IPL data analysis (sports case study)

* About: the Indian premiere League is a T-20 league in India contested every year representing different cities in India. It is the most attended cricket league in the world and in 2019it ranked second by average attendance among all sports league.
* Objective: The objective of the analysis is to perform an in-depth analysis of a specific batsman's performance in the IPL, including analyzing their batting statistics, comparing their performance with other batsmen, conducting a comparative analysis of teams, and performing basic analysis across different seasons. This analysis aims to provide insights into the batsman's strengths, weaknesses, consistency, and impact on team performance, as well as draw comparisons with other players and assess the overall performance of teams across seasons in the IPL. By accomplishing these objectives, the analysis will contribute to a comprehensive understanding of individual player performance, team dynamics, and trends in the IPL cricket tournament.
* Started with importing messy data, cleaning data, merging, concatenating, grouping and aggregating data and analyzing.TheIPL data analysis process starts with collecting the data, followed by cleaning and pre-processing to ensure data quality. Data visualization techniques are then employed to gain visual insights, and finally, data analysis techniques are applied to extract meaningful information and draw actionable conclusions from the data.
* Tools used: python,pandas,matplotlib,seaborn,numpy
* Insights: Based on the given statements, we can draw several insights and conclusions:

1. Performance of David Warner: David Warner has shown impressive performance in terms of scoring boundaries, with 401 fours and 160 sixes. His total runs scored of 4,213 indicates his significant contribution to his team's overall batting performance.

2. Batting performance of CSK & RCB: The statement suggests that the batting performance of Chennai Super Kings (CSK) and Royal Challengers Bangalore (RCB) seems to be the best. This implies that these teams have performed consistently well in terms of their batting performance in the IPL.

3. Teams scoring more than 200: it can be inferred that RCB has scored the most such scores. This indicates that RCB has had several high-scoring matches, showcasing their strong batting lineup.

4. Highest total runs: Suresh Raina (SK Raina) has the highest total runs across all seasons of the IPL. On the other hand, Virat Kohli is closely behind in terms of total runs, holding the second spot. This highlights the batting prowess and consistency of both these players throughout the IPL.

5. RCB's formidable batting side: The statement mentions that not only Chris Gayle but also several other RCB players are on the top scores list. This suggests that RCB has a strong and formidable batting lineup, which contributes to their overall performance in the IPL.

6. Chris Gayle's maximum score: Chris Gayle has achieved the highest individual score in an IPL match. This showcases his exceptional batting ability and ability to play big innings.

7. Lasith Malinga's highest wickets: Lasith Malinga leads the chart for the highest number of wickets in the IPL. This highlights his effectiveness as a bowler and his ability to take wickets consistently.

In conclusion, the insights derived from the given statements highlight the strong batting performances of CSK and RCB, the individual batting achievements of players like Chris Gayle and SK Raina, and the bowling prowess of Lasith Malinga. These insights shed light on the performance and impact of players and teams in the IPL, indicating the significance of a strong batting lineup and effective bowling strategies in the tournament.

Based on the given statements, we can draw several insights and conclusions:

8.Maximum Man of the Match awards: Chris Gayle has received the maximum number of Man of the Match awards. This highlights his exceptional performances and impact in the matches he has played in the IPL.

9. Highest run difference: Mumbai Indians (MI) defeated Delhi Daredevils (DD) with the highest run difference in a match. This indicates a dominant performance by MI and a significant gap in scoring between the two teams.

10. Toss decisions: In some seasons, there is a higher probability that toss winners opt for batting, while in 2016, the majority of toss winners chose to field. This suggests a shift in strategies and decision-making by teams based on the specific conditions or match situations in those seasons.

11. MI as the maximum toss winner: Mumbai Indians (MI) has won the toss the most number of times. This implies that MI has had the advantage of making strategic decisions such as choosing to bat or field more frequently compared to other teams.

12. Maximum matches played in 2013: The statement indicates that the maximum number of matches were played in the year 2013 across all seasons until 2017. This suggests a high level of participation and activity in that particular season.

13. Total runs trend: There was a decline in total runs from 2008 to 2009, followed by an increase in runs in every season until 2013. However, from the next season onwards, there was a slump in the total runs. This trend indicates variations in batting performances and possibly changing pitch or playing conditions during those periods.

14. Average runs per match: It is mentioned that the number of matches is not equal in all seasons, so it would be relevant to calculate the average runs per match in each season to assess the scoring trends accurately. This analysis will provide insights into the overall run-scoring patterns and the relative competitiveness of each season.

15. Wankhede Stadium as the most lucky ground: The statement suggests that Wankhede Stadium is considered the most lucky ground for teams. This could imply that teams playing at Wankhede Stadium have a higher probability of winning matches, indicating a possible home ground advantage or favorable conditions at that venue.

In conclusion, the insights derived from the given statements highlight the performance of individual players like Chris Gayle, the dominance of teams like Mumbai Indians (MI), variations in toss decisions and total runs across different seasons, and the significance of specific cricket grounds. These insights contribute to a better understanding of team strategies, player performances, and overall trends in the IPL.