

# Soccer Analysis



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# Executive Summary

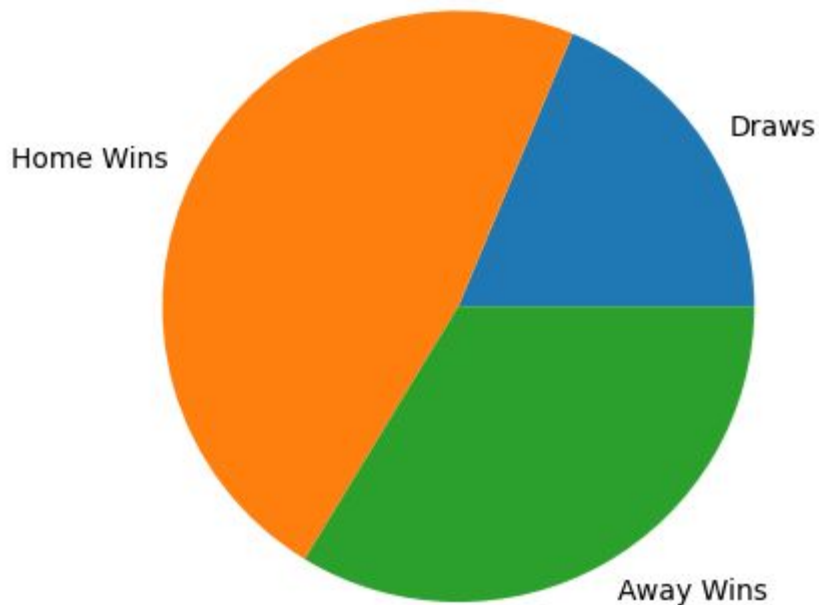
**Objective:** Identify key highlights and performance patterns from soccer games.

The dataset covers every match from the 2018–2019 English Premier League season, providing detailed information on half-time and full-time outcomes, frequency of fouls, red cards and yellow cards.

The influence of half-time results on full-time outcomes is not immediately clear. Understanding this relationship is crucial, as it can help coaches make informed decisions about squad rotation, giving junior players opportunities, and adjusting tactical strategies during the break.

Analysis shows a clear home advantage: teams leading at half-time at home are highly likely to secure victory by full-time. Away teams must factor this into their preparation, as protecting a lead is more challenging on the road. Overall, the half-time lead is a strong indicator of the full-time win, making it a valuable metric for strategic planning.

# Distribution of Full-Time Results



Home Team Wins More Often

# Match Outcome Stability

Half-Time Result	Full-Time Home Win	Full-Time Draw	Full-Time Away Win
HT Home Win	84.1% of matches that stay Home Win	12.7% that flip to Draw	3.2% that flip to Away Win
HT Draw	41.9% that flip to Home Win	28.4% that stay Draw	29.7% that flip to Away Win
HT Away Win	12.3% that flip to Home Win	12.3% that flip to Draw	75.5% that stay Away Win

Draws are unstable, leads are powerful predictors and home advantage is real.

# Additional Season Highlights

- The most fouls given to a home team is 87 to the Wolves.
- The most fouls given to an away team is 110 to Brighton.

# Conclusion & Recommendations

- Home teams **win more** often than away teams.
- Draws are **less likely** to happen
- A clear home advantage exists.
  - The majority of matches were won by the home side.
  - The probability of a home team maintaining a half-time lead is higher than that of an away team (84.1% vs. 75.5%).
- **Leverage home advantage:** Encourage aggressive play styles at home to capitalize on higher win probability.
- **Improve away performance:** Focus on resilience training, mental preparation, and strategies to counter crowd pressure.
- **Half-time focus:** Since home teams are more likely to maintain leads, coaches should emphasize defensive discipline when leading at half-time.