

IPL Data Visualization using Tableau

Praveen Niranjana Sharma

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.

Datasets provided

- **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.

Every row in deliveries.csv data set contains

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

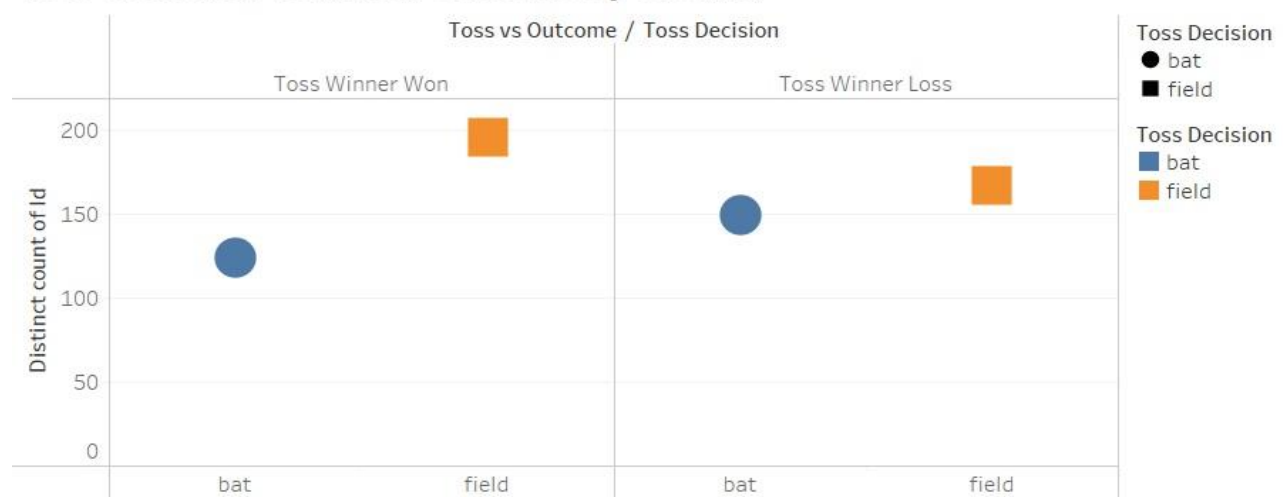
Every row in matches.csv data set contains:

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

Match Statistics

Toss Selection vs Match outcome (for each Ground/Venue)

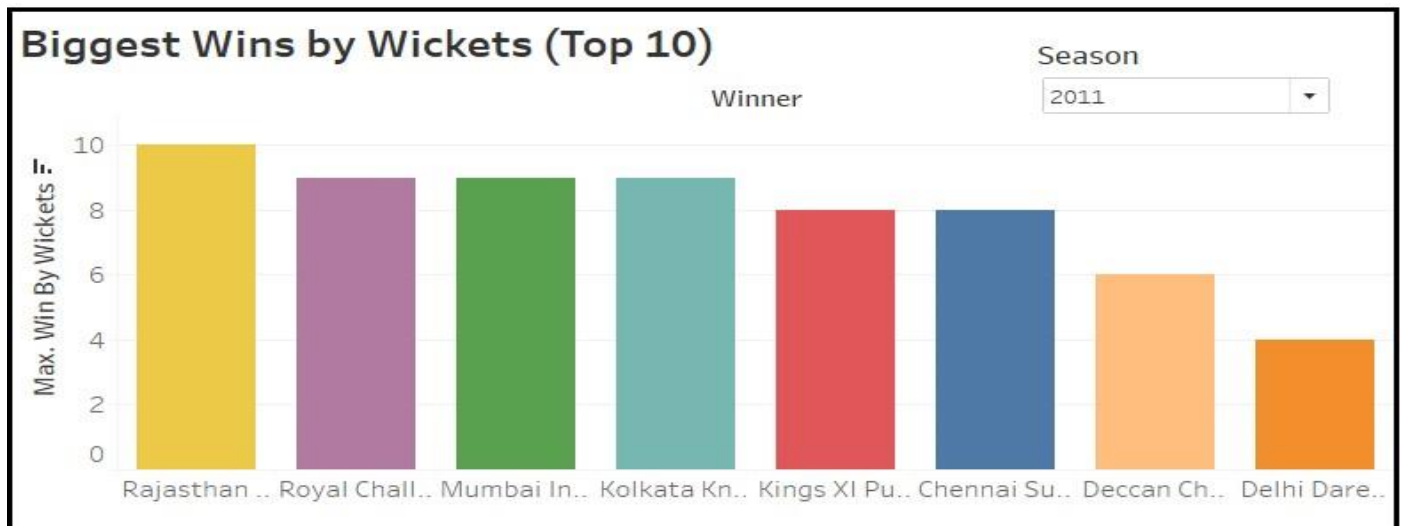
Toss Selection Vs Match Outcome by Ground



Distinct count of Id for each Toss Decision broken down by Toss vs Outcome. Colour shows details about Toss Decision. Shape shows details about Toss Decision. The data is filtered on Venue, which keeps 35 of 35 members.

