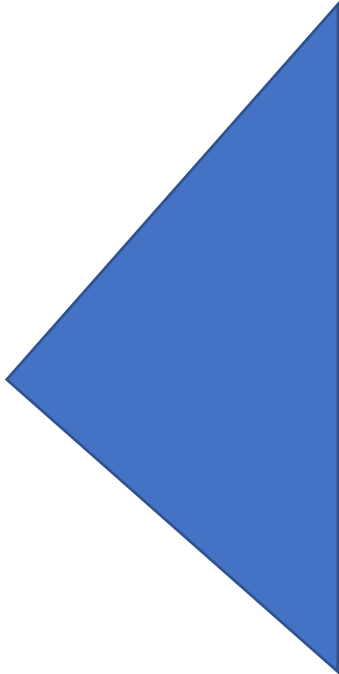




Data Visualization Using Tableau

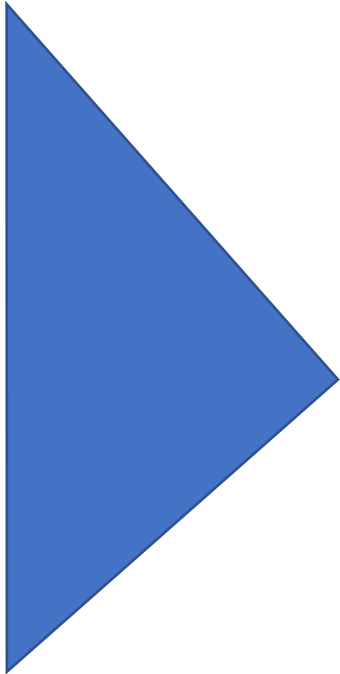
Submitted BY:-
Kartikey Shukla
DS-C41

Problem Statement



The Indian Premier League, or IPL, is a T20 cricket league, which was founded in 2008 and is held every year. It sees participation from both national and international players, and eight teams representing eight Indian cities compete with each other in a double **round-robin** format in the league stages, which are followed by playoffs. Over the years, IPL has become one of the most-watched and most attended live sporting events all over the world.

You work as a data analyst at IFP, a nationally recognised news agency, which is based out of New Delhi, and provides news reports and feeds to magazines, newspapers and TV broadcasters all over the country. The Sports Editor of the agency has approached you to build a Tableau dashboard of IPL statistics over the years since its inception in order to create an infographic for a newsletter that their team is working on. For this newsletter, in some cases, they will use the visual representations as you have created in Tableau directly for their infographic, and in a few other cases, they will use important statistics after trying out the different filters and customisations that you have provided for interactivity. Therefore, you are expected to build an interactive dashboard in Tableau for this purpose.



Dataset Available

- **matches.csv** - It contains match-level information for each and every match held in IPL from 2008 to 2017.
- **deliveries.csv** - It contains ball-by-ball information for each of the matches.

matches.csv file contains the following data:

- Teams involved
- Results (which team won, win type, player of the match, etc.)
- Match specifics (umpires, ground, etc.)

deliveries.csv file contains the following data:

- Match related information (batting team vs bowling team)
- Player information (Bowler, Batsman, Non-striker)
- Delivery information (Runs scored, Wickets, Extras, etc.)

Expected Outcome

1. Match Statistics

- Toss outcome vs Match outcome (for each Ground/Venue)
- Biggest wins (by runs and by wicket)
- Highest totals (across all the seasons)

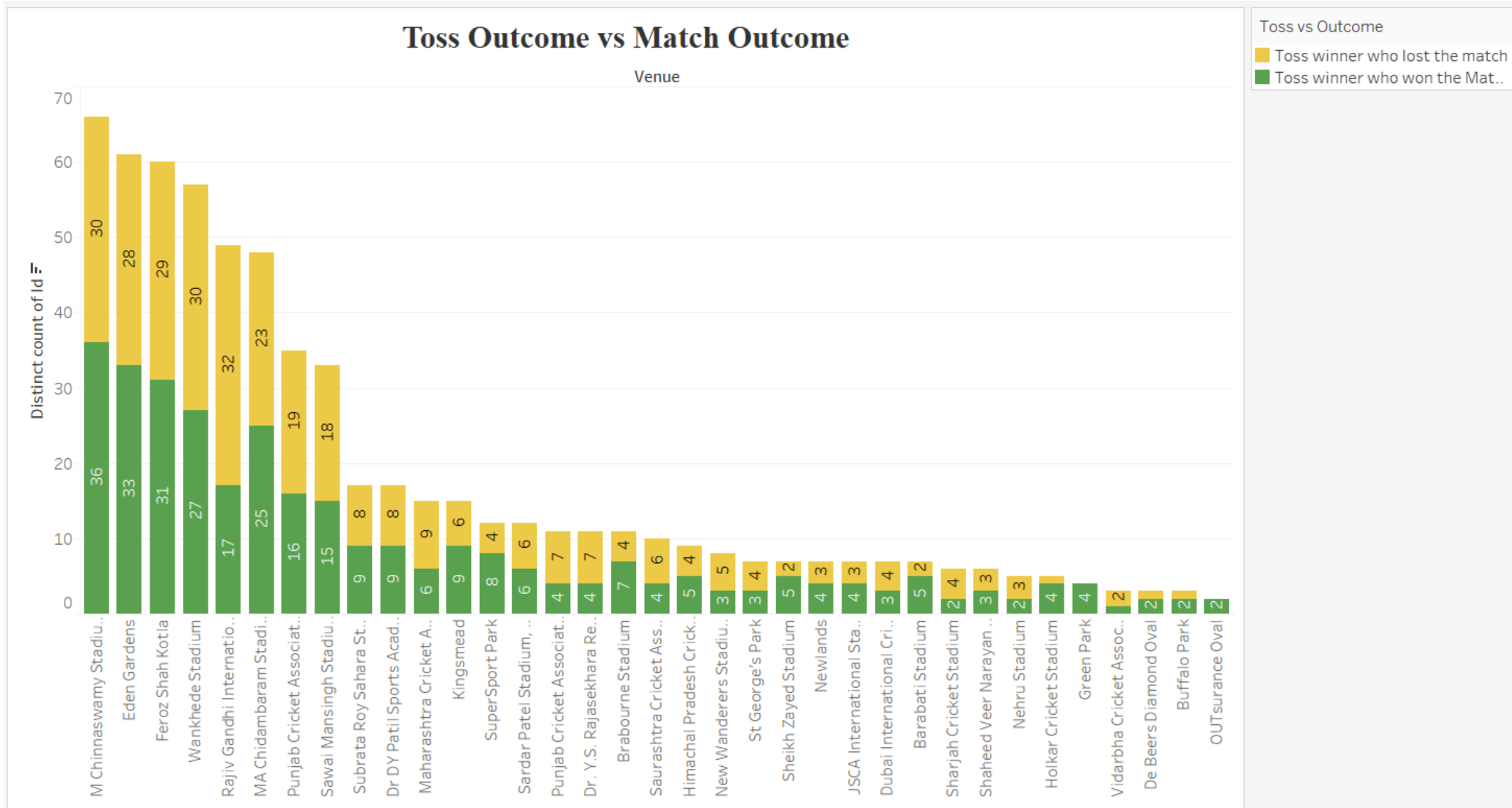
2. Player Statistics

- Orange Cap contenders (The batsmen who have scored the maximum number of runs in a particular season)
- Purple Cap contenders (The bowlers who have taken the maximum number of wickets in a particular season)
- Batsmen who have hit the most number of fours and sixes (per season and overall)

3. Team Statistics

- Season-wise team performance (wins vs losses)
- Win %age (home vs away)

