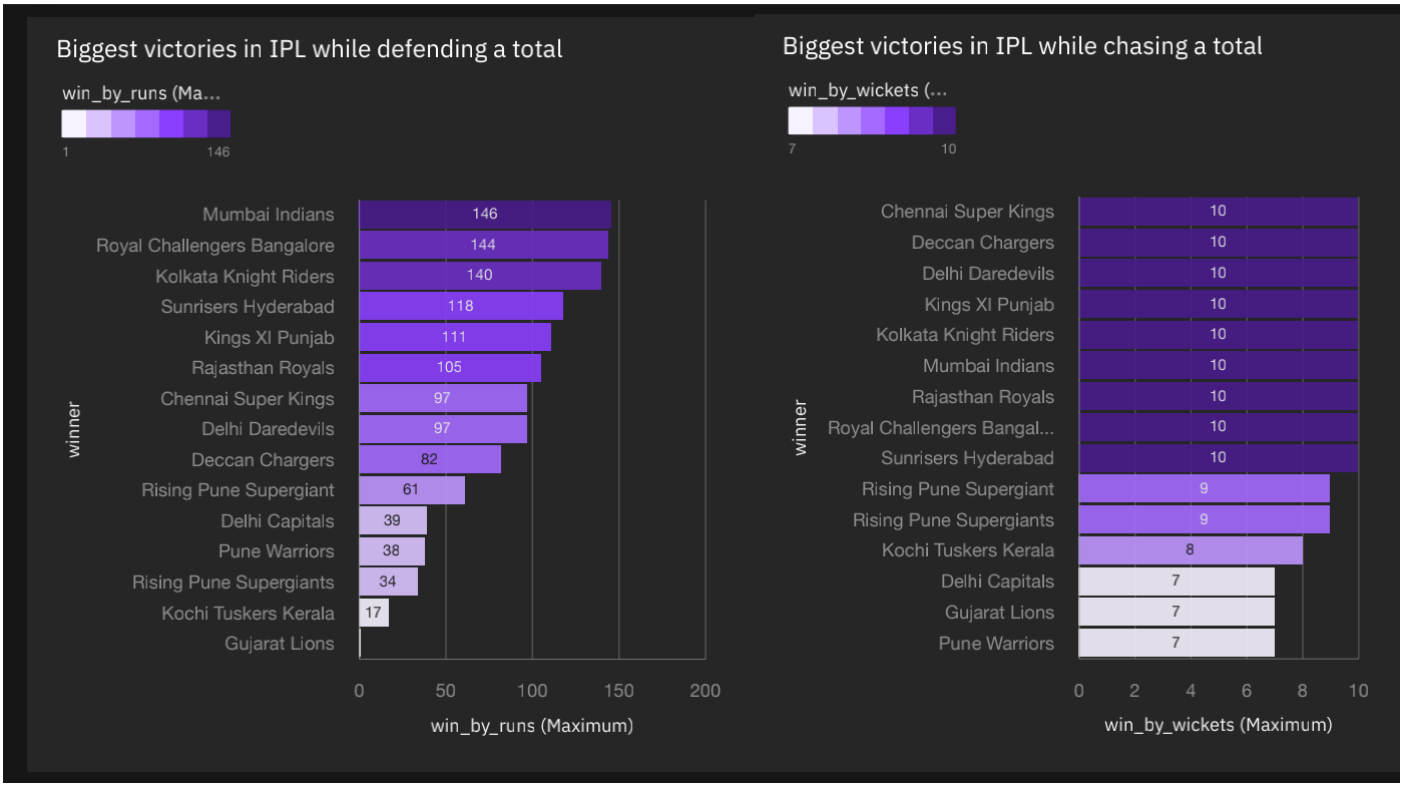
Tab 2



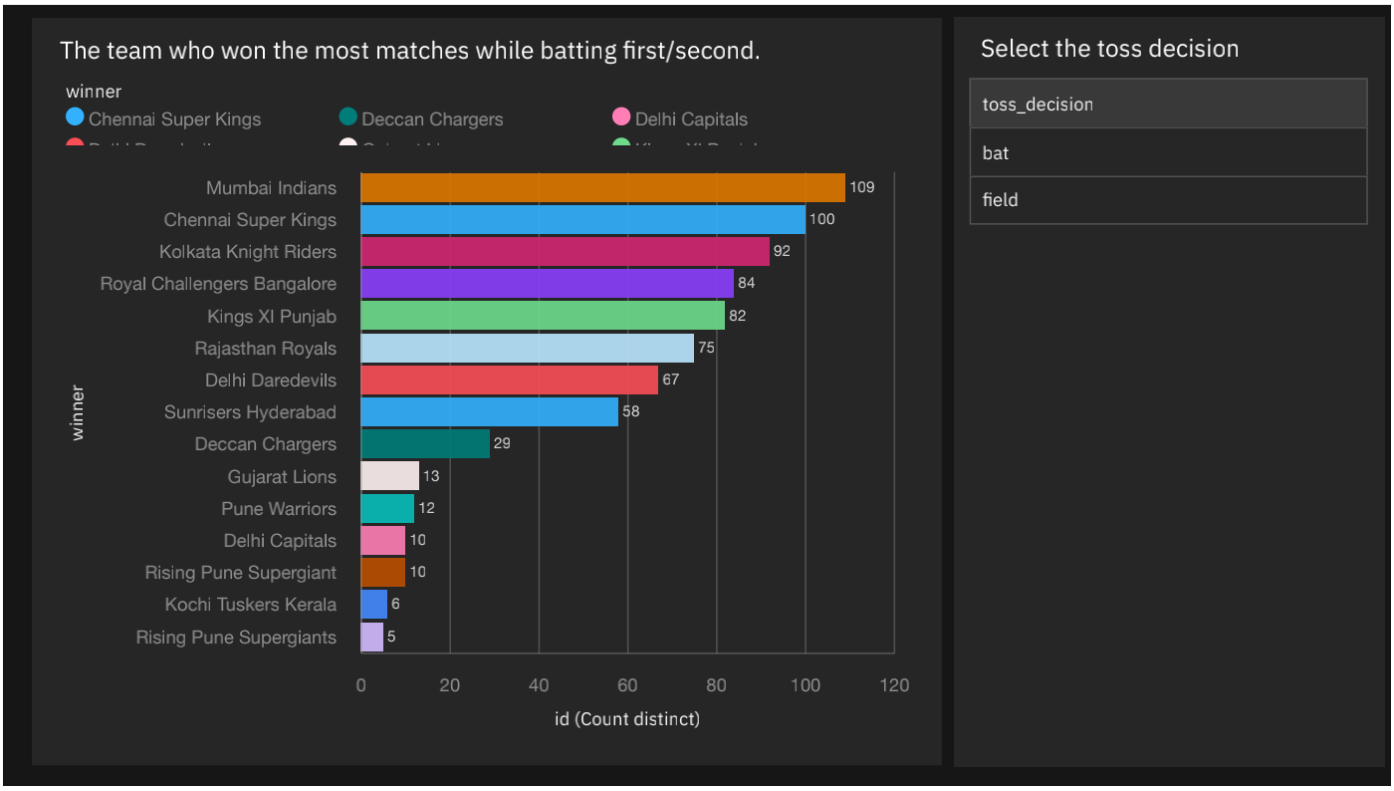
Tab 3


The most winning team (season wise)
winner
Chennai Super Kings
Delhi Daredevils
Kings XI Punjab
Kolkata Knight Riders
Mumbai Indians
Rajasthan Royals
Sunrisers Hyderabad
winner (Count)
season
On-field empire with the maximum number of IPL matches.
Measures
id
umpire2
umpire1
HDPK Dharmasena 73 21
Asad Rauf 51 16
S Ravi 49 14
AK Chaudhary 43 14
Aleem Dar 38 14
BF Bowden 37 14
BR Doctrove 34 13
M Erasmus 32 12
S Asnani 19 12
Nitin Menon 20 11
RE Koertzen 20 8
Values

