

Insights on the Impact of Matches, Players & Teams in IPL



- ***Presented By
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General Note



- The 2 data files ***“deliveries”*** and ***“matches”*** have merged within a single document named ***“deliveries_matches”*** and has been transformed to excel format for analysis.
- The excel document ***“deliveries_matches”*** contains two sheets ***“deliveries”*** and ***“matches”*** which contain the same data the individual files ***“deliveries”*** and ***“matches”*** had within them.
- Further the two sheets ***“deliveries”*** and ***“matches”*** have been joined in Tableau workbook for analysis.
- It was observed that many of the venue(stadium) was not properly shown on map(latitude and longitude), so it was decided proceed with alternate modes of visualization.
- As an analyst various situations have been assumed and the solution for the same has been presented.
- Multiple Tableau packaged workbook (with extract) has been created in order to have a clear view of understanding of presentations and also since copy pasting of sheets was not possible .
- Assumption: Only the sheets with snapshot would be considered for presentation(as an analyst), rest is explanatory for the evaluators to have a clear understanding of situation and calculated fields in Tableau.

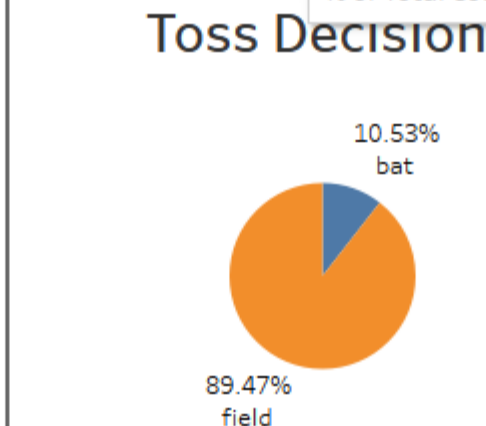
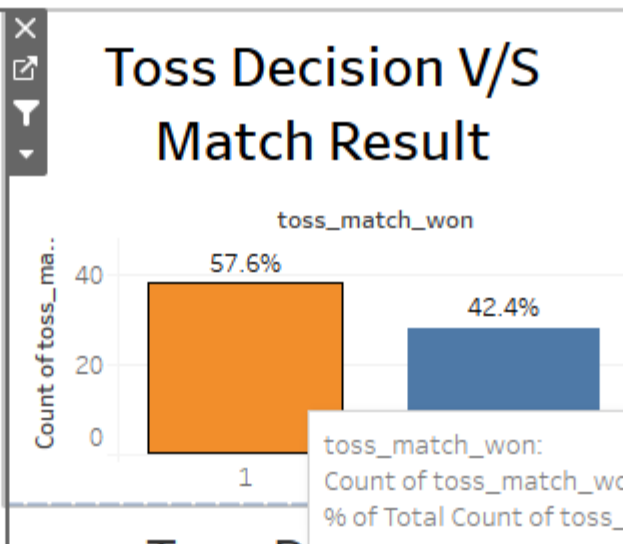
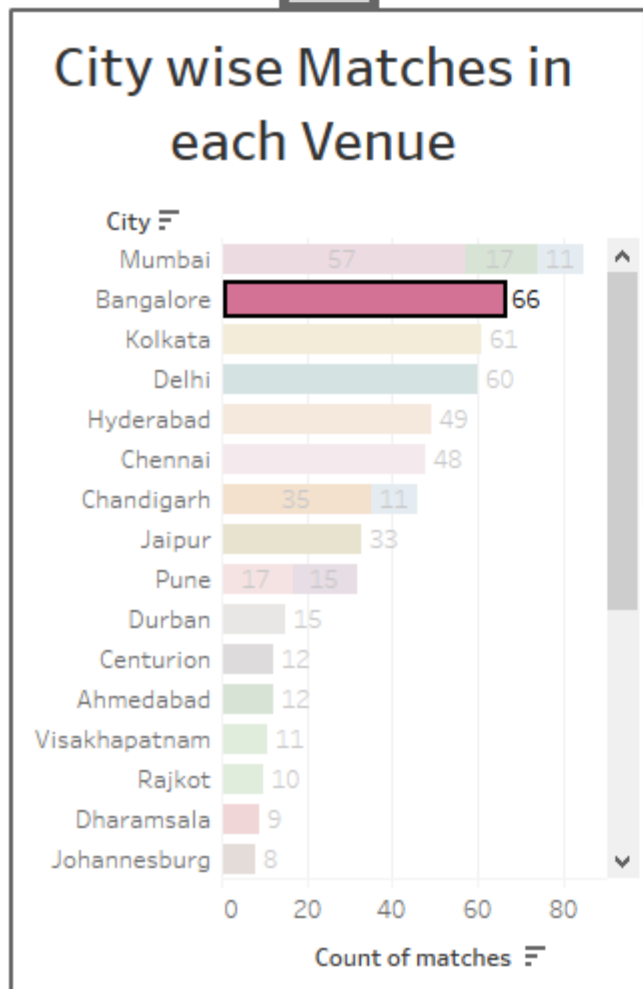
Situation-1