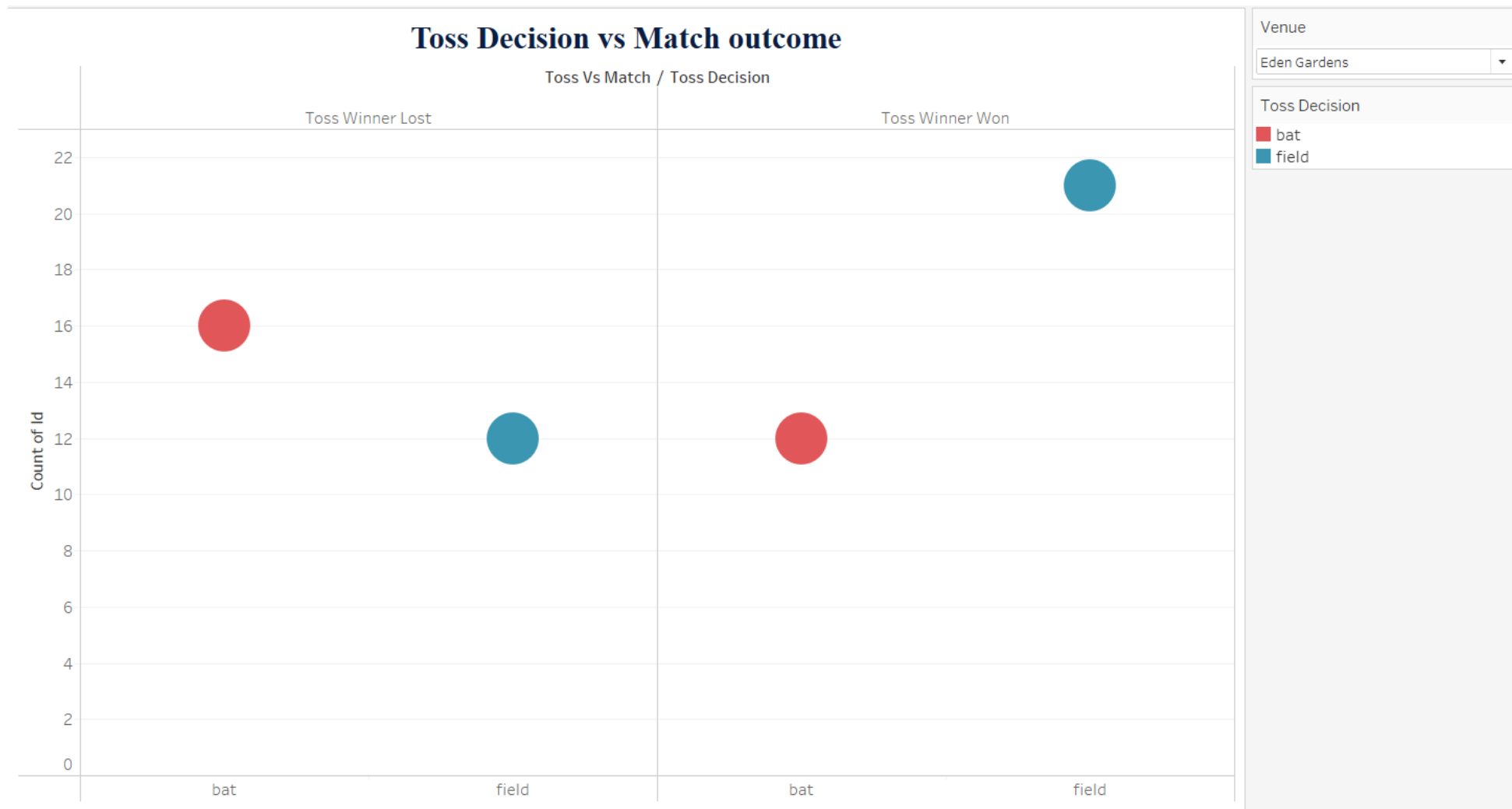
MATCH STATISTICS



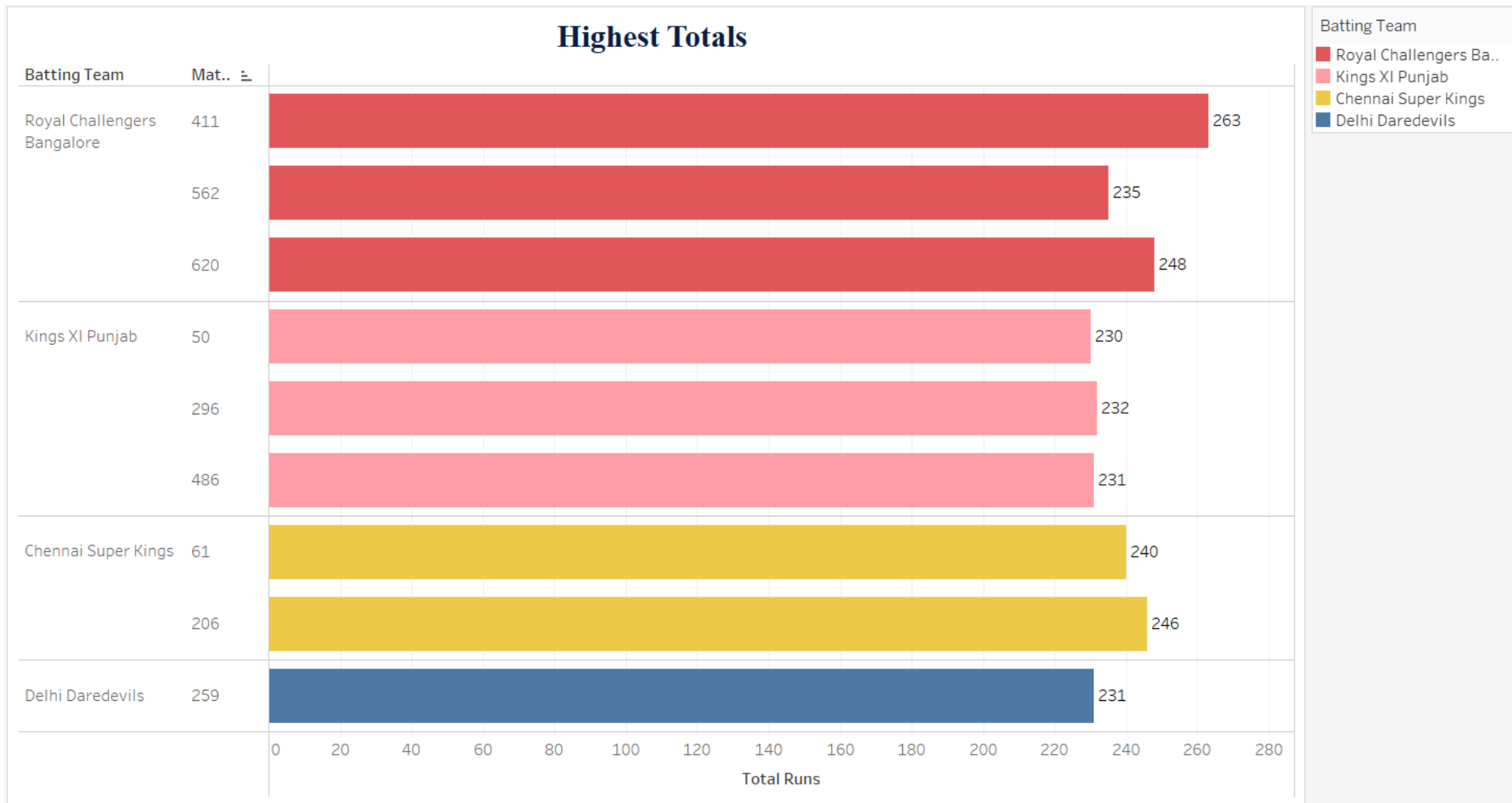
This chart indicates the number of matches the toss winner won and lost for each venue.

The **green** colour indicates the number of matches the toss winner won, while the **yellow** colour indicates the number of matches the toss winner lost.

Highest number of matches were won at M Chinnaswamy Stadium, while the highest number of matches were lost at Rajiv Gandhi International Stadium.

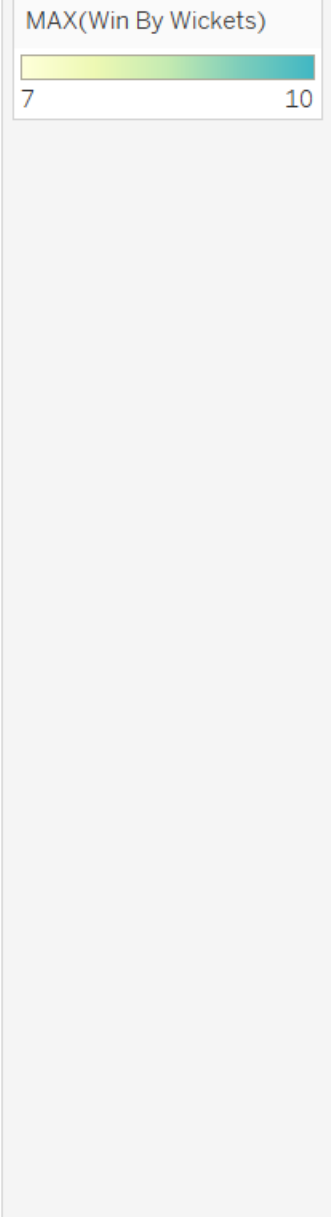
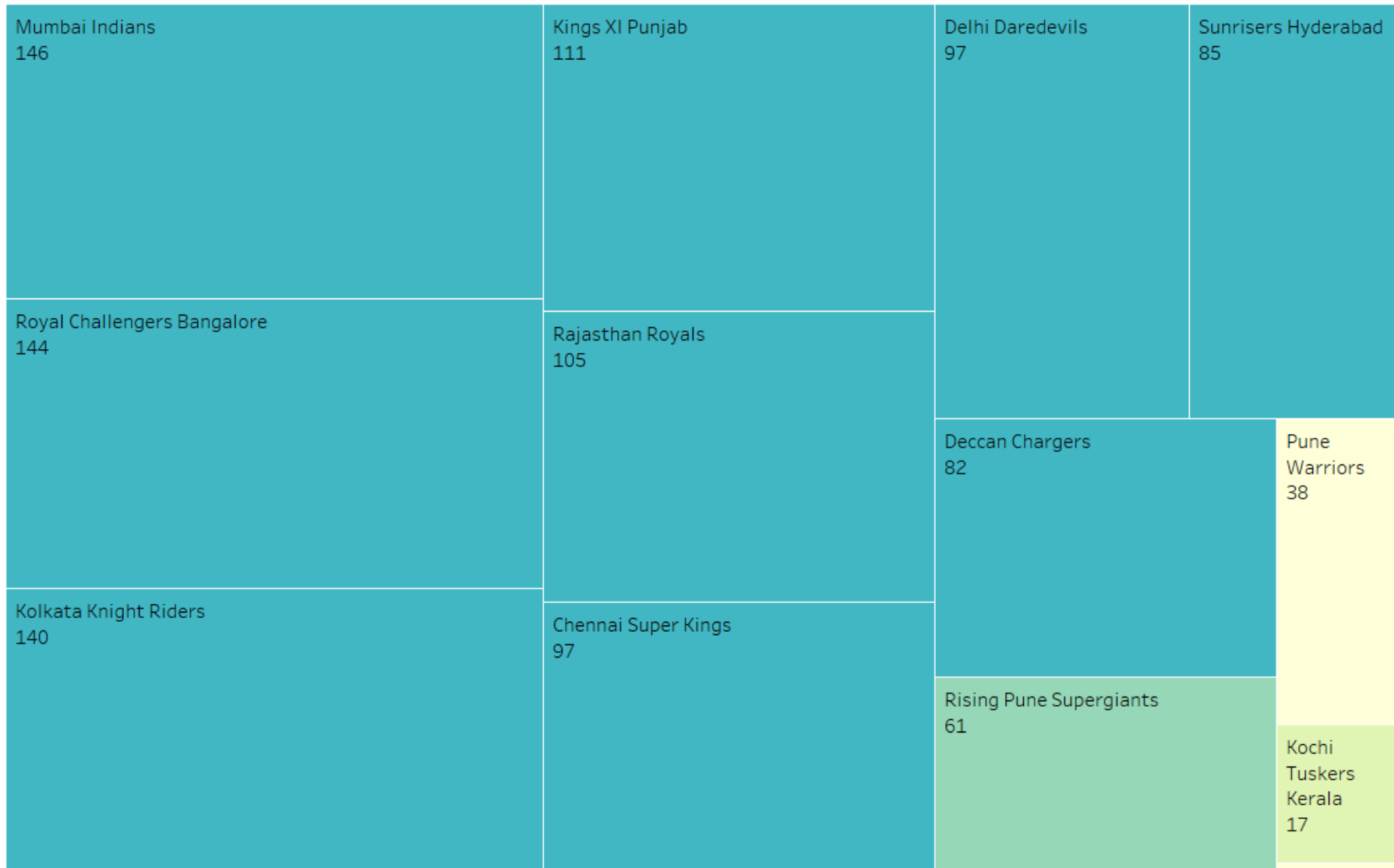