The above graph indicates the number of matches the toss winner won and lost the matches for each venue. Toss winner is derived from the data. The Blue Circle shows batting and Orange square indicates field. The graph shows that team won the toss and choose to field win the match maximum times as compare to the team won the toss and chose to bat first.

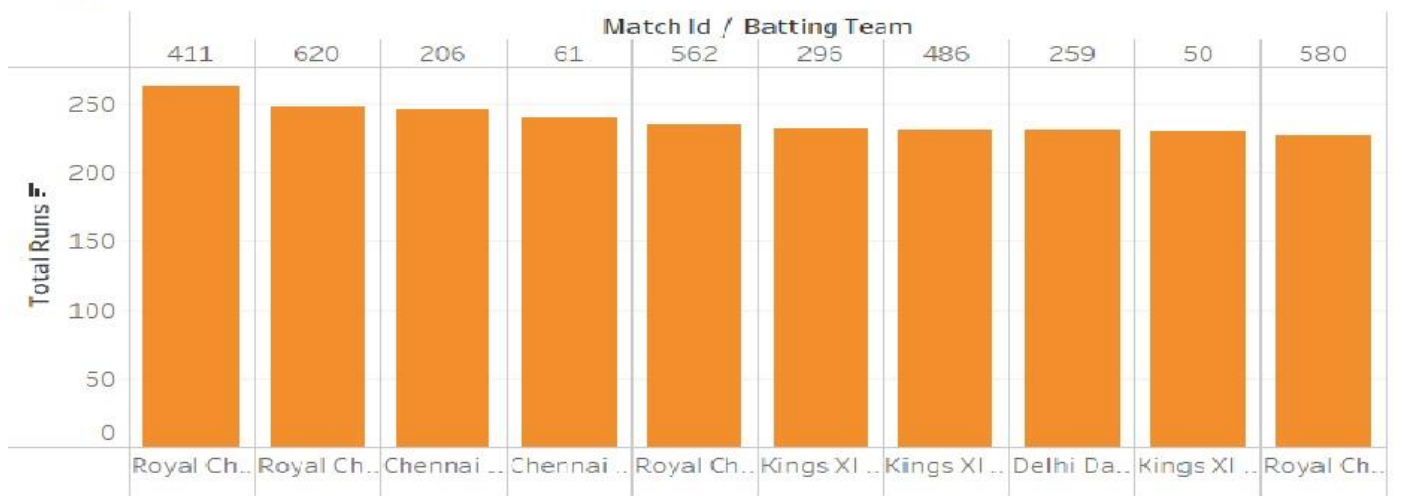
Biggest Wins by Wickets (Top 10)



The graph indicates each bar for each team. Color indicates the different batting teams across all seasons. The graph shows top 10 teams in 2011 win by wickets in maximum number of times. In 2011 Rajasthan Royals is the team who won maximum number of times with 10 Wickets.

Highest totals (across all the seasons)