- The news agency tries to analyse the confusions faced by Team's Captain after winning toss. Thereby decides to come up with a visualization(solution) by thinking of below situation.
- Suppose the captain of the team is confused of making the decision after winning the toss, so he goes up to the coach of his team for a suggestion. The coach has a complete solution, but he finds it difficult to convey it orally so he asks an analyst of his team to provide him with a visualization of historical outcomes based on venue, toss decision and the match result of each and every match which has happened from the starting of season 1, till the year 2017 so that the coach and the captain can make a suitable decision based on the venue where matches would be conducted. The analyst comes up with a dashboard in Tableau which would convey the impact of toss decisions on match results for each venue.
- After having the data in hand , Some of the new variables are generated which are explained as follows :
 - toss_result: returns **"T1"** if team 1 wins the toss, else returns **"T2"**.
 - match_result: returns **"T1"** if team 1 wins the match else returns **"T2"**.
 - toss_match_won: returns **"1"** if the team which won the toss wins the match else **"0"**. In simple terms, **"1"** is returned if the team wins the match after winning the toss else **"0"**.

Historical Insights on Matches-I

Match History



- Out of 636 IPL matches, highest number of matches was conducted in Bangalore city which is 66.

- Within this 66 matches it was observed that 38 matches had teams which won the match after winning the toss. And further within this 38 matches 89.47% of the matches had teams opting to chase after winning the toss.

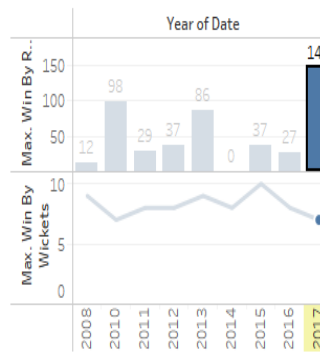
- Concluding the insight, there is more probability of winning match in Bangalore if teams opt to chase after winning Toss.

Situation-2

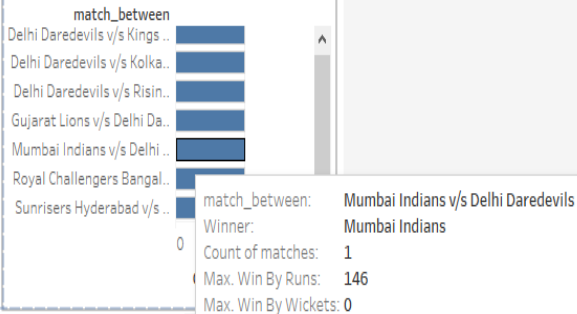
- After having the analysis of all the matches conducted in each venue, the coach thinks of diving in deep into insight on historical performance of teams in each venue in terms of highest margin of wins by runs and by wickets. Again the analyst comes up with a dashboard which displays season-wise highest margin of wins by runs and by wickets in each stadium where matches were being played.
- Some of the new variables are generated which are explained as follows :
 - Match-between: values of Team1 and Team2 column are concatenated to denote the fixture between particular teams.