The graph indicates the toss winners who chose to bat and field respectively and the corresponding number of matches they lost or won based on the toss decision. The data has been filtered on the basis of venue for better understanding.



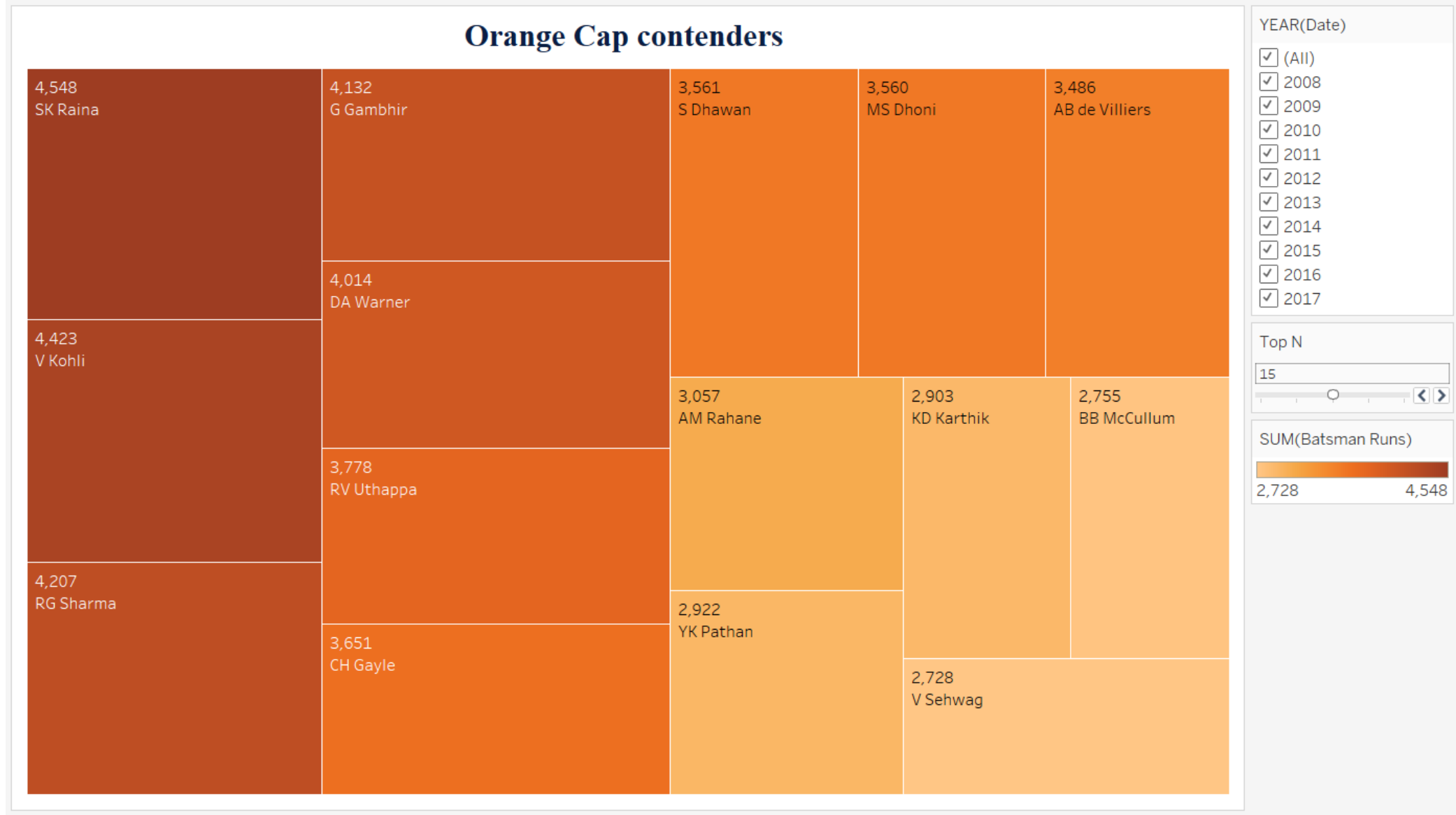
This graph shows the highest runs scored by the teams based on ranges of total.
Ass per the chart we can derive that Royal Challengers Bangalore has the highest scores of 263 & 248 across all seasons.

Biggest Wins (By runs and by wickets)



The above tree graph represents the maximum wins by wickets and by runs.
The colour intensity represents the maximum wins by wickets, while the size of each tile represents the maximum wins by runs.
As per the graph, the maximum win by wickets is 10 and the maximum runs is scored by Mumbai Indians.

PLAYER STATISTICS

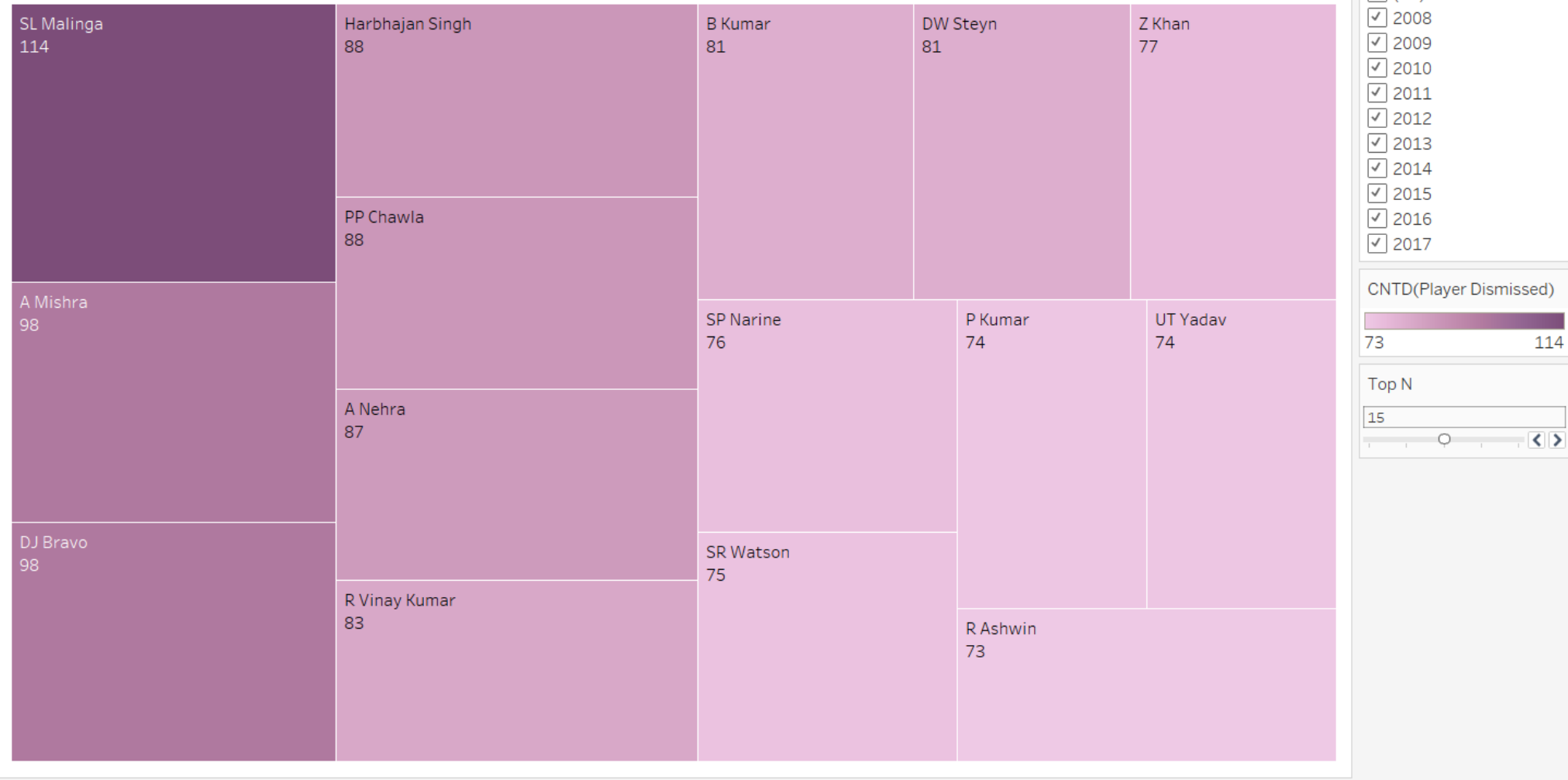


Colour and intensity of the graph indicates the total runs scored by a batsman for a corresponding year.

