1 INTRODUCTION

1.1 Overview

Our main aim is to process data from pervious IPL matches to analyze it better and detect patterns to propose hypothesis based on match results, top scores and wicket takers etc. to gain insights for future matches.

1.2 Purpose

Users of firms such as Dream11, Fantasy, My11Circle, and others will benefit from this prediction model in forming a stronger squad for their fantasy matches. As a result, such businesses will be able to expand their user-base as users would have more information to assist them create their teams.

2 LITERATURE SURVEY

2.1 Existing problem

Existing problems today include the following:

- Lack of clean data is a major callenge we face today. This forces us to make less accurate predictions by leaving room for ambiguity.
- Reduced key differentiating factors from player to player eg. series situation, form, etc.
- Including retired players in current series and other such incorrect information.
- People having similar looking teams due to the small pool of players to choose from.

2.2 Proposed solution

We plan to solve this problem by thoroughly cleaning and updating our training data to be more useful and robust with its predictions. We plan to offer clear visual representation to empower the user to make better choices.

3 THEORITICAL ANALYSIS

3.1 Block diagram

IPL

Team Wins per Season		Most Winning Teams from 2008 to 2019
Teams with Most Victory by Run Cumulatively	Biggest Victory while Chasing a Total	Biggest Victory while Defending a Total

Team Stats

Top 10 Teams that Won the most Matches	Most Wins on Batting First
Top 10 Teams that Lost the most Matches	Most Wins on Batting Second

Additional Information

Umpires with most On-Field Matches	Most Player of the Match Winners	Total Number of Matches
		Total Number of Host Cities
Chances of Winning the match on Winning Toss	Top 5 IPL Host Cities	Total Number of Runs
		Total Number of Runs

3.2 Hardware / Software designing

Technology to be Used:

1. Applications:
    - IBM Cognos Analytics
    - IBM Cloud
    - IBM Watson Studio
    - Git
2. Python Libraries or Modules:
    - Pandas
    - Numpy
    - Seaborn
    - Matplotlib
3. Hardware
    - Intel CORE i5 8th Generation
    - Minimum 8 GB RAM