Highest Totals

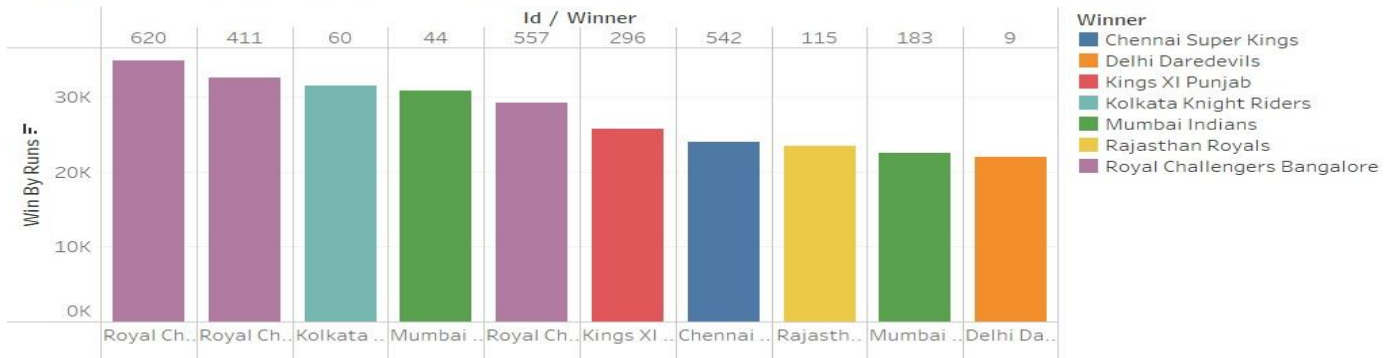


Sum of Total Runs for each Batting Team broken down by Match Id. The data is filtered on Match_Innings and Date Year. The Match_Innings filter has multiple members selected. The Date Year filter keeps 10 of 10 members.

The total runs score in each match is calculated and the highest runs are filtered based on ranges of total. Color indicates the different batting teams. RCB has the highest scores of 263 and 248 across all seasons.

Biggest Wins by Runs (Top 10)

Biggest Wins by Runs(TOP 10)



Sum of Win By Runs for each Winner broken down by Id. Colour shows details about Winner. The view is filtered on Id, which keeps 10 of 636 members.

In the above graph, maximum Win by Wickets is indicated by color intensity. The size of each tile indicates the maximum Win by Runs. The maximum win by runs is by Royal Challengers Bangalore consecutively in 2016 and 2013 simultaneously .

Player Statistics

Orange Cap contenders (The batsmen who have scored the maximum number of runs in a particular season)

Orange Cap Contendor		Season	Batting Team
		2009	(All)
NA AB de Villiers	NA G Gambhir	NA RV Uthappa	NA V Kohli
NA CH Gayle	NA MS Dhoni	NA S Dhawan	
NA DA Warner	NA RG Sharma	NA SK Raina	

Color 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 2009, the orange cap contender was AB de Villiers who had amassed 465 runs in that season followed by SK Raina who has scored 434 runs in the entire season. Although treemap is not the best fit for the above visualization, it is visually appealing for purple cap and orange cap contenders.

Purple Cap contenders (The bowlers who have taken the maximum number of wickets in a particular season)



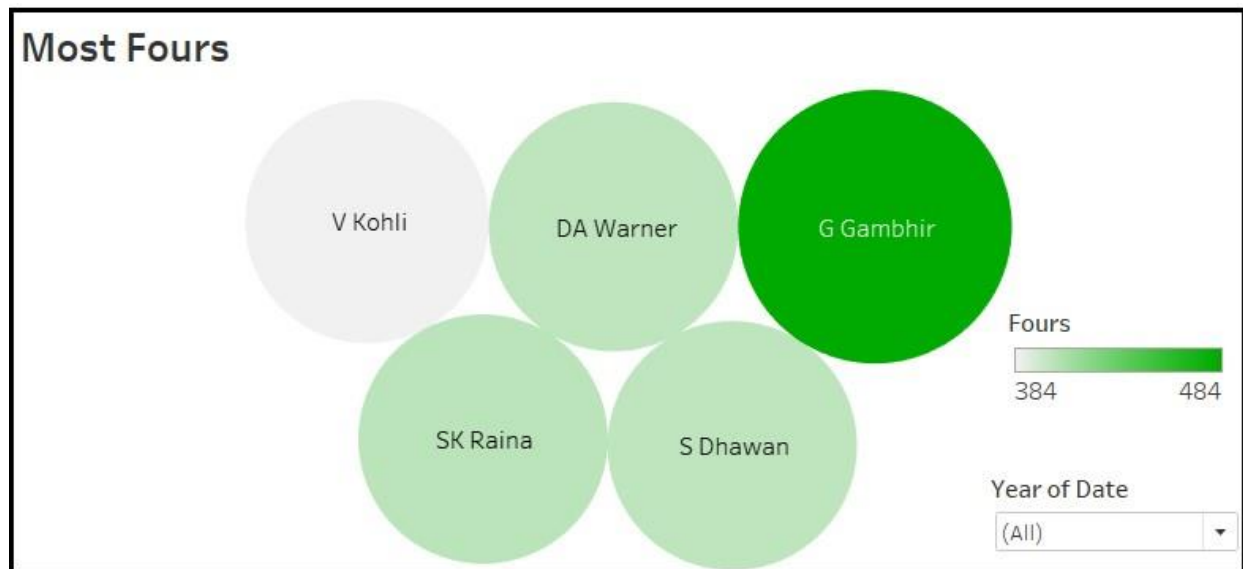
Color and intensity of the graph indicates the total numbers of players dismissed (wickets taken) for a corresponding year. The context is filtered using Year and “top N” purple cap contenders are displayed. All seasons, SL Malinga has taken 154 wickets followed by A Mishra, who has taken 134 wickets in all seasons.