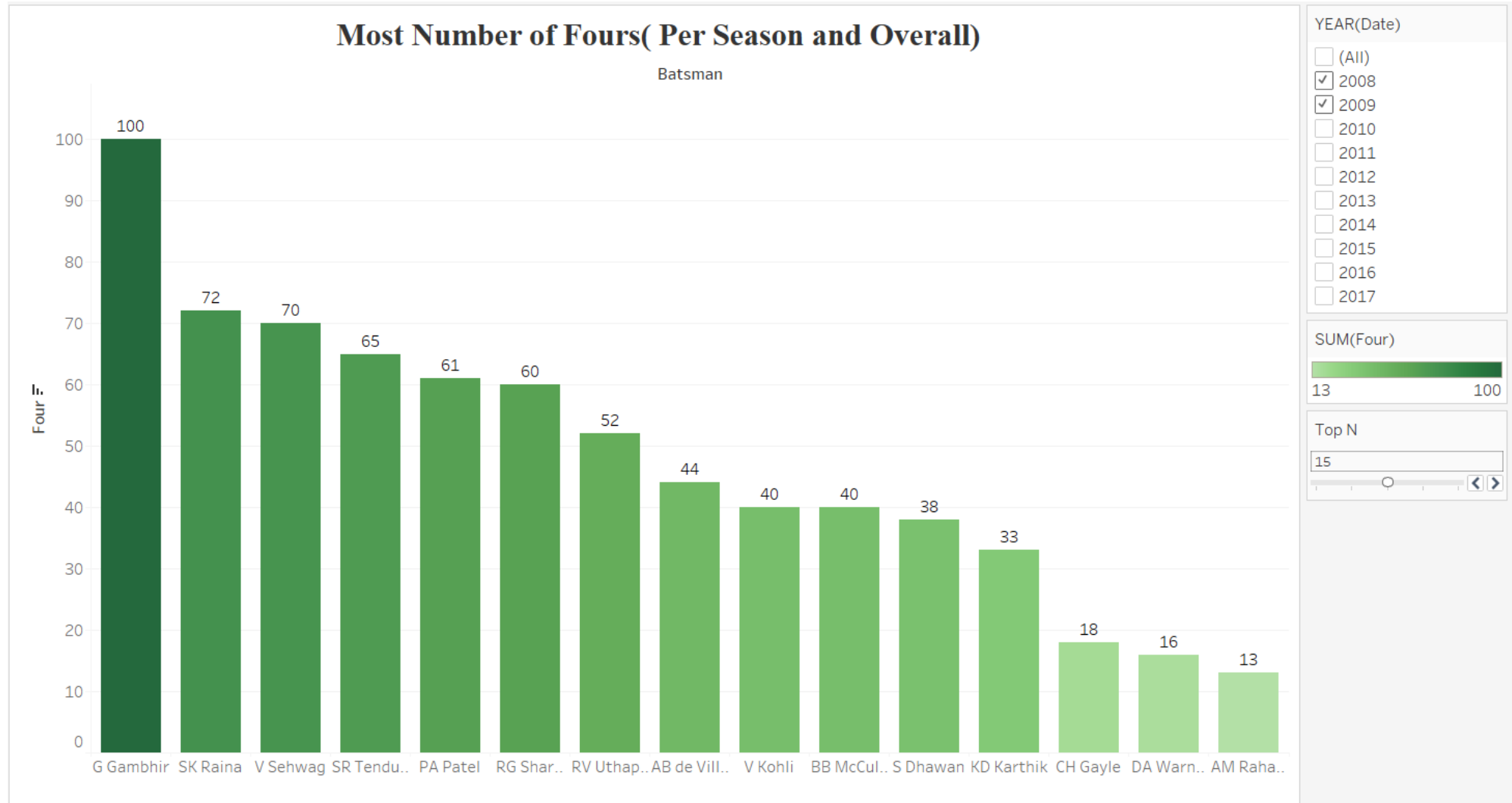
The context is filtered using Year and “Top N” orange cap contenders are displayed.

In entire season SK Raina had amassed 4548 runs in all seasons followed by V Kohli who has scored 4423 runs in the entire seasons.

Purple Cap contenders



Colour and intensity of the graph indicates the total number of players dismissed (wickets taken) for a corresponding year. The context is filtered using Year and "Top N" purple cap contenders are displayed. In entire year SL Malinga has taken 114 wickets followed by A Mishra who has taken 98 wickets in that season.

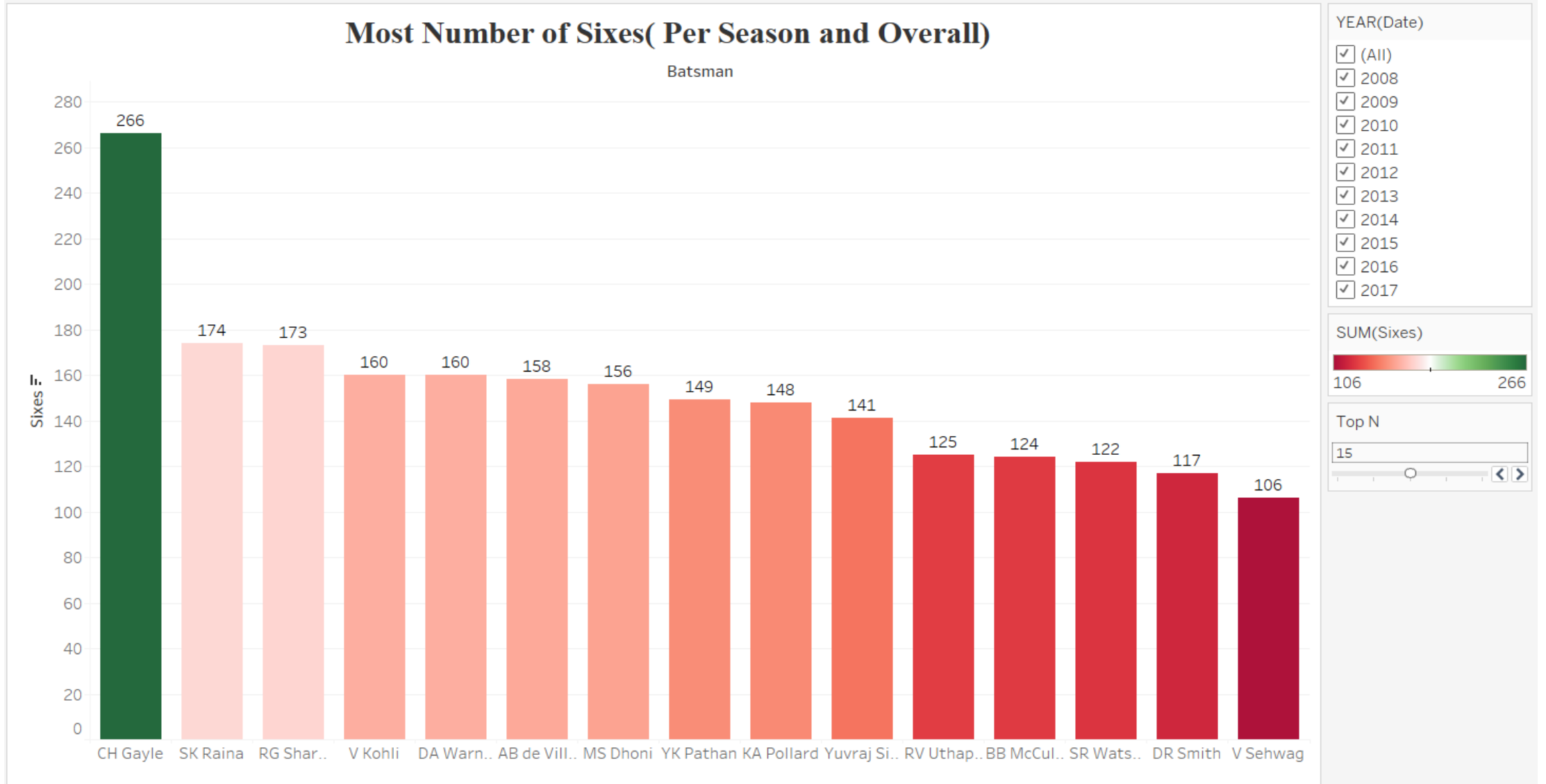


The graph displays the number of fours that each batsman has hit.

