

IBM Hack Challenge

Problem Statement: ***SUPER PREDICTOR OF INDIAN PREMIER LEAGUE***

Introduction:

a. Overview:

The Super predictor of Indian Premier League Dashboard contains several solution and visualizations to various kinds of problem statements. Problem statements include the following:

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.

b. Purpose:

The purpose of this project is to find insights and predictions for future matches. Insights are found using useful graphs and visualizations. These insights could help teams strategize better for better results.

Literature Survey:

2.1) Existing problems:

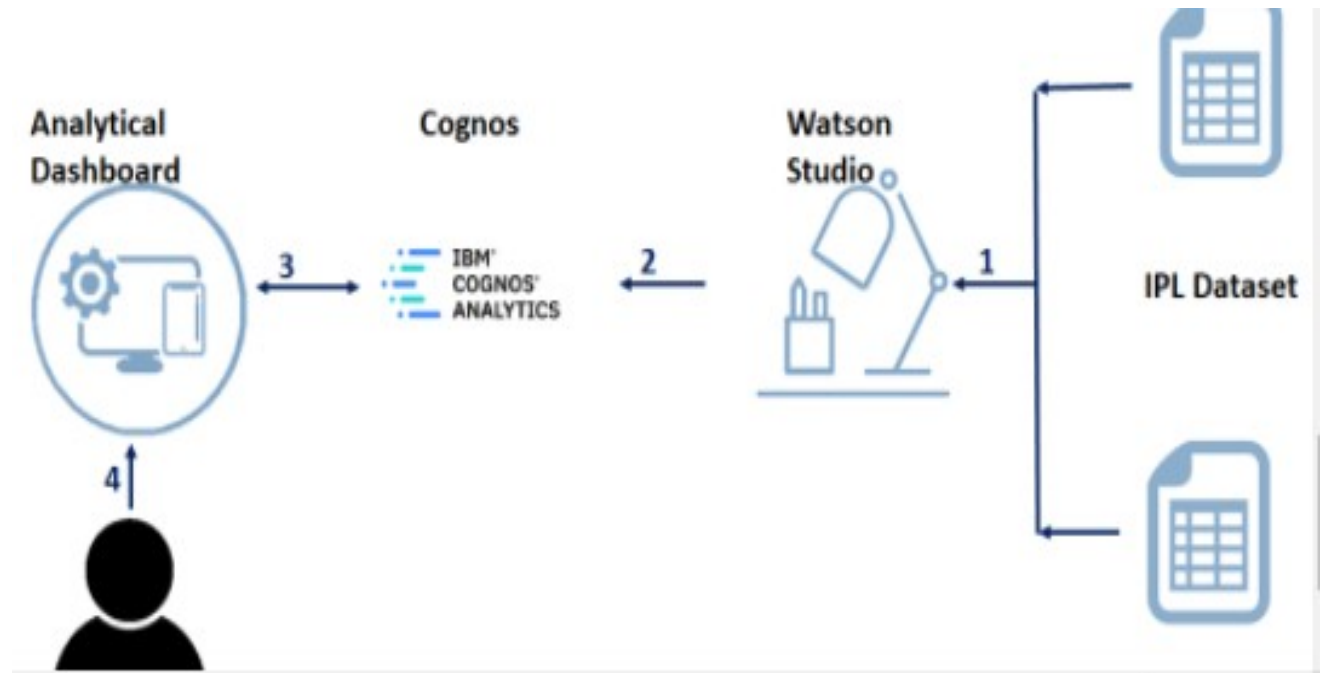
Existing approaches deal with pure human strategies, i.e. there is no machine learning or detailed analysis to help teams plan better. Coaches from teams analyze manually to the best of their knowledge, hence there might be errors or mistakes which can be easily solved using IBM cognos analytics.

2.2) Proposed solution:

The proposed solution is displayed using the IBM cognos analytics dashboard, which contains several plots and tables that help one understand and study the game to the depth. The solution helps teams, coaches, mentors, players analyze their game and improve depending on the circumstances.

Theoretical Analysis:

3.1) Block Diagram:



The above figure deals with the block diagram of the project.

3.2) The hardware and software requirements for designing the dashboard are A PC loaded with WATSON studio and IBM cloud analytics. These softwares are available in the Data science website of IBM cloud. The cognos analytics in particular is the tool used in this project. Hardware required are the basic mouse, keyboard, PC. Also the dataset is an important part for this project and is must for going ahead with creating the dashboard.