4 EXPERIMENTAL INVESTIGATIONS

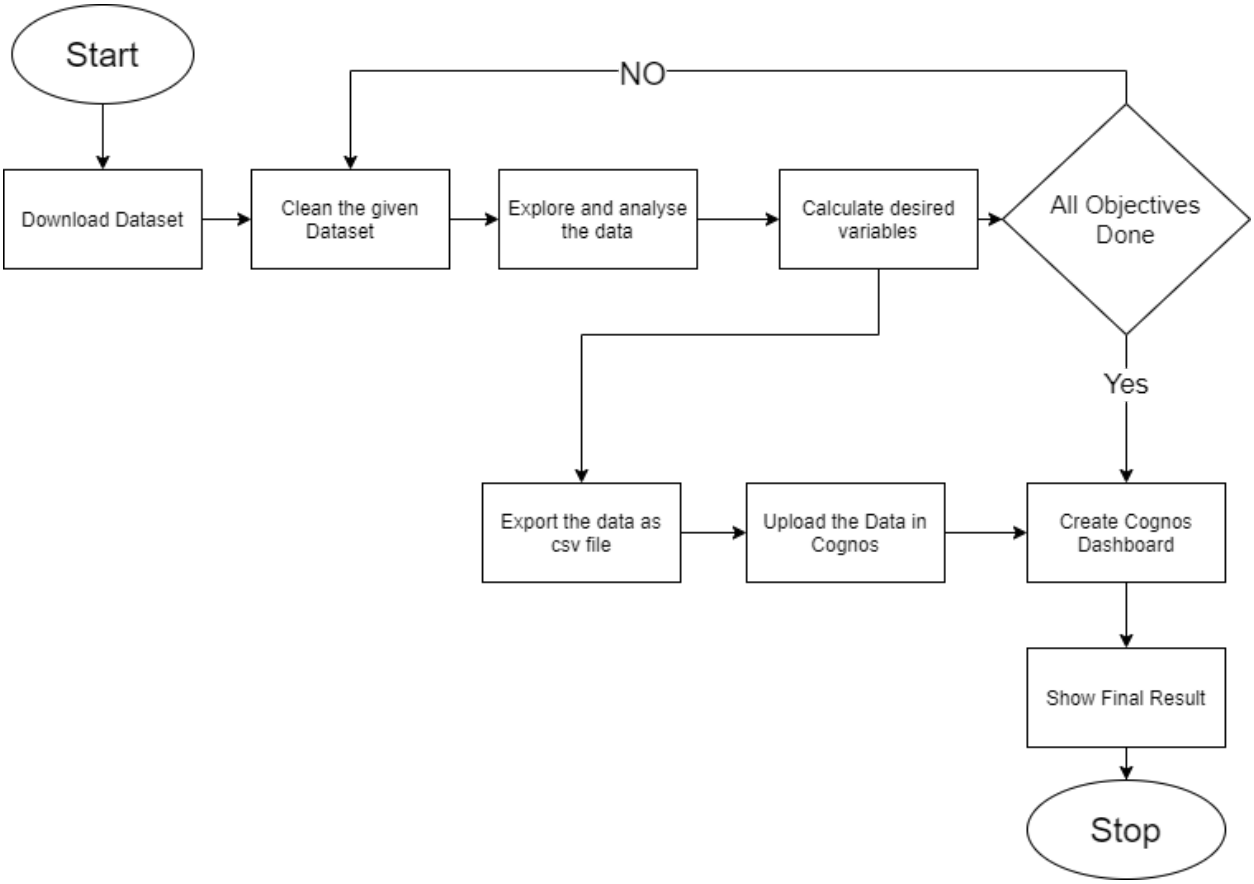
Ours was a two step solution wherein;

Step One dealt with importing, cleaning and processing the data. We calculated various variables and introduced colums important to our model (like losser, toss2win, etc.).

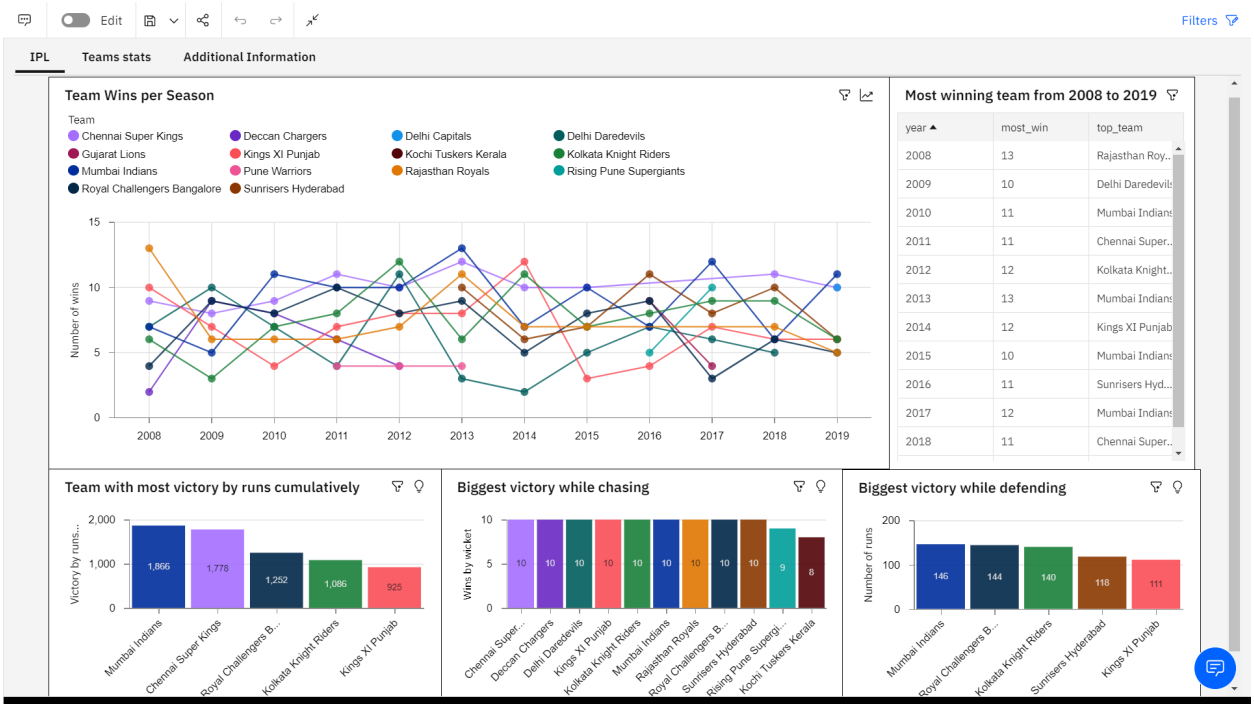
The Second Step was majorly about visually representing our findings. For making our dashboard we first attended all the IBM Hackchallenge Bootcams where we learned the basics to build a Cognos Dashboard.