The data is filtered on year and “Top N” numbers of batsman are displayed.

In the graph a cumulative sum of numbers of sixes in 2008 and 2009 is displayed.

G Gambhir has hit a total of 484 fours across all IPL seasons.



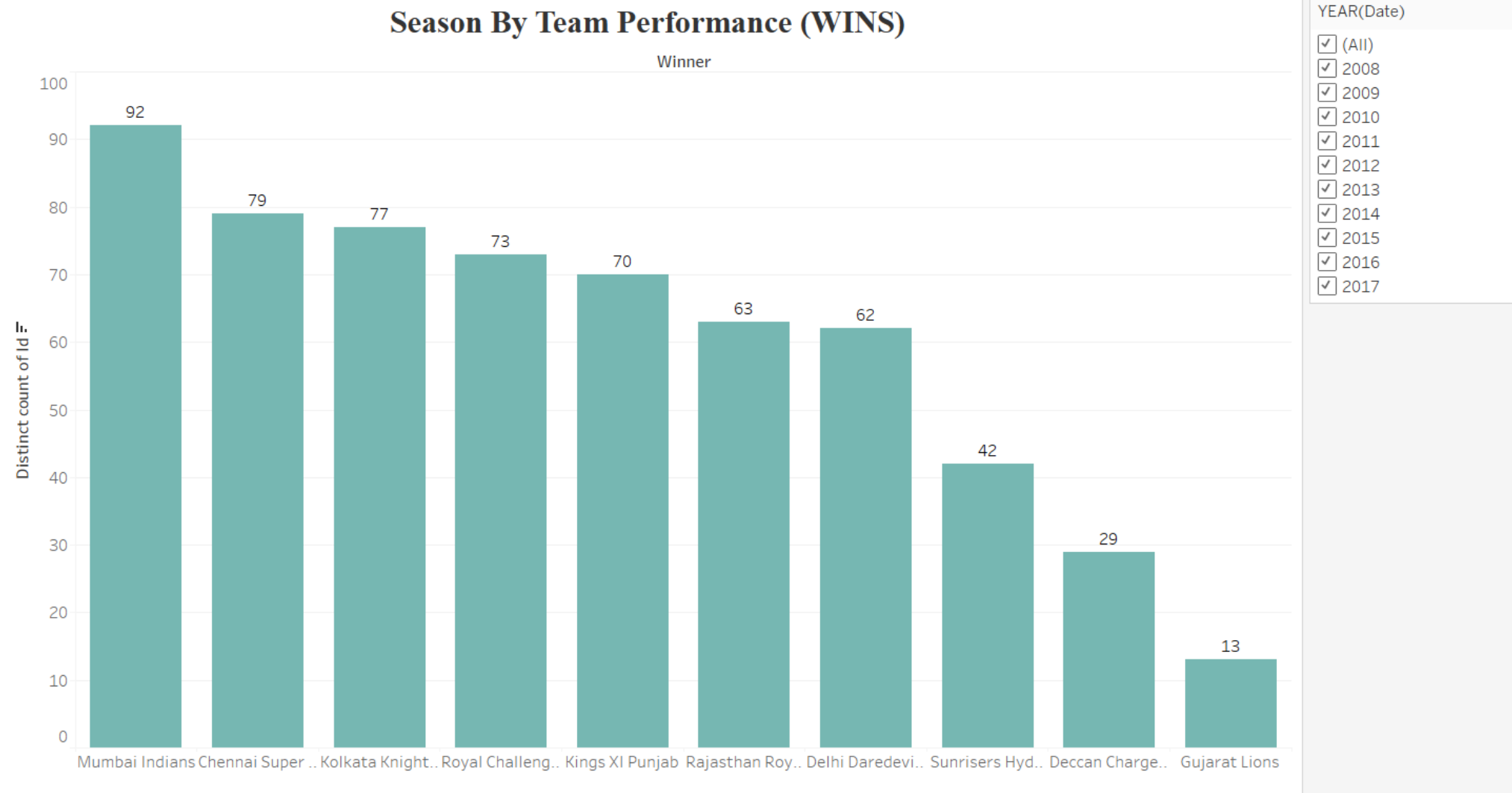
The graph displays the number of sixes hit by each batsman.

The data is filtered by year and "Top N" number of batsmen are displayed.

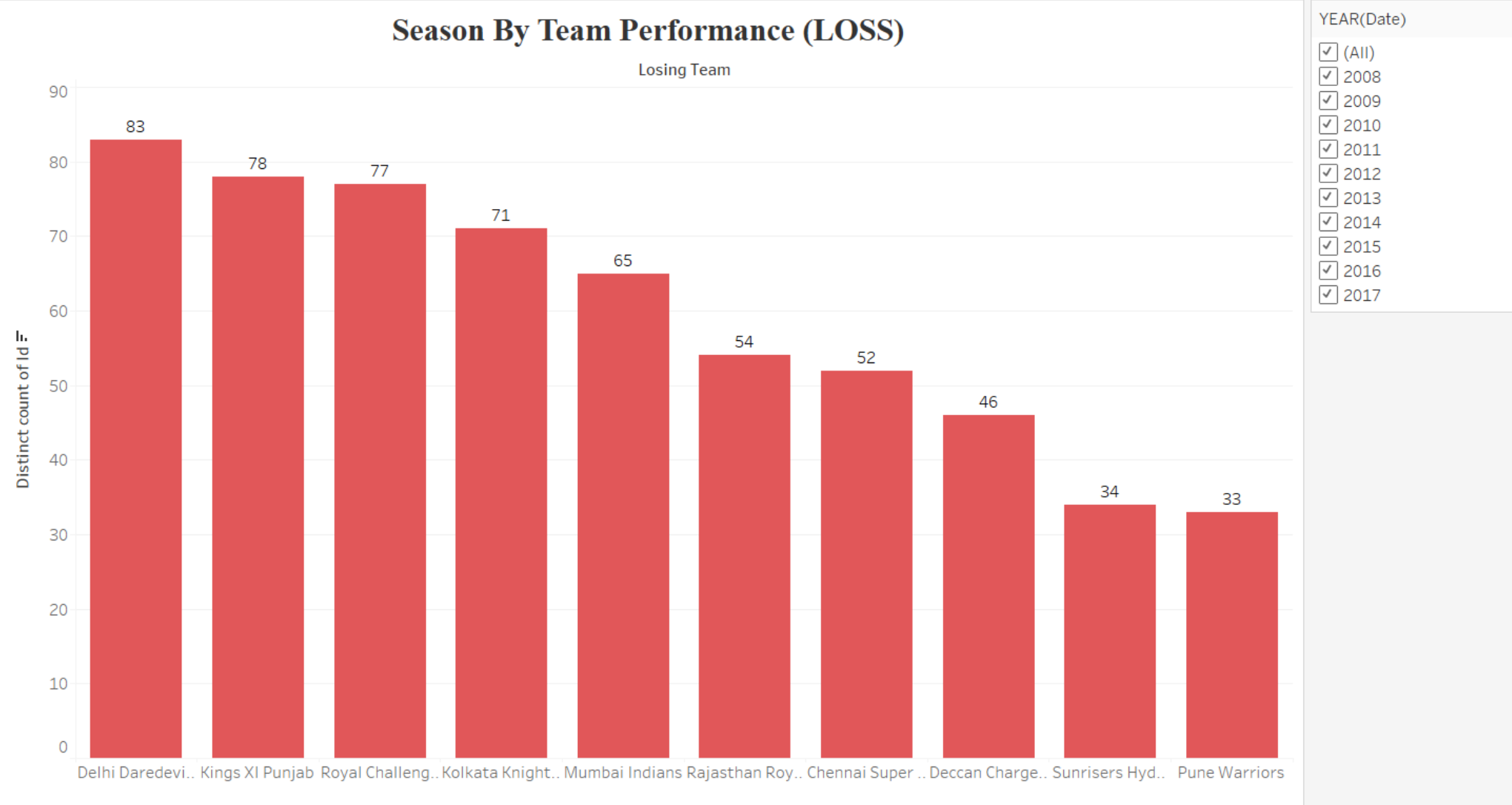
In the graph, a cumulative sum of the number of sixes across all years has been displayed.

CH Gayle has hit a total of 266 sixes across all IPL seasons.