Historical Insights on Matches-II

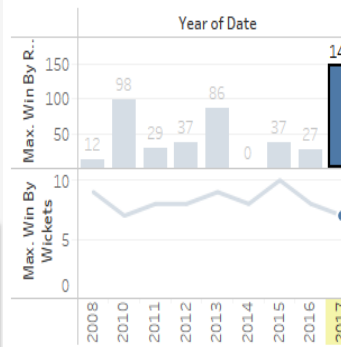
Highest win by Runs & Wickets



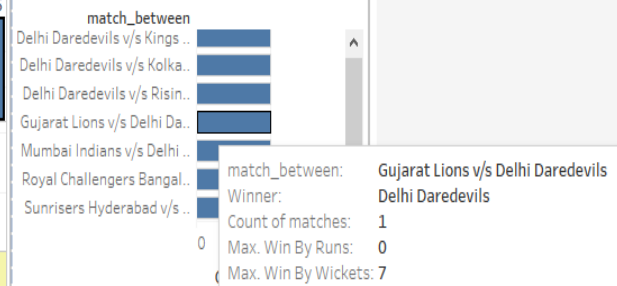
Count of matches between teams



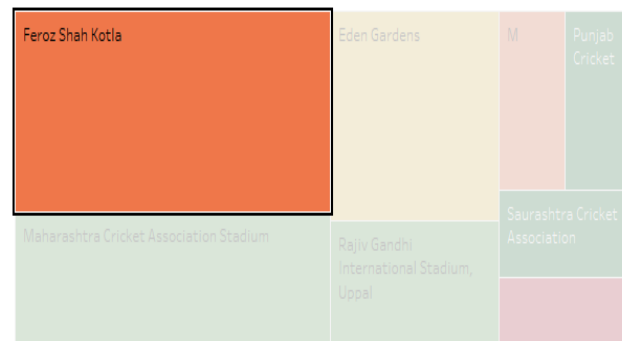
Highest win by Runs & Wickets



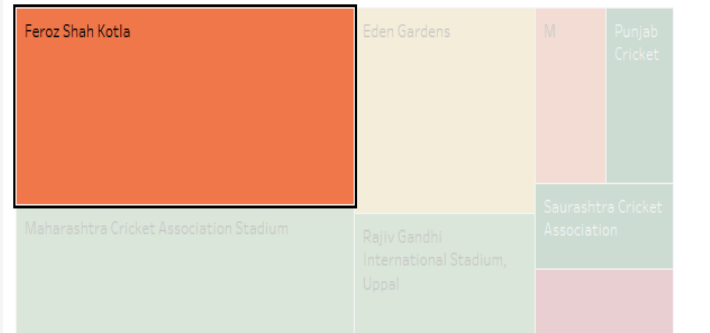
Count of matches between teams



Venue-Wise Biggest Wins by Runs & by Wickets

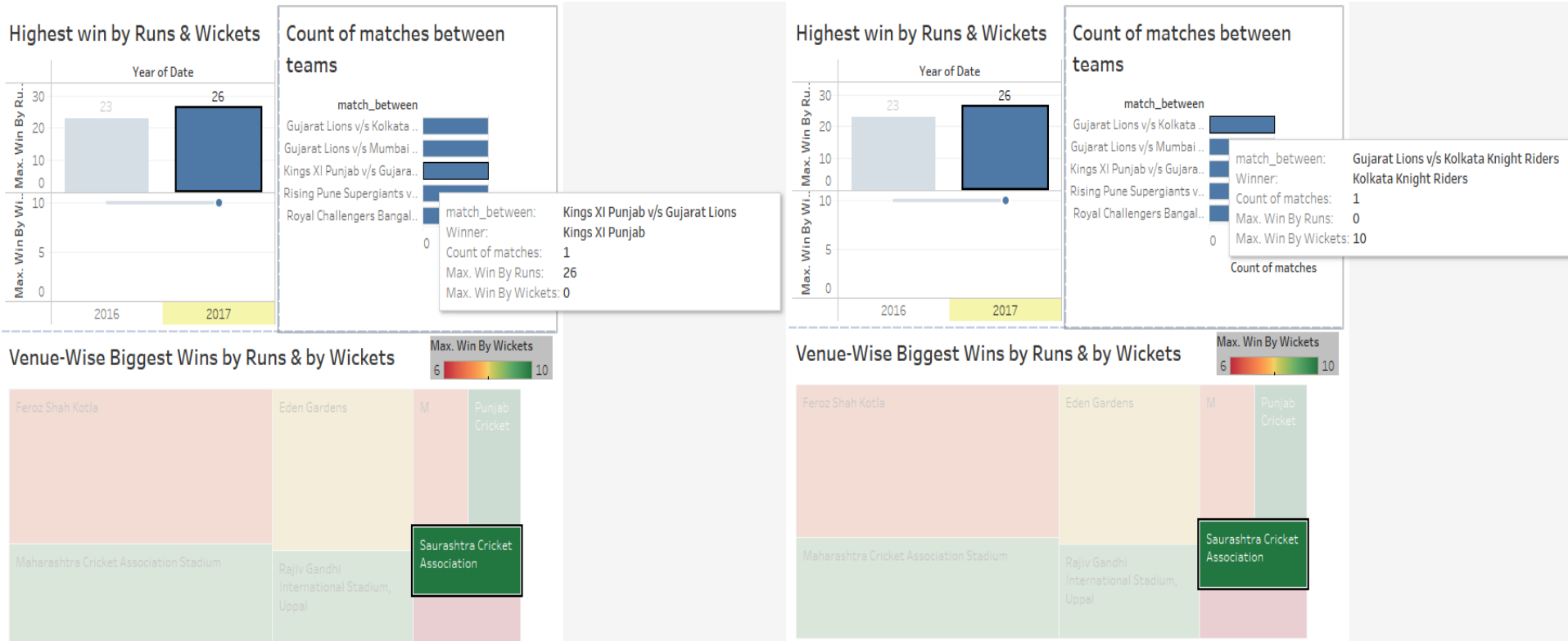


Venue-Wise Biggest Wins by Runs & by Wickets



- From above 2 visualizations we can observe that the biggest win by runs in the IPL History was in the year 2017 i.e. by 146 runs which was in the match between Mumbai Indians and Delhi Daredevils in Feroz shah kotla stadium and Mumbai appeared to be the winner of the match.
- Also, in the same year, same venue the Biggest win by wickets was by 7 wickets in the match between Gujarat Lions and Delhi Daredevils in which Delhi appeared to be the winners.