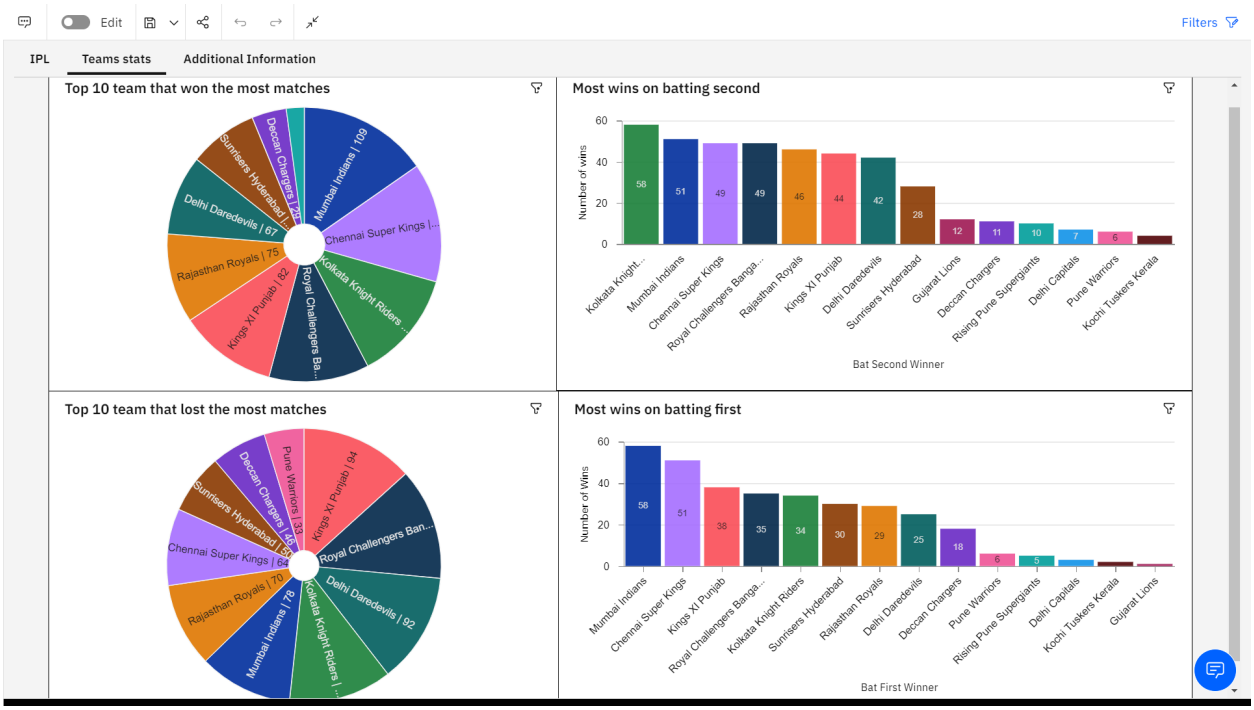
Finally we combined our knowledge from both the steps to create our final solution.