TEAM STATISTICS



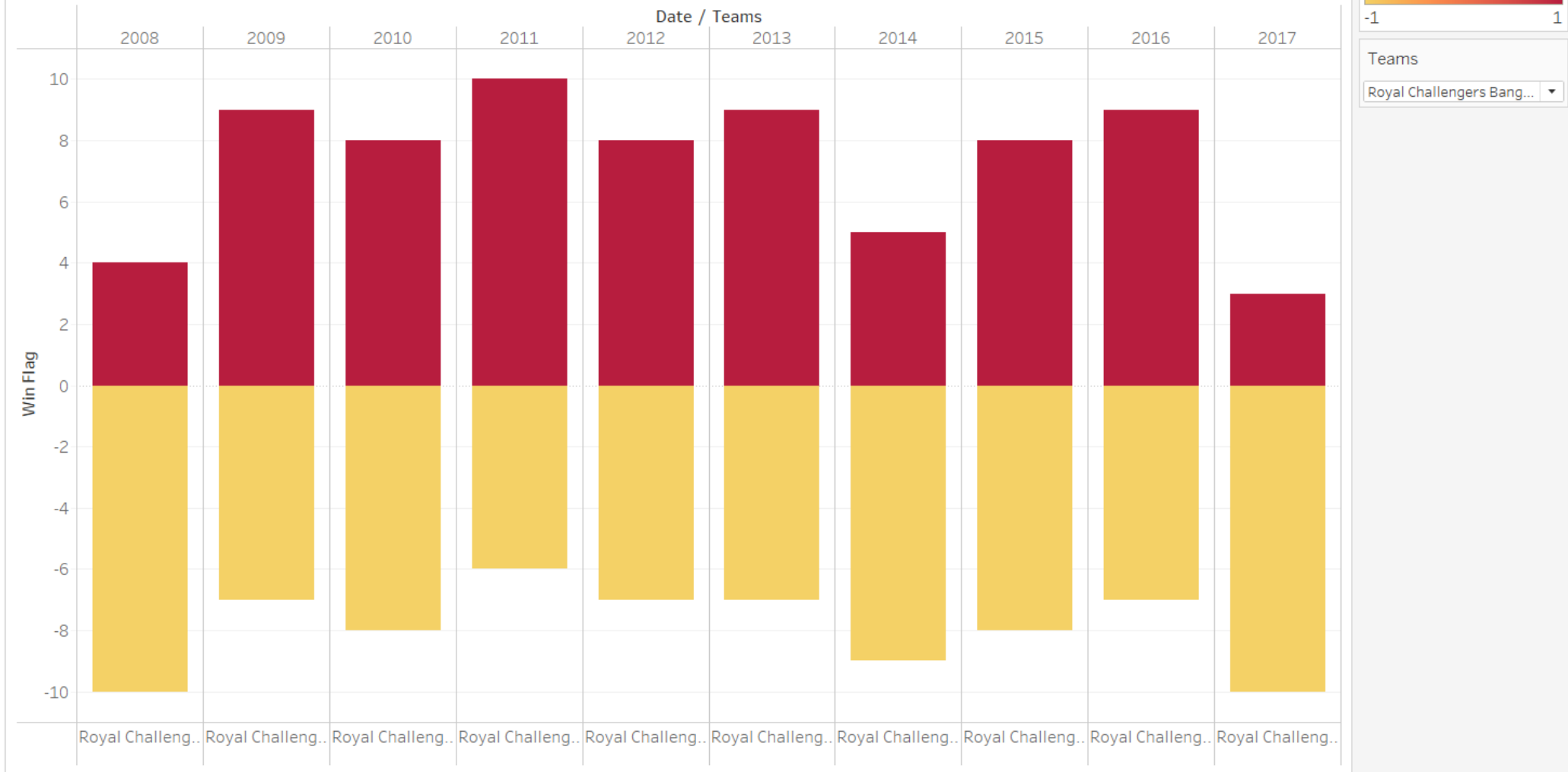
This graph displays the total number of matches won by each team participating in a particular season. The data is filtered on date. As per the data, Mumbai Indians has won 92 matches in total across all seasons and were the team with the highest number of matches won.



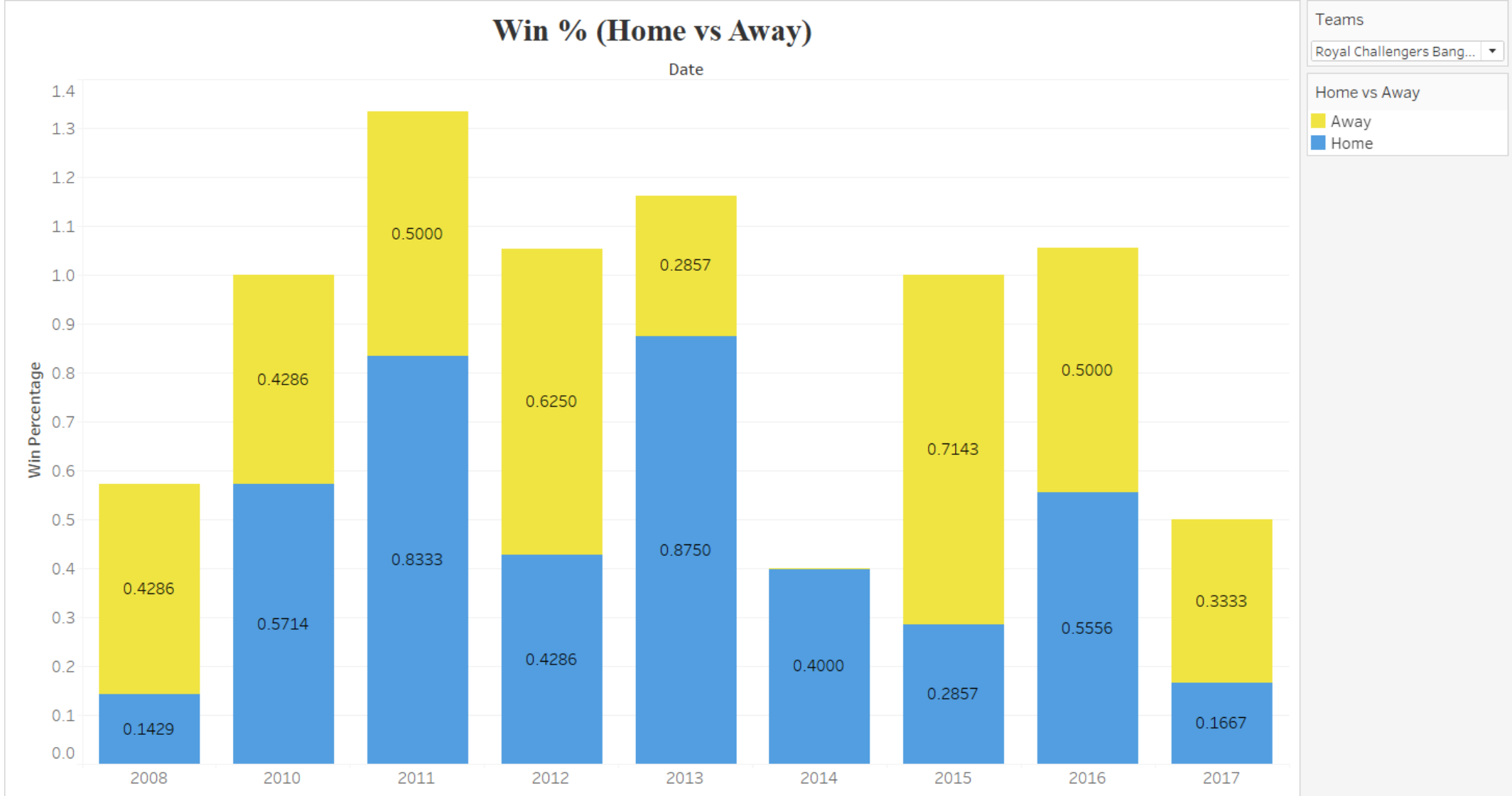
This graph displays the total number of matches lost by each team across all the seasons.

This data is filtered on date. As per the graph, Delhi Daredevils had lost 83 matches in total across all seasons and were the team with the highest number of matches lost.

Season Wise Team Performance



In the graph, the sum of win flag for each team has been broken down by date year.
Here the colours show the sum of win flag along with the details of match id.
The graph shows the performance of Royal Challengers Bangalore across all the seasons.



This graph displays the percentage of matches that Royal Challengers Bangalore has won and lost in Home & Away location.

DASHBOARDS

Match Statistics

Biggest Wins (By runs and by wickets)

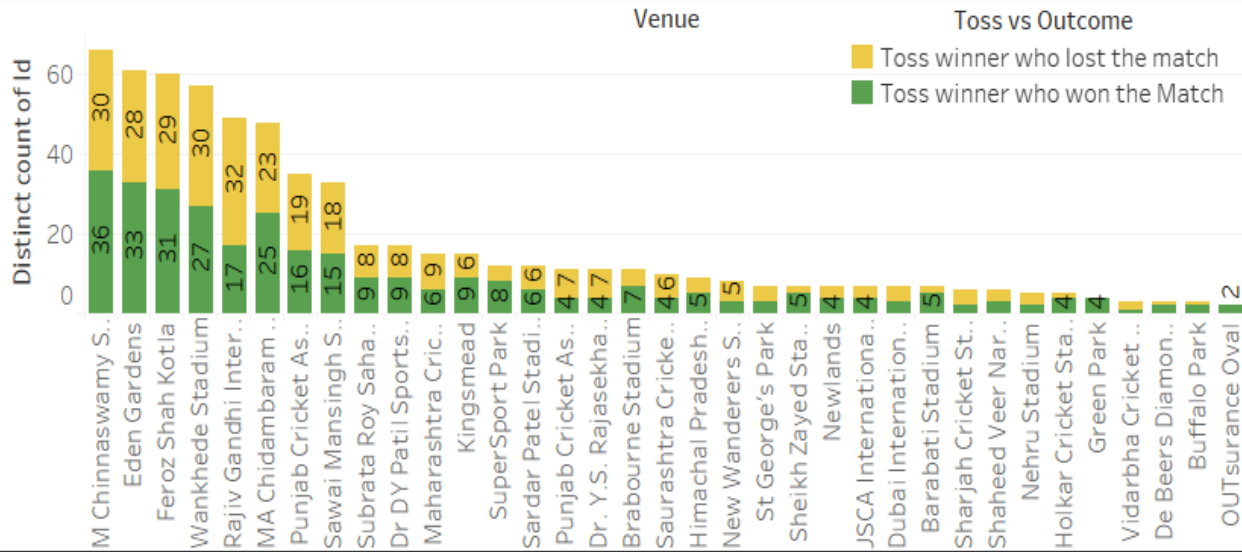
Max. Win By Wicke..
7 10

Mumbai Indians 146	Kolkata Knight Riders 140	Rajasthan Royals 105	Sunrisers Hyderabad 85	Deccan Chargers 82
Royal Challengers Bangalore 144	Kings XI Punjab 111	Chennai Super Kings 97	Rising Pune Supergiants 61	Pune Warriors 38
		Delhi Daredevils 97		