Batsmen who have hit the most number of sixes (per season and overall)



The graph displays the number of sixes that each batsman has hit. The data is filtered on Year and “top N” number of batsmen are displayed. In the graph, a cumulative sum of number of sixes in all seasons is displayed. CH Gayle has hit a total of 266 Sixes across all IPL seasons.

Batsmen who have hit the most number of fours (per season and overall)

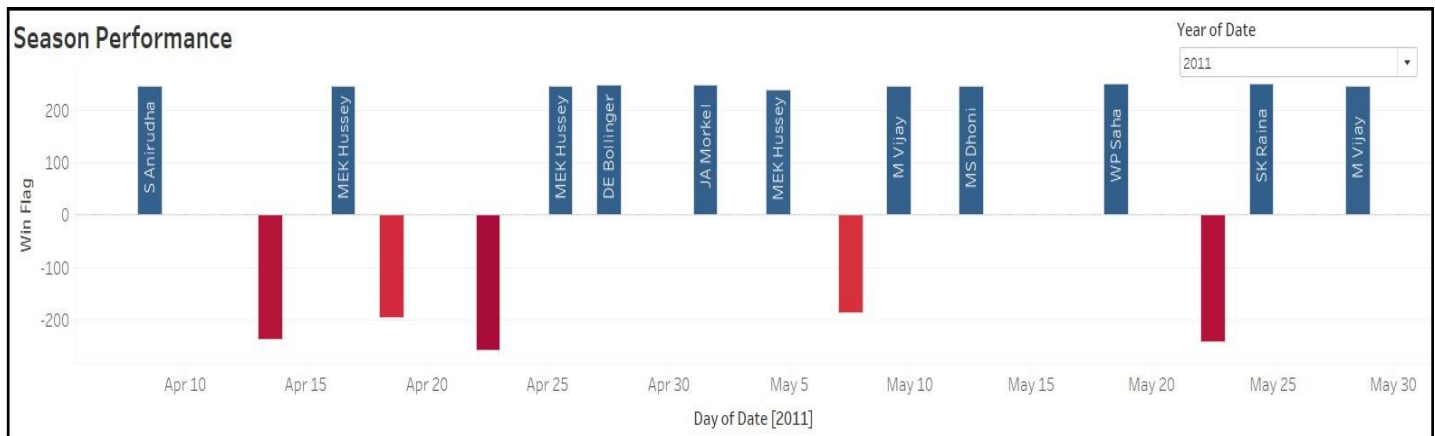


The graph displays the number of fours that each batsman has hit. The data is filtered on Year and “top N” number of batsmen are displayed. In the graph, a cumulative sum of number of fours in all seasons is displayed. G Gambhir has hit a total of 484 fours across all IPL seasons.

Team Statistics

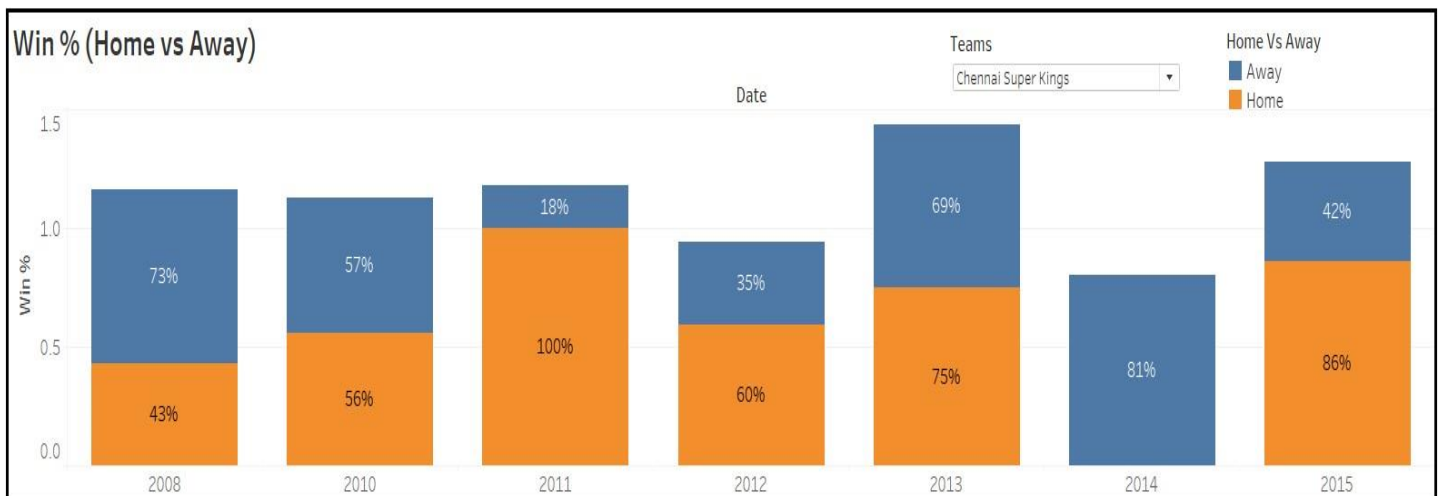
Season-wise team performance (wins vs losses)