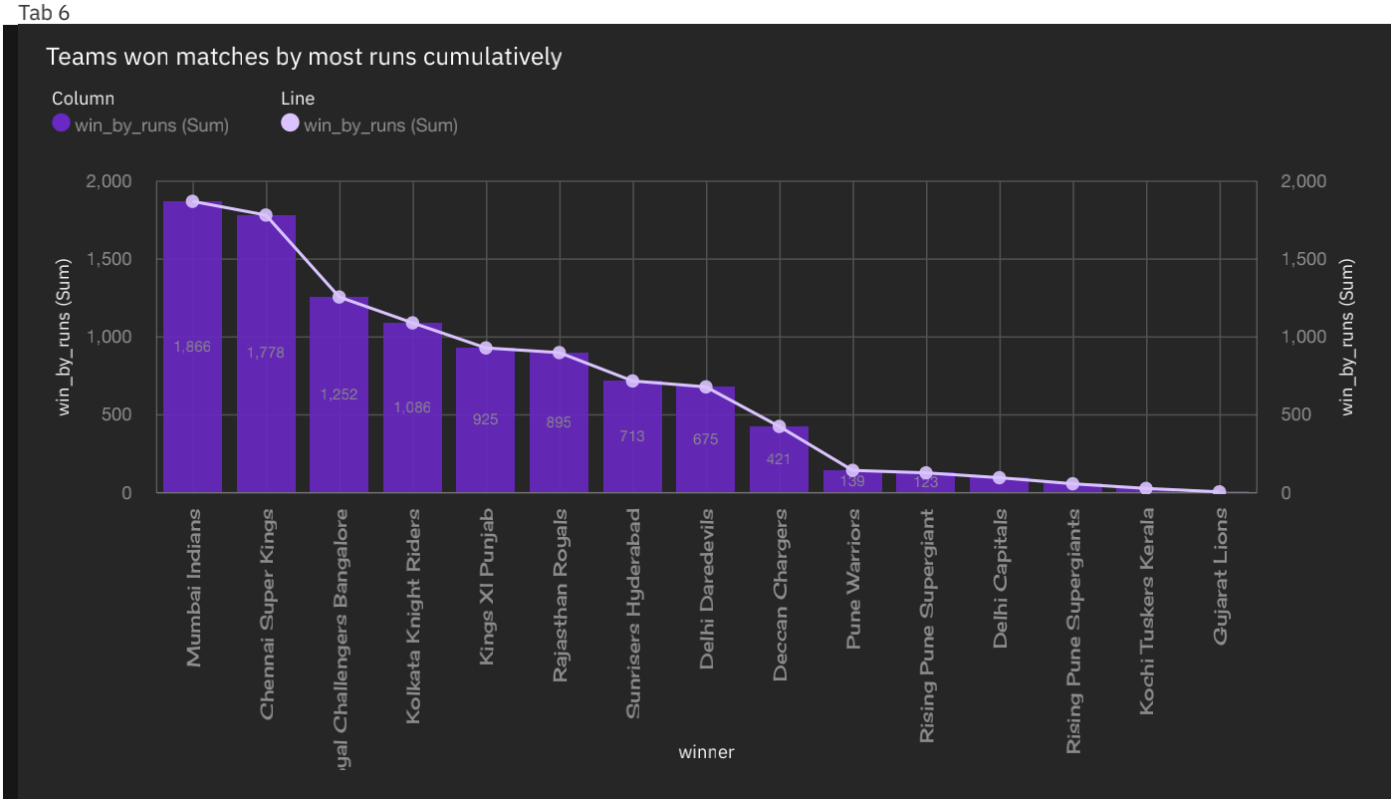
Tab 4


Biggest victories in IPL while defending a total
win_by_runs (Ma...
1
146
winner
Mumbai Indians 146
Royal Challengers Bangalore 144
Kolkata Knight Riders 140
Sunrisers Hyderabad 118
Kings XI Punjab 111
Rajasthan Royals 105
Chennai Super Kings 97
Delhi Daredevils 97
Deccan Chargers 82
Rising Pune Supergiant 61
Delhi Capitals 39
Pune Warriors 38
Rising Pune Supergiants 34
Kochi Tuskers Kerala 17
Gujarat Lions
win_by_runs (Maximum)
Biggest victories in IPL while chasing a total
win_by_wickets (...
7
10
winner
Chennai Super Kings 10
Deccan Chargers 10
Delhi Daredevils 10
Kings XI Punjab 10
Kolkata Knight Riders 10
Mumbai Indians 10
Rajasthan Royals 10
Royal Challengers Bangal... 10
Sunrisers Hyderabad 10
Rising Pune Supergiant 9
Rising Pune Supergiants 9
Kochi Tuskers Kerala 8
Delhi Capitals 7
Gujarat Lions 7
Pune Warriors 7
win_by_wickets (Maximum)

