Introduction

This project focuses on analyzing football league "Premier League" data to understand the scoring patterns of teams, from August 2024 untill January 2025.

The project aimed to examine the number of goals scored by teams in home and away games, identifying interesting trends such as:

- Which teams lead in goal scoring?
- Are there significant differences between home and away performances?
- How much goals scored in away games and how much in home games?

The goal of this project is to extract valuable insight about team dominance in the league and identify key points that could be used for advanced analysis or predictions.

Methodology

Data Source

The data was obtained from a CSV file containing football match results, including details such as home and away goals, team names, and match outcomes. Initial data cleaning and validation were performed to ensure accuracy .

Tools and Technologies

- SQL was used to analyze the data and create summary tables
- Excel was used for data visualization, including charts and graphs.

Process

- Importing the data into SQL and validating its structure.
- Calculating team performance metrics, including total goals scored at home and away
- Visualizing the results using Excel to highlight key trends and insights.
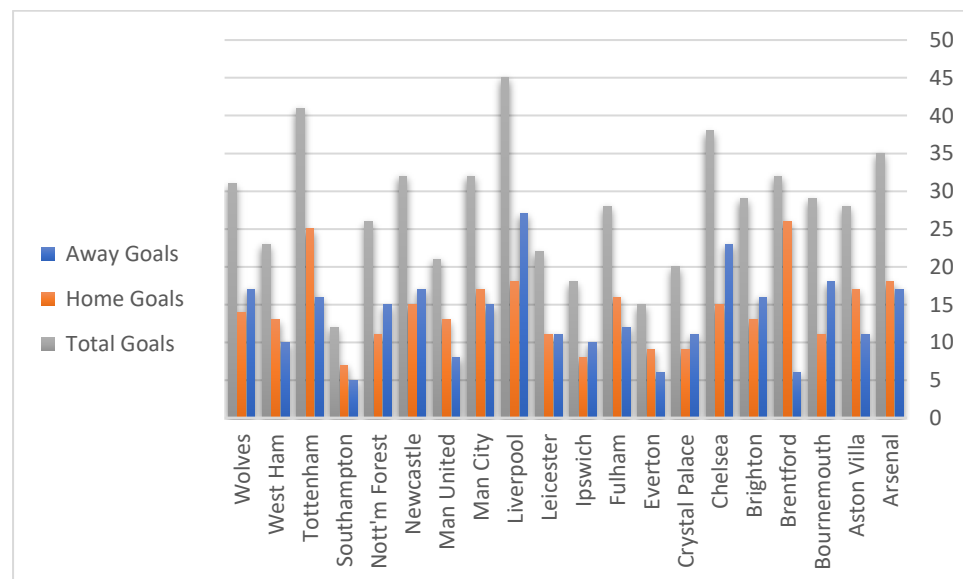
Findings

Key Insights

- Liverpool(45) and Tottenham (41) lead the league in total goals scored, but Liverpool scored more goals in away games then in home games, and Tottenham scored more home goals then away goals.
- Brentford(26) scored the most home goals in the league, but scored almost the least away goals in the league, only Southampton(5) scored least away goals then Brentford.
- Leicester have scored 22 total goal in the league and did it with 11 home goals and 11 away goals, what makes it even.