Historical Insights on Matches-II



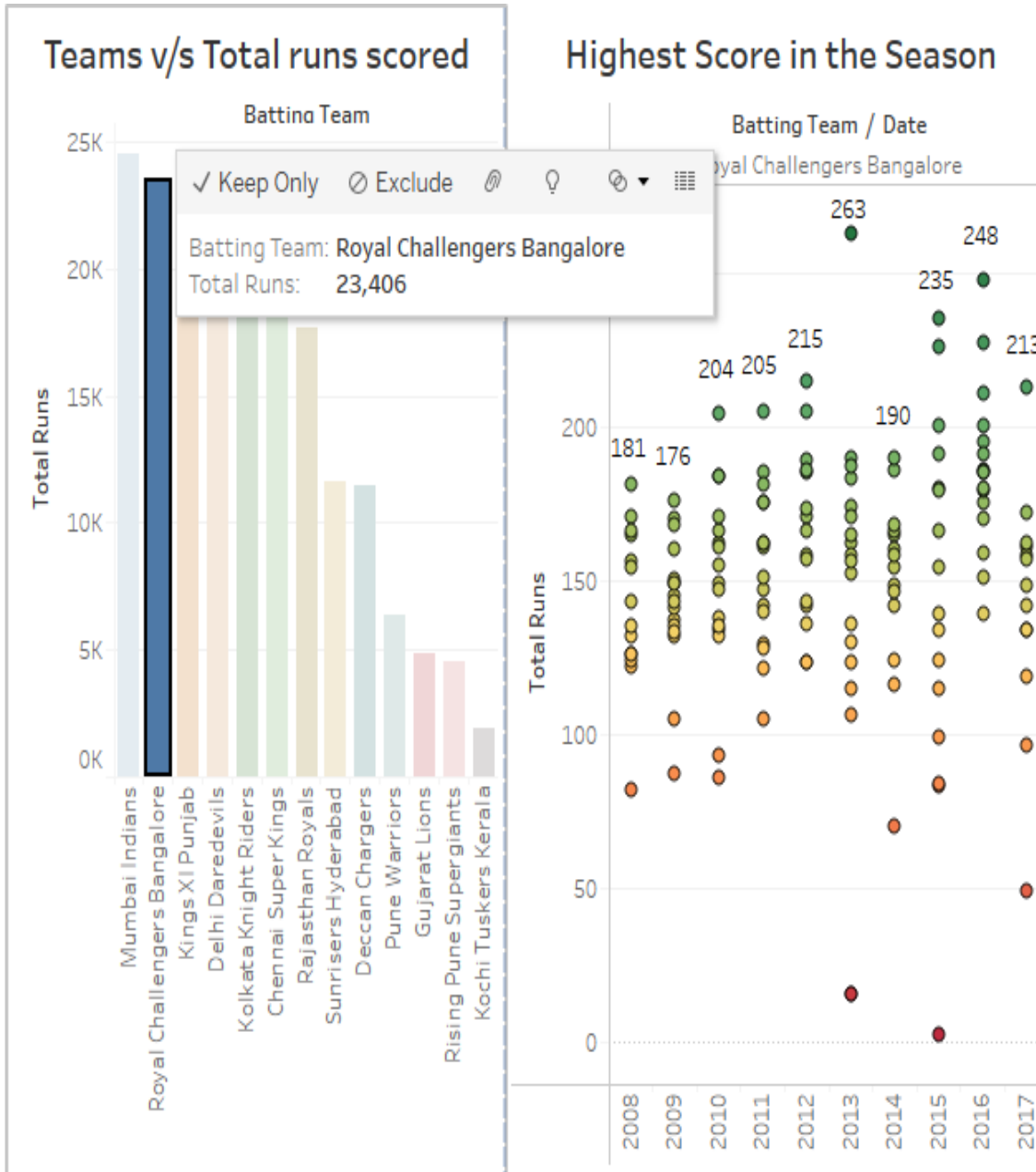
- From the above 2 visualizations we can observe that Kolkata Knight Riders won against Gujarat Lions by not even losing a single wicket in the saurashtra cricket association stadium in the year 2017. Out of 5 matches played in the same stadium, same year, the match between Kolkata and Gujarat was the only match in the entire season to witness the biggest win by runs.
- Out of 5 matches conducted in saurashtra cricket stadium in the year 2017, the match between Kings XI Punjab and Gujarat Lions was only match to witness Punjab winning with highest win by runs (i.e. 26 runs) in the particular stadium in that particular year.