Highest Totals

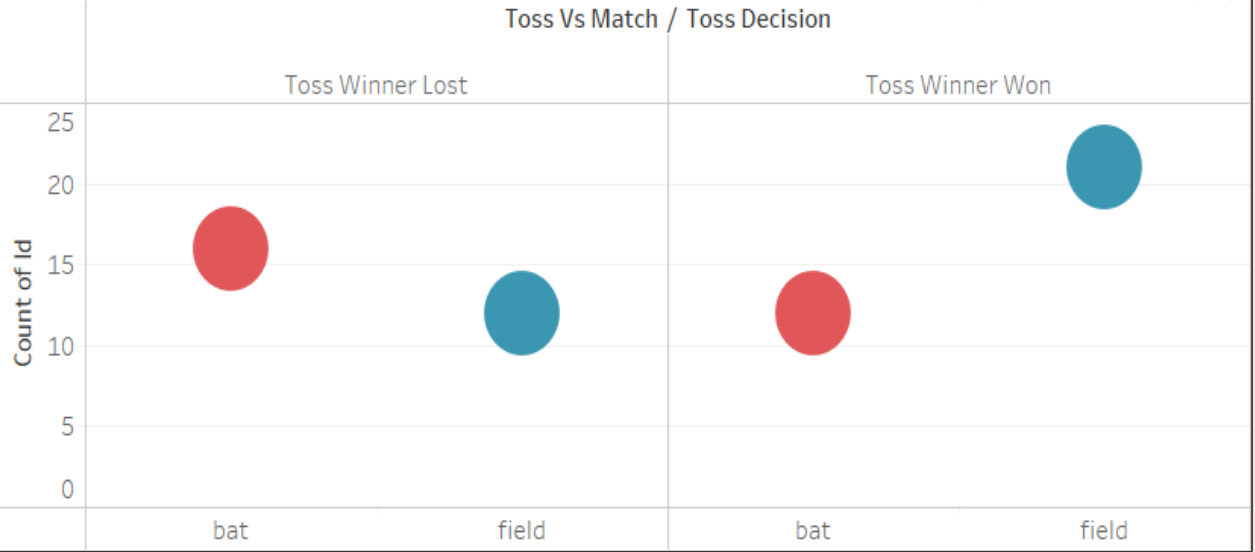
Batting Team	Mat..	
Royal Challengers Bangalore	411	263
	562	235
	620	248
Kings XI Punjab	50	230
	296	232
	486	231
Chennai Super Kings	61	240
	206	246
Delhi Daredevils	259	231
		0
		50
		100
		150
		200
		250

Toss Outcome vs Match Outcome



Toss Decision vs Match outcome

Venue
Eden Gardens



Player Statistics

Orange Cap contenders

4,548 SK Raina	4,132 G Gambhir	3,651 CH Gayle	3,486 AB de Villiers	3,057 AM Rahane	2,922 YK Pathan
4,423 V Kohli	4,014 DA Warner	3,561 S Dhawan	2,903 KD Karthik		2,728 V Sehwag
4,207 RG Sharma	3,778 RV Uthappa	3,560 MS Dhoni	2,755 BB McCullum		

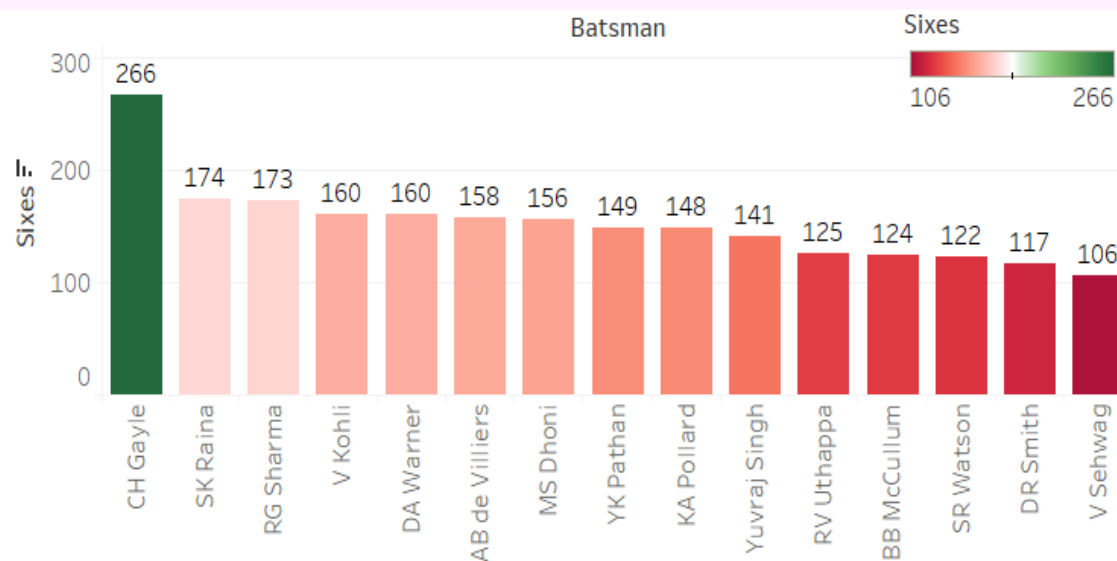
Purple Cap contenders

Distinct count of Player Dismissed

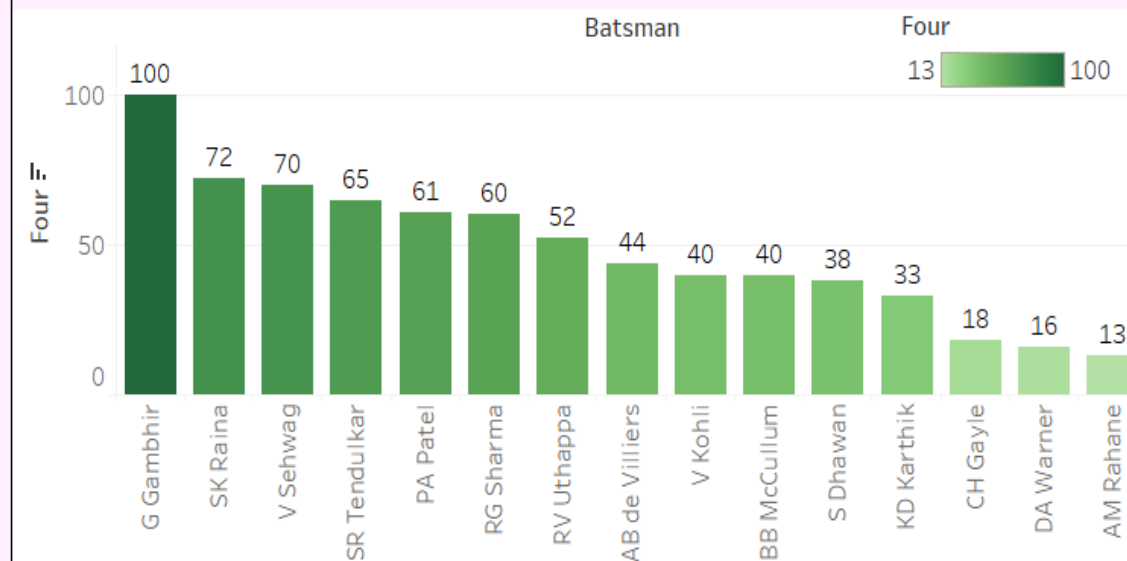
73  114

SL Malinga 114	Harbhajan Singh 88	R Vinay Kumar 83	Z Khan 77	SP Narine 76	SR Watson 75
A Mishra 98	PP Chawla 88	B Kumar 81	P Kumar 74		R Ashwin 73
DJ Bravo 98	A Nehra 87	DW Steyn 81	UT Yadav 74		

Most Number of Sixes(Per Season and Overall)



Most Number of Fours(Per Season and Overall)



Year of Date

- ☒ (All)
- ☒ 2008
- ☒ 2009
- ☒ 2010
- ☒ 2011
- ☒ 2012
- ☒ 2013
- ☒ 2014
- ☒ 2015
- ☒ 2016
- ☒ 2017