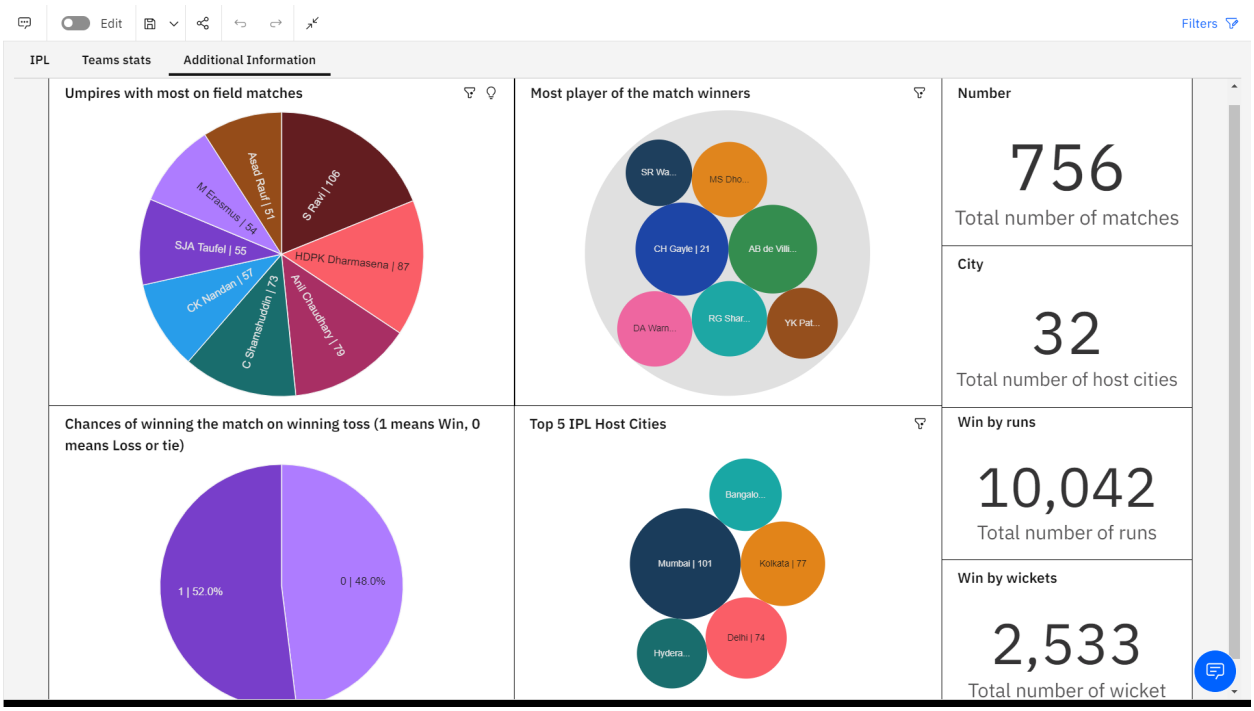
5 FLOWCHART



6 RESULT


Edit
Filters
IPL
Teams stats
Additional Information
Team Wins per Season
Team
Chennai Super Kings
Deccan Chargers
Delhi Capitals
Delhi Daredevils
Gujarat Lions
Kings XI Punjab
Kochi Tuskers Kerala
Kolkata Knight Riders
Mumbai Indians
Pune Warriors
Rajasthan Royals
Rising Pune Supergiants
Royal Challengers Bangalore
Sunrisers Hyderabad
Number of wins
Most winning team from 2008 to 2019
year
most_win
top_team
2008 13 Rajasthan Roy..
2009 10 Delhi Daredevil..
2010 11 Mumbai Indians
2011 11 Chennai Super..
2012 12 Kolkata Knight..
2013 13 Mumbai Indians
2014 12 Kings XI Punjab
2015 10 Mumbai Indians
2016 11 Sunrisers Hyd..
2017 12 Mumbai Indians
2018 11 Chennai Super..
Team with most victory by runs cumulatively
Victory by runs...
1,866
1,778
1,252
1,086
925
Mumbai Indians
Chennai Super Kings
Royal Challengers B...
Kolkata Knight Riders
Kings XI Punjab
Biggest victory while chasing
Wins by wicket
Biggest victory while defending
Number of runs
146
144
140
118
111


Edit
Filters
IPL
Teams stats
Additional Information
Top 10 team that won the most matches
Mumbai Indians | 109
Chennai Super Kings |...
Kolkata Knight Riders...
Royal Challengers Ba...
Kings XI Punjab | 82
Rajasthan Royals | 75
Delhi Daredevils | 67
Sunrisers Hyderabad |...
Deccan Chargers | 29
Most wins on batting second
Number of wins
58
51
49
49
46
44
42
28
12
11
10
7
6
Kolkata Knight...
Mumbai Indians
Chennai Super Kings
Royal Challengers Banga...
Rajasthan Royals
Kings XI Punjab
Delhi Daredevils
Sunrisers Hyderabad
Gujarat Lions
Deccan Chargers
Rising Pune Supergiants
Delhi Capitals
Pune Warriors
Kochi Tuskers Kerala
Bat Second Winner
Top 10 team that lost the most matches
Kings XI Punjab | 94
Royal Challengers Ban...
Delhi Daredevils | 92
Kolkata Knight Riders |...
Mumbai Indians | 78
Rajasthan Royals | 70
Chennai Super Kings | 64
Sunrisers Hyderabad | 58
Deccan Chargers | 58