Situation-3



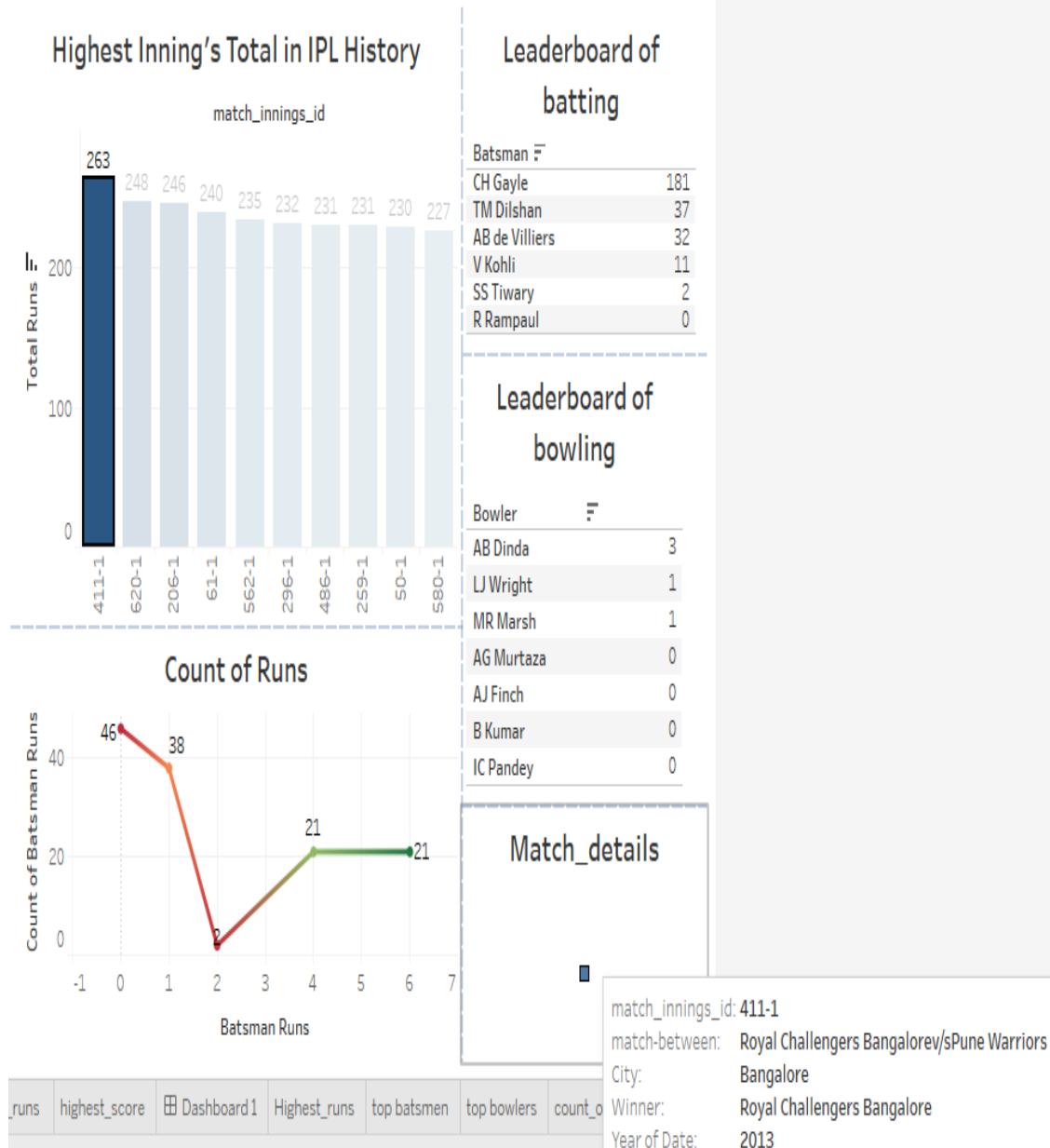
- Suppose there is a need to perform analysis based on the total runs scored by each team from starting of season 1 till 2017 and the highest scored across each season.
- This can be done by generating a dashboard in Tableau which displays an interactive visualization which displays total runs scored by each team from season 1 till 2017 on 1 side and the runs scored in a single inning across all the season on the otherside. On the 1st side if a team is selected, its total runs from season 1 till 2017 will be highlighted and in response on the other side same team's score in each inning across all the season will be displayed.
- Some of the new variables are generated which are explained as follows :
 - Match_innings_id: this ID conveys the specific inning's ID of specific match(which also will be represented as ID). This will help us visualize the runs scored by the batting team in a specific innings in a specific match.
 - TopN: parameter to customise the filtering.

Historical Insights on Matches-III



- From the visualization we can observe that Mumbai Indians have the highest total of runs scored from season 1 till 2017, followed by Royal Challengers Bangalore.
- Also, we can clearly observe that the highest runs scored by Bangalore team in its entire journey in IPL in a single innings was in the year 2013, i.e. 263.