The above graph shows the Performance of Team CSK for the Year 2011. The blue bar indicates the matches where CSK won, and red bar indicates the matches where CSK lost. Player of the match is indicated by the label on each bar. In 2011, CSK played 16 matches and it won 11 matches that year. No data is available for CSK and RR in 2016 and 2017 as they had been suspended for two years.



Win %age (home vs away)

The above graph displays the percentage of matches that CSK has won and lost in Home and Away games. In 2011, CSK won all the games played at Chennai.



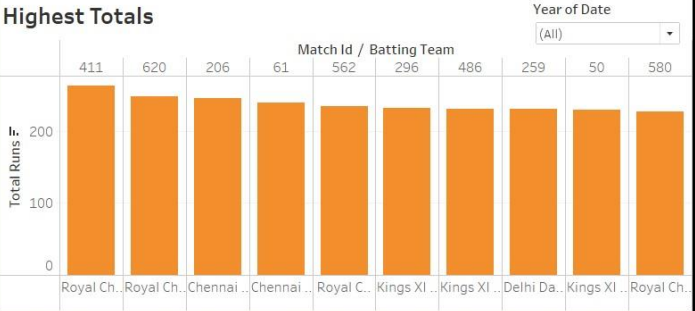
Dashboards

Match Statistics

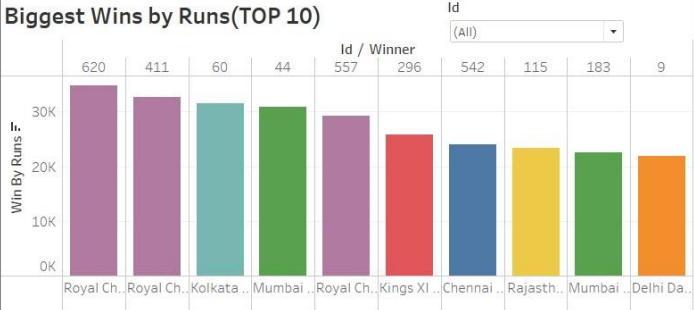
Toss Selection Vs Match Outcome by Ground



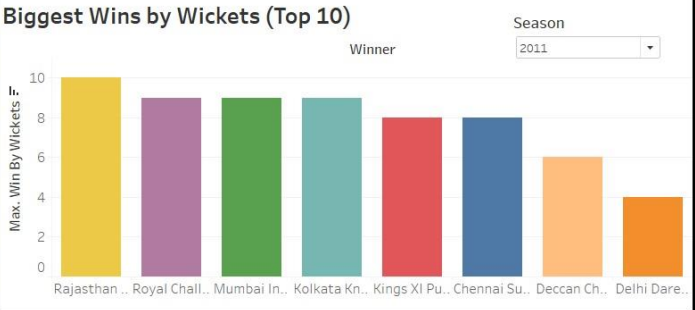
Highest Totals



Biggest Wins by Runs(TOP 10)



Biggest Wins by Wickets (Top 10)