Year of Date

- ☒ (All)
- ☒ 2008
- ☒ 2009
- ☒ 2010
- ☒ 2011
- ☒ 2012
- ☒ 2013
- ☒ 2014
- ☒ 2015
- ☒ 2016
- ☒ 2017

Top N

15 

Team Statistics

Year of Date

(All)

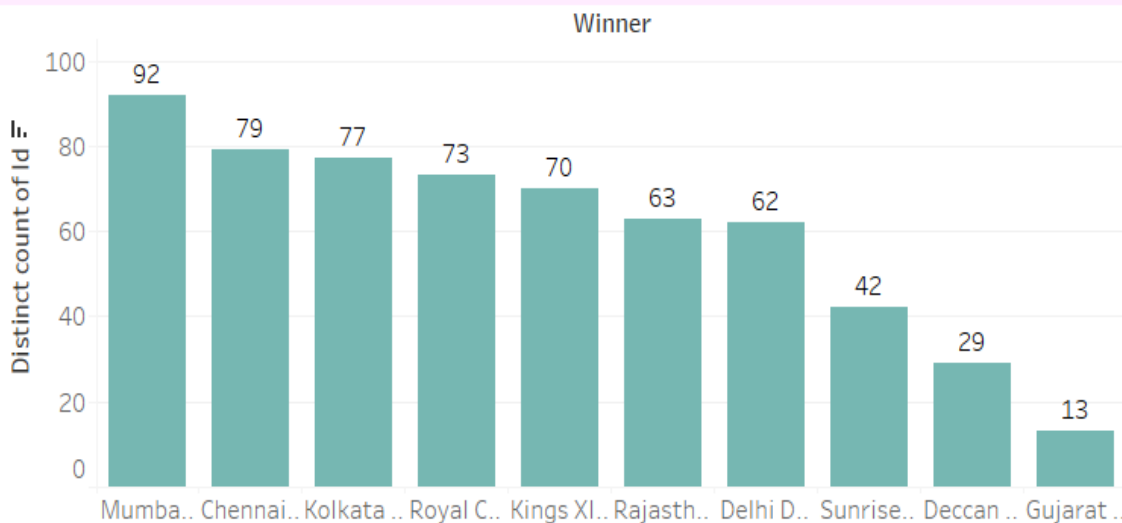
Year of Date

(All)

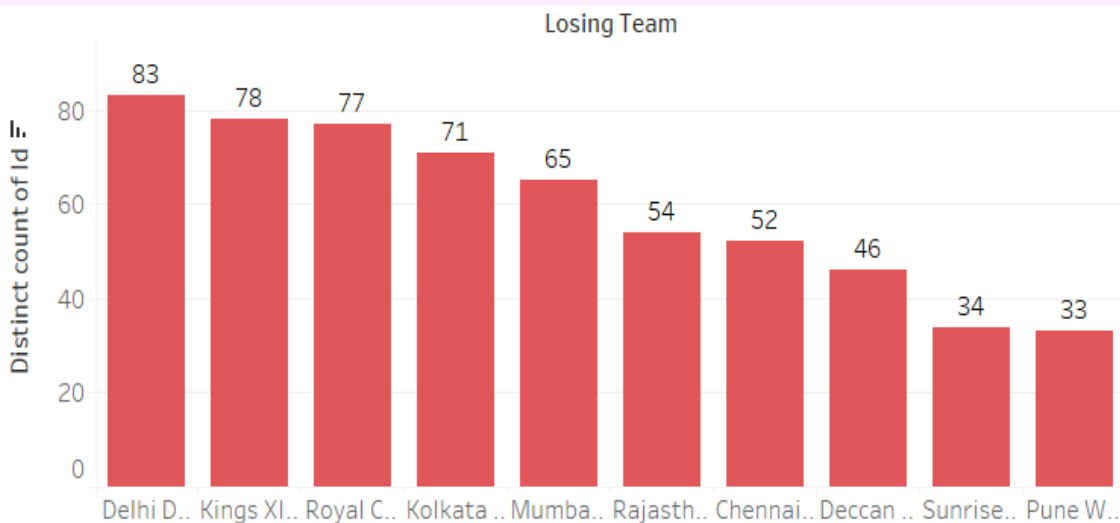
Teams

Royal Challengers B...

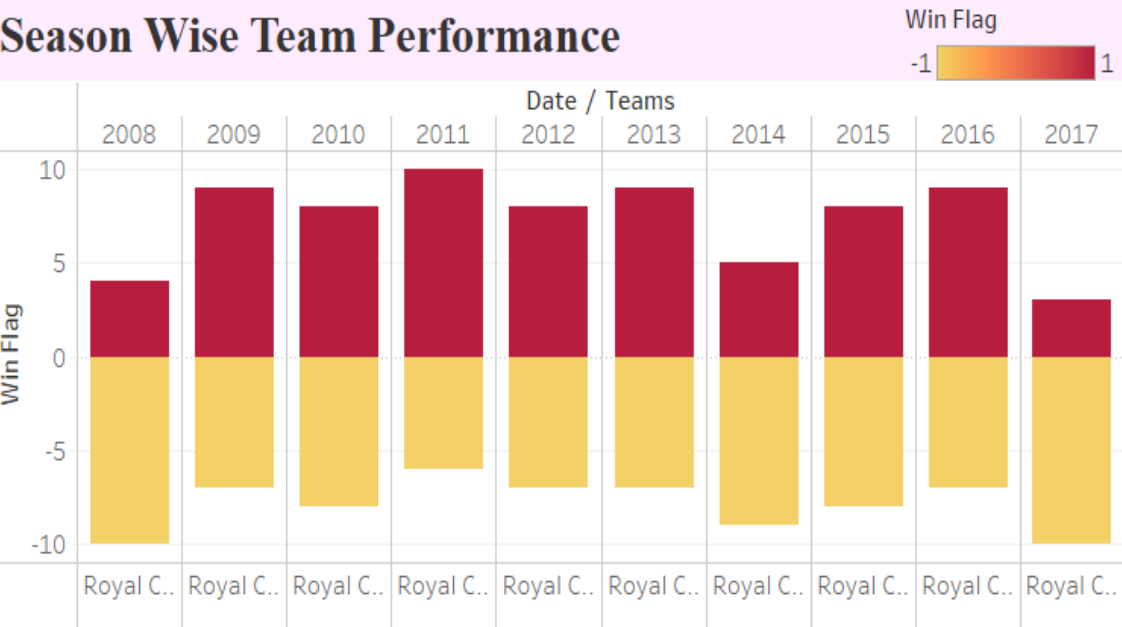
Season By Team Performance (WINS)



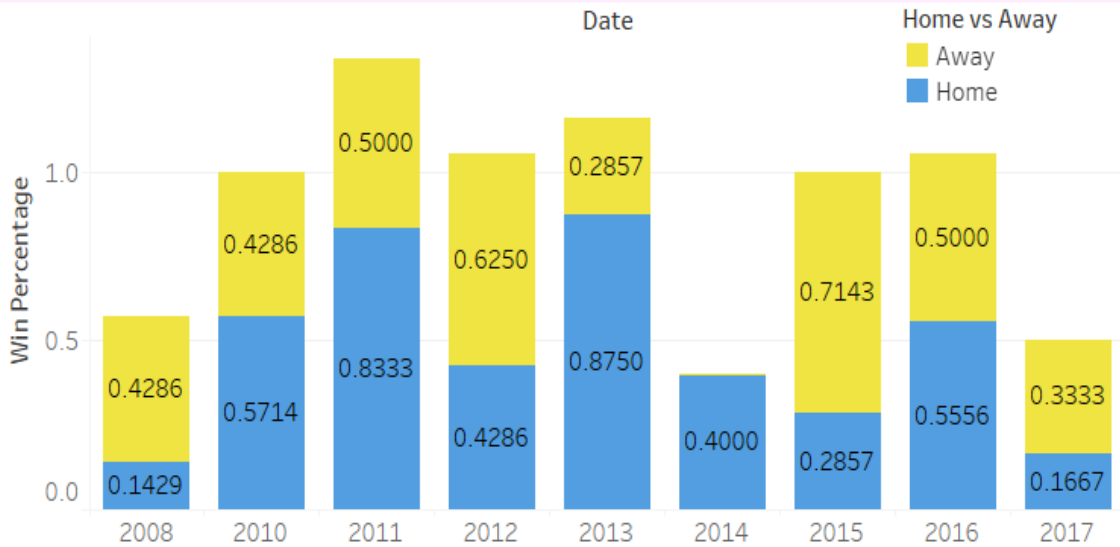
Season By Team Performance (LOSS)



Season Wise Team Performance



Win % (Home vs Away)



SUMMARY

- Maximum number of matches were played at M Chinnaswamy stadium. Toss winners who chose to field have won the matches the most.
- Maximum number of matches were won at M Chinnaswamy stadium and maximum matches were lost at Rajiv Gandhi International Stadium.
- RCB holds the highest score across all the seasons of IPL.
- The maximum win by wickets is 10 and the team with maximum wins by runs is Mumbai Indians.
- SK Raina holds the record for highest runs across all the seasons of IPL.
- SL Malinga holds the record for taking the highest number of wickets in a single season of IPL.
- Gautam Gambhir has hit maximum number of fours across all IPL Seasons.
- Chris Gayle has hit the maximum number of sixes across all IPL Seasons.
- Mumbai Indians and Chennai Super Kings are the most successful teams in the IPL history.