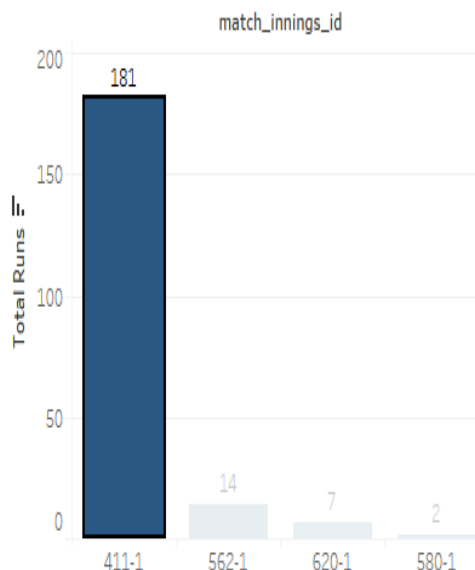
Historical Insights on Matches-III



- From the visualization we can observe that in the entire history of IPL Royal Challengers Bangalore was the team to score highest total on score board of 263 runs which was in the year 2013 and that too in their home ground.
- Also, we can find out that the match was dominated by Chris Gayle who individually scored a total of 181 runs (almost which would be scored by a single team), and AB Dinda was the bowler to take highest wickets in that match.

Historical Insights on Matches-III

Highest Inning's Total in IPL History



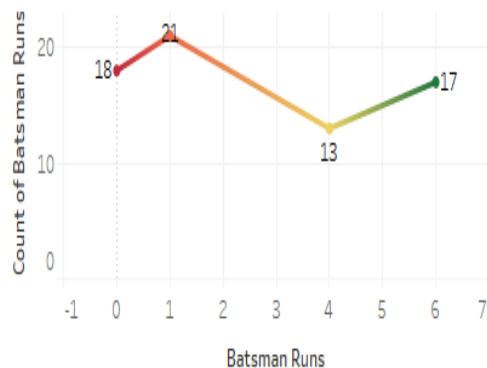
Leaderboard of
batting

Batsman	Runs
CH Gayle	181
TM Dilshan	37
AB de Villiers	32
V Kohli	11
SS Tiwary	2
R Rampaul	0

Leaderboard of
bowling

Bowler	Wickets
AB Dinda	0
AG Murtaza	0
AJ Finch	0
B Kumar	0
IC Pandey	0
LJ Wright	0
MR Marsh	0

Count of Runs



Match_details

match_innings_id: 411-1
 match-between: Royal Challengers Bangalore/sPune Warriors
 City: Bangalore
 Winner: Royal Challengers Bangalore
 Year of Date: 2013

- From this visualization we can observe that in the match 411-1 (which was earlier discussed as highest total from a team in IPL history), Chris Gayle scored the highest total of 181 runs(individually) which came from a massive hit comprising of 17 sixers, 14 boundaries, followed by 26 singles and 18 dot balls.

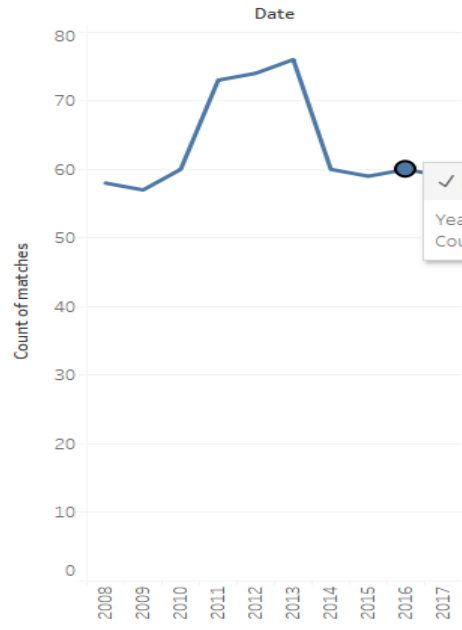
Situation-4



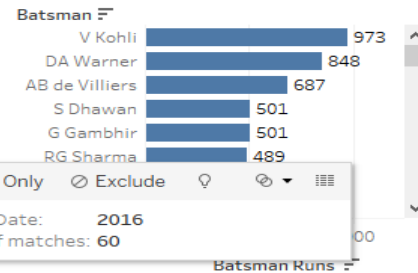
- Dig insight on hierarchical performance of players based on runs scored, wickets taken, 4s and 6s.
- Some of the new variables are generated which are explained as follows :
 - 4s: returns **"1"** if the runs scored per single delivery is 4 runs, else **"0"**
 - 6s: returns **"1"** if the runs scored per single delivery is 6 runs, else **"0"**
 - *Assumption: we are assuming that 4 runs and 6 runs scored per single delivery will definitely be boundary and sixer and nothing else(for example-not batsmen scoring 4 singles or runs scored for overthrow, etc.).*