Tab 5


The team who won the most matches while batting first/second.
winner
Chennai Super Kings
Deccan Chargers
Delhi Capitals
Mumbai Indians 109
Chennai Super Kings 100
Kolkata Knight Riders 92
Royal Challengers Bangalore 84
Kings XI Punjab 82
Rajasthan Royals 75
Delhi Daredevils 67
Sunrisers Hyderabad 58
Deccan Chargers 29
Gujarat Lions 13
Pune Warriors 12
Delhi Capitals 10
Rising Pune Supergiant 10
Kochi Tuskers Kerala 6
Rising Pune Supergiants 5
winner
0 20 40 60 80 100 120
id (Count distinct)
Select the toss decision
toss_decision
bat
field

Tab 6


Teams won matches by most runs cumulatively
Column
win_by_runs (Sum)
Line
win_by_runs (Sum)
2,000
1,500
1,000
500
0
win_by_runs (Sum)
1,866
1,778
1,252
1,086
925
895
713
675
421
Mumbai Indians
Chennai Super Kings
Kolkata Knight Riders
Kings XI Punjab
Rajasthan Royals
Sunrisers Hyderabad
Delhi Daredevils
Deccan Chargers
Pune Warriors
Rising Pune Supergiant
Delhi Capitals
Rising Pune Supergiants
Kochi Tuskers Kerala
Gujarat Lions
winner

7. ADVANTAGES

- Our Dashboard uses graphical approach which makes it user friendly and eye-catching.
- Our dashboard has various characteristics which makes it useful for team buyers to analyse the performance of players and teams.
- Dashboards are an effective way to present large volumes of data, in a complex, user friendly manner.
- On the basis of shown data in the dashboard, we can predict the outcome of the matches/season.

8. APPLICATIONS

- It can be used by investors to analysis and invest in teams/players according to their interests.
- It can be used by the media to predict the various outcomes of a match.
- Our dashboard is very helpful in education field, students can learn and analyse our dashboard and enhance their knowledge.
- It can also be used by professional users in making better decisions.
- With real-time, accurate insight on current customers purchasing behaviours, we have a better chance of achieving higher retention rates and increased revenue.

9. CONCLUSION

After signing in to IBM Cognos analytics, and analysing the dataset we start working on our project, we used graphical approach in our dashboard for ease to visualise by the normal users and professionals, we ended up using various graphs like pie, bar, column, etc, for accuracy and betterment in analysing the given scenarios. As a result, we end up making the dashboard displayed herewith.

10. FUTURE SCOPE

- An accurate predictor can be added to the dashboard, which will help users to predict results of the near future.
- Pictorial representation can also be used with graphical representation, so that user can visualize more accurately and it would make our dashboard more captivating.
- With the help of advance artificial intelligence we can make our dashboard to analyse data and show real time results from live data of the matches.

11. BIBILOGRAPHY

- https://www.kaggle.com/nowke9/ipldata?select=matches.csv
- https://www.ibm.com/docs/en/cognos-analytics/11.1.0?topic=stories-get-started-dashboards
- https://www.youtube.com/channel/UCvB8PgOZdb2y7lgToPE-Dfw?view_as=subscriber
- https://smartinternz.com/Student/challenge_workspace
- https://keyskill-clms.comprehend.ibm.com/course/view.php?id=237

APPENDIX

Dashboard Link:

https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FIPL%2BDashboard&action=view&mode=dashboard&subView=model0000017b15f38a67_00000000

Video Demo Link:

https://youtu.be/m33j_viI0HY