Pune Warriors | 32
Most wins on batting first
Number of Wins
58
51
38
35
34
30
29
25
18
6
5
Mumbai Indians
Chennai Super Kings
Kings XI Punjab
Royal Challengers Banga...
Kolkata Knight Riders
Sunrisers Hyderabad
Rajasthan Royals
Delhi Daredevils
Deccan Chargers
Pune Warriors
Rising Pune Supergiants
Delhi Capitals
Kochi Tuskers Kerala
Gujarat Lions
Bat First Winner



Following results were generated by the IPL Super Predictor:

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

7 ADVANTAGES & DISADVANTAGES

Advantages:

- One click visualization of IPL data on dashboard.
- This not only saves time but increases the quality of your decision as well because you now account for many more variables.

Disadvantages:

- Our training database does not contain various important parameters such as series situation, form, fitness, etc.

8 APPLICATIONS

Users of firms such as Dream11, Fantasy, My11Circle, and others will benefit from this prediction model in forming a stronger squad for their fantasy matches. Since a result, such businesses will be able to expand their user base as users would have more information to assist them create their teams.

9 CONCLUSION

After cleaning and processing the data we calculated the desired variables and created a visual representaion of the same on our dashboard. For instance, most winning team of all seasons, most man of the match winner, most on-field umpires and the list continues.

10 FUTURE SCOPE

Our training database could contain other parameters such as series situation, form, fitness, etc. for better future predictions.

11 BIBILOGRAPHY

Kaggle: https://www.kaggle.com/arbazkhan971/indian-premier-league-analysis-2020

Reference to the aforementioned work was made along with help from websites like: stackexchange, geeksforgeeks, etc. for refining our code.

APPENDIX A.

The sourse code for the solution built is made available on the GitHub Repository.