Year-wise Top class performing Players

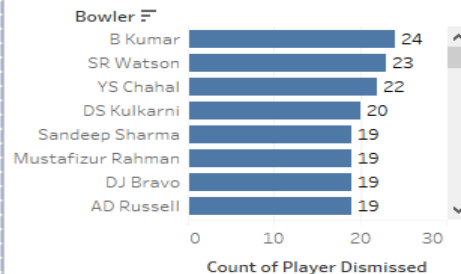
TOTAL MATCHES PER YEAR



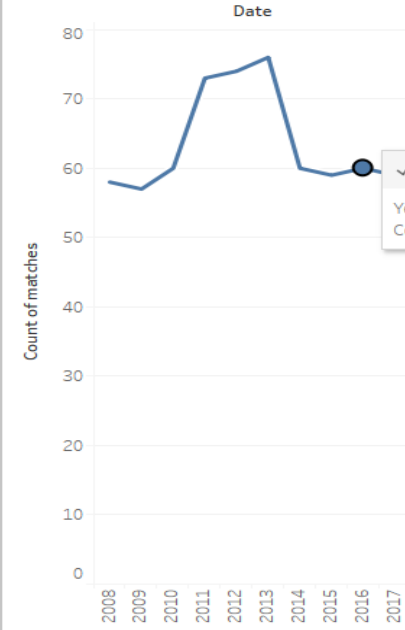
RUNS



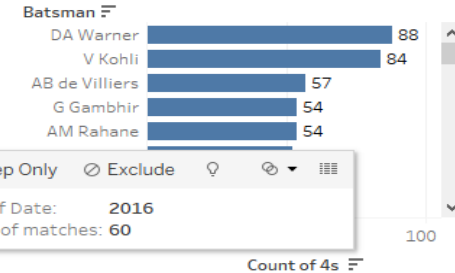
WICKETS



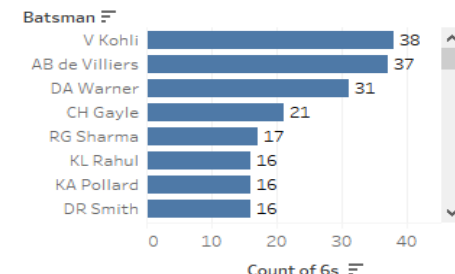
TOTAL MATCHES PER YEAR



Boundaries



Sixers



- From the above 2 visualizations it is evident that highest number of matches was conducted in the year 2013 i.e. 73 matches. In the year 2016 Virat Kholi was top number 1 batsman to score highest runs in the entire season and Bhuvaneshwar Kumar was the top number 1 bowler in the entire season to grab 24 wickets.
- Further, in the same season highest number of boundaries was hit by David warner i.e. 88, and highest number of Sixers was cleared by Virat Kholi i.e. 38, both of which appears to be the highest in the entire season