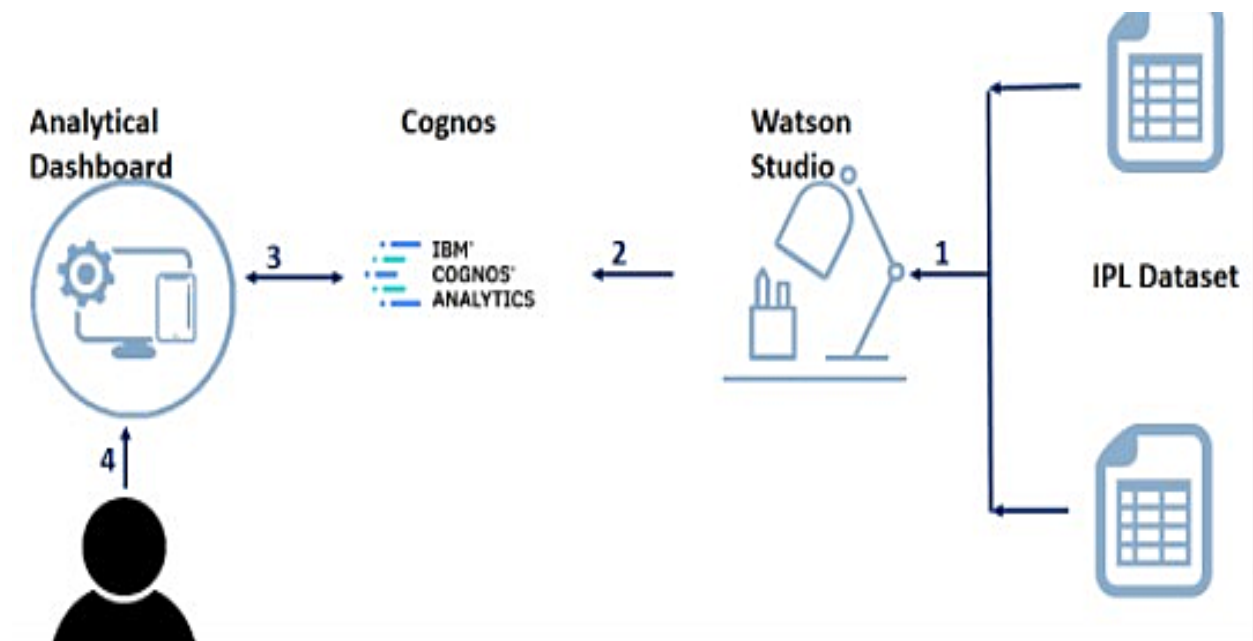
Experimental Investigations:

I had to explore the data using the cognos analytics tool, to find several insights. The investigations turned out to be very useful as it contains potential use for teams and strategists.

The problem statements required using every single column in the dataset to its fullest. Thus requiring thorough knowledge on the dataset.

A bit of domain knowledge also would help one understand the problem statement and help in providing better results.

Flowchart:



The problem started with collecting the dataset from kaggle and also downloading the necessary tools from IBM cloud. Thus having the dataset we had to perform Exploratory Data Analysis

(EDA). For that we had to upload the dataset into the Cognos analytics and then we have to refine it to separate the integer variables and categorical variables.

Further visualisations and plotting of graphs helped in creating the dashboard required as the problem solution.

Result:

The result can be given as providing several possible insights to the 11 problem statements mentioned in the overview. The result helps teams to analyze where they could improve and also helps them in producing better results.

Advantages and Disadvantages:

Advantages are as follows:

- 1) They help in providing insights that can benefit the teams to show better performance.
- 2) They also give an overall stat/ record of the Indian Premier League since 2008 to 2018
- 3) The visualisations are very easy to understand that anyone can easily read and get to know more.

Disadvantages are as follows:

- 1) There could be more criteria or factors that the problem statements could depend upon, which might have not been considered.

Applications:

The applications of this project, as mentioned earlier helps on understand the progress of the Indian Premier League over the years. We find out the most successful teams and most play venues etc. These insights help us identify the best possible solution. They can also be used by teams to improve their performances and help each of them achieve more than their capabilities. With the help of IBM cognos analytics there is no need for one to be a data scientist to perform or create such a dashboard, it is very easy to create one and hence a little bit of domain knowledge is all that's enough. The solution can be used in the field of sports, any kind of sports. It helps coaches reduce their burden of choosing the best team to play and so on.

Conclusion:

The project dealt with using IBM cognos analytics to find useful insights about IPL Super predictor. This project provided solution in the form of a dashboard which contained several visualizations. These visualization help teams to show better results.

Future Scope:

The future scope of this project is, it can be seen that teams use such strategies and help of software like IBM cognos analytics to help their players perform better.

Having used these technologies teams can see a drastic change in their performance for their betterment.

Bibliography:

The bootcamp was very informative and helped me solve the problem statement.