- Southampton(12) has scored the least total goals in the league, where it can be seen that the team scored the least away(5) and home(7) goals in the league also.
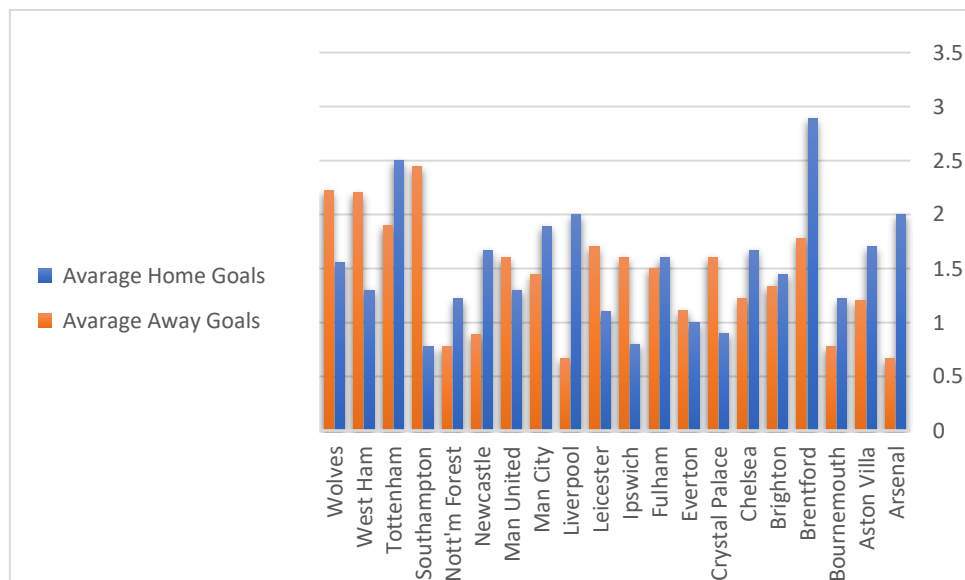
Below is a chart illustrating the total goals scored by each team, divided into home and away performances.

Total Goals	Home Goals	Away Goals	Team Name
35	18	17	Arsenal
28	17	11	Aston Villa
29	11	18	Bournemouth
32	26	6	Brentford
29	13	16	Brighton
38	15	23	Chelsea
20	9	11	Crystal Palace
15	9	6	Everton
28	16	12	Fulham
18	8	10	Ipswich
22	11	11	Leicester
45	18	27	Liverpool
32	17	15	Man City
21	13	8	Man United
32	15	17	Newcastle
26	11	15	Nott'm Forest
12	7	5	Southampton
41	25	16	Tottenham
23	13	10	West Ham
31	14	17	Wolves
557	**286**	**271**	**Total Goals**

Below is a chart illustrating the summary of home goal and away goals.

Avarage Away Goals	Avarage Home Goals	Team Name
0.67	2	Arsenal
1.2	1.7	Aston Villa
0.78	1.22	Bournemouth
1.78	2.89	Brentford
1.33	1.44	Brighton
1.22	1.67	Chelsea
1.6	0.9	Crystal Palace
1.11	1	Everton
1.5	1.6	Fulham
1.6	0.8	Ipswich
1.7	1.1	Leicester
0.67	2	Liverpool
1.44	1.89	Man City
1.6	1.3	Man United
0.89	1.67	Newcastle
0.78	1.22	Nott'm Forest
2.44	0.78	Southampton
1.9	2.5	Tottenham
2.2	1.3	West Ham
2.22	1.56	Wolves
28.63	**30.53**	**Total**

Conclusions

Summary of Findings

- The analysis revealed that dominant teams, such as Liverpool and Tottenham, perform consistently well both at home and away, emphasizing their balanced offensive strategies.
- Lower-ranked teams show a strong reliance on home games, which highlights the impact of home advantage in the league.
- Additionally Southampton has been soft on attack this season so far, making their season bad so far and being the last in the league.

Key Takeaways

- Consistency in both home and away games is critical for success in the league.
- Teams relying heavily on home advantage may struggle in away games, affecting their overall rankings.

Future Directions

This analysis could be expanded to include:

- Examining defensive performance (goals conceded).
- Analyzing individual player contributions to team success.
- Predicting future match outcomes based on past performance trends.

Summary and Recommendations

Project Summary

This project successfully analyzed Premier League data to uncover scoring patterns and identify team strengths in home and away matches. The findings shed light on the balance between offensive consistency and home advantage, offering valuable insights for further analysis.

Value of Insights

These findings can be used by analysts, coaches, or even fans to better understand team dynamics and strategies. They could also be applied in predictive models for future matches.

Future Recommendations

- Expand the analysis to include defensive metrics (e.g., goals conceded).
- Compare trends across multiple seasons to identify long-term patterns.
- Integrate player-level data to assess individual contributions to team success.
- Develop predictive models to forecast match outcomes.

Acknowledgments

Data was sourced from a structured CSV file containing football match results, including team names, home and away goals, and match outcomes. and the project utilized SQL and Excel for analysis and visualization.