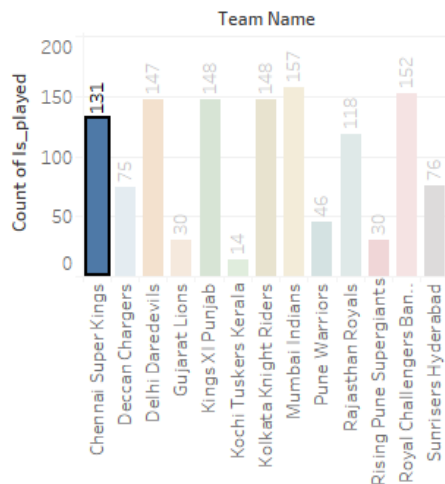
Situation-5



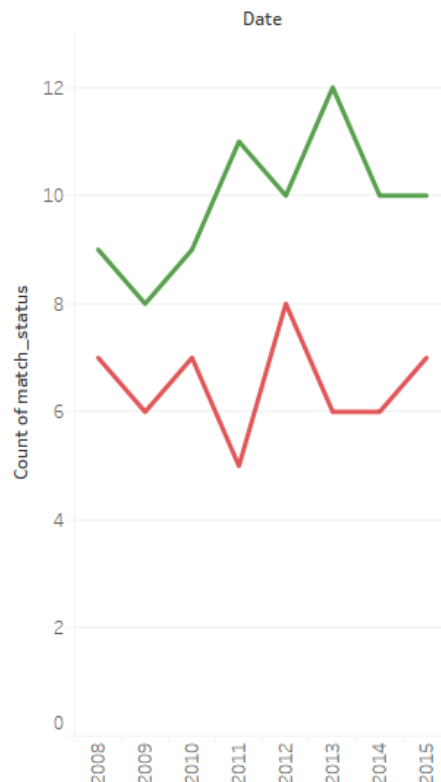
- Analyse the consistency of each team's performance across all the seasons which are conducted till the year 2017, including 2017.
- The columns **team1** and **team2** are being pivoted for further analysis . The pivoted columns are named as ***"Team No"*** and ***"Team Name"***.
- Some of the new variables are generated which are explained as follows :
 - Is_Home_Team: compares ID of home team with team ID and returns ***"Yes"*** if both are same, otherwise returns ***"No"*** .
 - Match_won: returns ***"1"*** if Team Name and Winner(winning team) are same, otherwise returns ***"0"***. Simply to indicate if the particular team has won the match or not.
 - Match_lost: returns ***"1"*** if Team Name and Winner(winning team) are not same, otherwise returns ***"0"***. Simply to indicate if the particular team has lost the match or not.
 - match_status: compares Team Name with the Winner(winning team) and returns ***"Won"*** if both are same otherwise returns ***"Lost"***.
 - Is_played: returns ***"No"*** for 2 cases
 - **Case 1:** if ***"match_status"*** column is ***"Lost"*** and ***"match_lost"*** column is ***"0"***
 - **Case 2:** if ***"match_status"*** column is ***"Won"*** and ***"match_won"*** column is ***"0"***otherwise returns ***"Yes"***. In other terms, if a team had played in a match there could be only 2 outcomes i.e. winning or losing, for example if a team had lost the match the team should have played it, this can be verified as the same should be reflected in ***"match_status"*** and ***"match_lost"*** columns i.e. they need to be ***"Lost"*** and ***"1"*** meaning that the team lost after playing the match.

Historical Insights on Teams

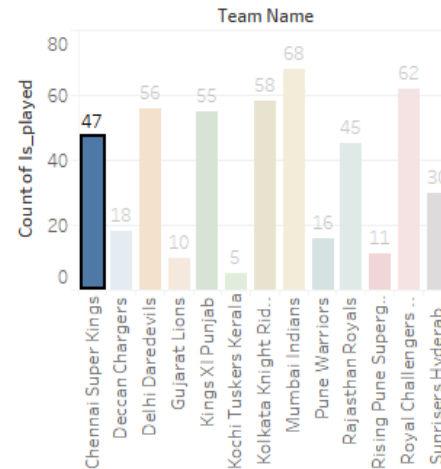
Year wise Matches



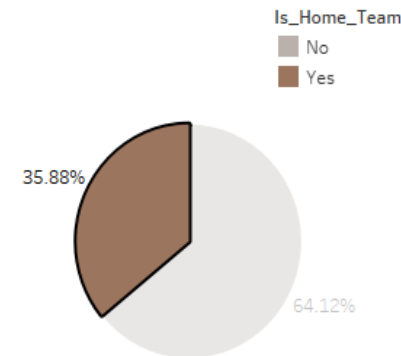
Match Statistics



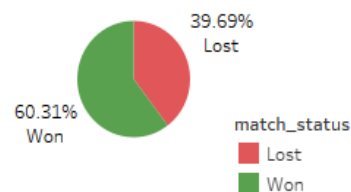
Year wise Matches



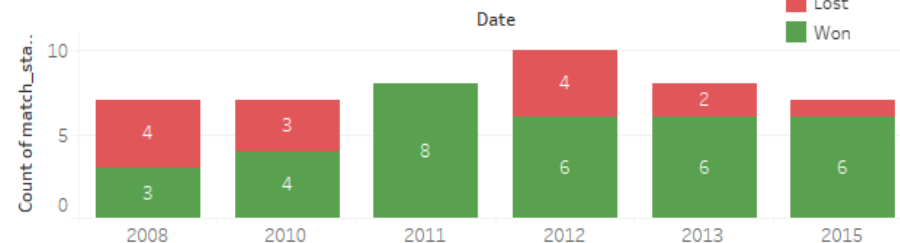
Home Ground Statistics



Average Performance Till Date



Year-Wise-Match-Status



- From the above visualizations we can observe the trend of performance Chennai Super Kings in each season. We can infer that Chennai has a good consistent performance as we can observe the improvement in the number of matches won year by year on an average. Another major observation is that, on an average in each season Chennai had greater number of winning matches than the number of losing matches.

- We can observe from the visualization (left), that in the 1st season Chennai won 9 matches and in the year 2015 it won 10 matches thereby on an average Chennai maintained there winning curve upwards across multiple seasons. Also, we can observe that out of 131 matches played by Chennai from 2008, they have almost won 60.31% of matches.
- Also, we can observe from the visualization (right) that out of 131 matches played by Chennai 35.88% of matches was played in home ground , and within that 35.88% we can have a year wise view of total number of matches played, total number of matches won and the total number of matches lost.
- Combining our both the observations we can conclude that Chennai has an average consistent performance across all seasons and can perform well if they play anywhere outside their home ground.

THANK YOU