Player Statistics

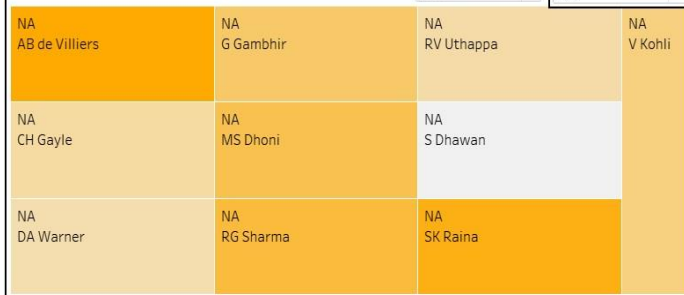
Orange Cap Contendor

Season

2009

Batting Team

(All)



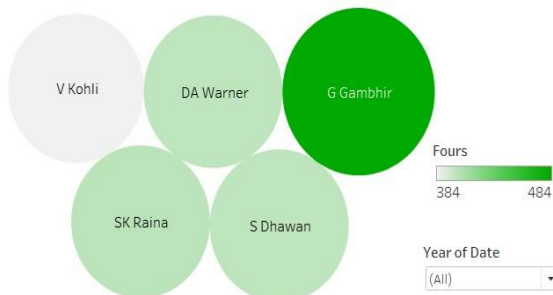
Purple Cap Contendor

Year of Date

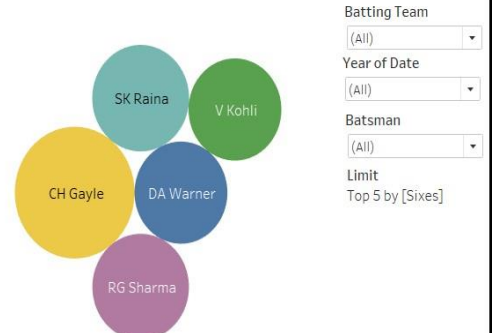
(All)



Most Fours



Most Sixes



Team Statistics

Win % (Home vs Away)

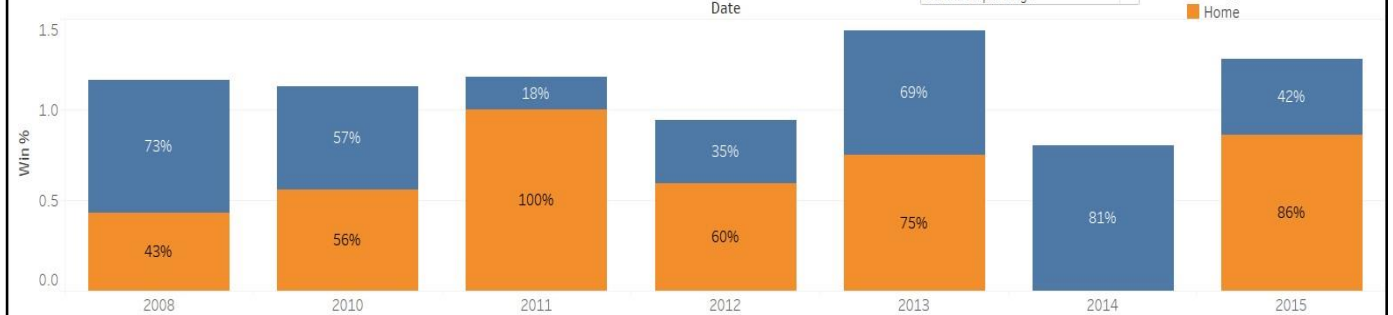
Teams

Chennai Super Kings

Home Vs Away

Away

Home



Season Performance

Year of Date

2011



Summary

- The team won the toss and chose to field have won maximum number of times.
- Toss losers who get a chance to field have won the matches the most.
- RCB holds the highest score in the IPL history of 263 & 248 in the year 2013 and 2016.
- The maximum win by wickets is 10 in 2011 is by Rajasthan Royals.
Overall, 9 teams have won the matches by 10 wickets.
- Virat Kohli holds the record for highest runs in a single season of IPL with 3345 Runs in a single season.
- SL Malinga holds the record for taking highest number of wickets in a single season of IPL.
- Gautam Gambhir has hit maximum number of fours across all IPL seasons with a record of 484 fours.
- Chris Gayle has hit most no of sixes across all IPL seasons with a record of 266 sixes.
- The highest number of matches won in a season is 13 and this was achieved by RR in 2008 and MI in 2013.
- The highest number of matches lost in a season is 13 and DD performed the worst in 2013.
- Mumbai Indians and Chennai Super Kings are the most successful teams in the IPL history followed by Kolkata Night Riders.
- CSK is the most successful team in IPL history. Despite a two-year suspension, they are among the top 2 teams who have won the maximum number of matches and IPL in all IPL seasons.