# ENGLISH PREMIER LEAGUE PREDICTIONS

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# INTRODUCTION

Football is the most popular sport in the world and it is very dominant in countries from Europe, South America and Africa.

Each country have their own individual leagues and English Premier League is the top league from England.

Notable teams in league are Manchester United, Liverpool, Arsenal, Chelsea and Manchester City.

# PROBLEM STATEMENT

Using past matches stats and football team stats from FIFA , predict future matches results.

## Approach :

Using ML with Multi-Class Classification, discover important features for predicting the match results and develop a model which can assist potential stakeholders such as football pundits, betting website, football fans and shareholders of football club.

# THE DATA APPROACH

Chosen players' stats are
then taken from the FIFA
stats to form team stats.


FIFA18, 19, 20 & 21 datasets
taken from [Kaggle]

I

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Web Scrap Data for the
following seasons:
2017/2018, 2018/2019
2019/2020, 2020/2021

Using the seasons fixtures
data, locate 18 players with
the most appearance in each
team for each season.

# EXPLORATORY DATA ANALYSIS & FEATURE ENGINEERING

## Team Statistics Features

- As mentioned in previous slide, the team stats are engineered from top 18 players with the highest appearances in the season.
- The stats used from each player are Value, Wages, Age, Height, Weight, Overall, Potential, International Reputation and Skills Move.
- Different features are engineered differently:
  - Wage and Value are summed.
  -Mean and Standard Deviation of Age, Height, Weight, Overall, Potential, International Reputation and Skills are used

| club | total_value_eur | total_wage_eur | average_age | average_height_cm | average_weight_kg | average_overall |
|---|---|---|---|---|---|---|
| Arsenal | 285300000 | 1287000 | 25.24 | 182.12 | 76.35 | 78.76 |
| Aston Villa | 141370000 | 751000 | 24.89 | 183.00 | 75.22 | 74.00 |
| Brighton & Hove Albion | 124025000 | 693000 | 24.94 | 182.06 | 76.53 | 74.18 |
| Burnley | 137700000 | 776000 | 27.59 | 182.88 | 78.06 | 75.53 |
| Chelsea | 437500000 | 1673000 | 25.18 | 181.94 | 78.53 | 81.59 |

| average_potential | average_internationl_reputation | average_skill_moves | age_std | height_cm_std | weight_kg_std | overall_std |
|---|---|---|---|---|---|---|
| 83.82 | 1.94 | 3.12 | 4.22 | 5.56 | 5.96 | 4.45 |
| 79.00 | 1.22 | 2.94 | 2.93 | 5.86 | 8.80 | 5.21 |
| 78.76 | 1.29 | 2.65 | 3.58 | 8.79 | 7.37 | 4.50 |
| 77.24 | 1.12 | 2.65 | 3.37 | 6.12 | 6.59 | 4.50 |
| 85.59 | 2.29 | 3.06 | 4.63 | 6.95 | 8.46 | 3.61 |

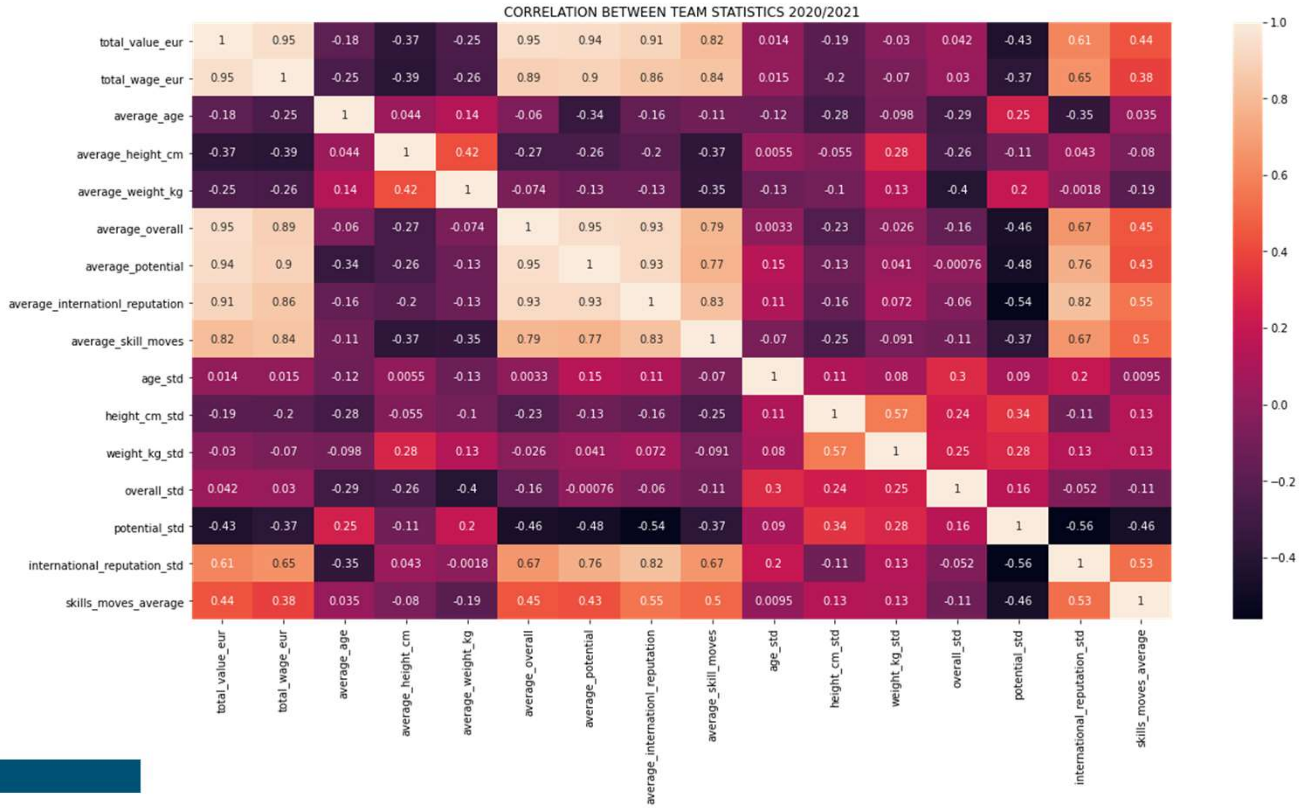
| potential_std | international_reputation_std | skills_moves_std |
|---|---|---|
| 2.81 | 1.09 | 0.86 |
| 3.24 | 0.55 | 0.80 |
| 2.99 | 0.59 | 1.06 |
| 3.70 | 0.33 | 0.79 |
| 2.90 | 0.99 | 0.90 |

# EXPLORATORY DATA ANALYSIS & FEATURE ENGINEERING

## Correlation Between Team Statistics

This is the heatmap of correlation between all the team stats. As footballers tend to be more valuable if they are better, the average overall and average potential are positive correlated with value and wages.

However, as a footballer ages, they tend to be not as good as before, their value, potential, overall and wages will drop. Therefore, age has a strong negative correlation with a lot of other features.



# EXPLORATORY DATA ANALYSIS & FEATURE ENGINEERING

## Fixtures Matches Stats

- One of the datasets we are using is the fixtures data, which consists of the matches that have been played in the season.
- Each match has the match stats for the players, such as Gls which is goals, SoT is shots on target and CrdY is yellow card.
- Most of the stats are correlated.
- As we are looking at the team as a whole, we will sum up each stat from each player into one.

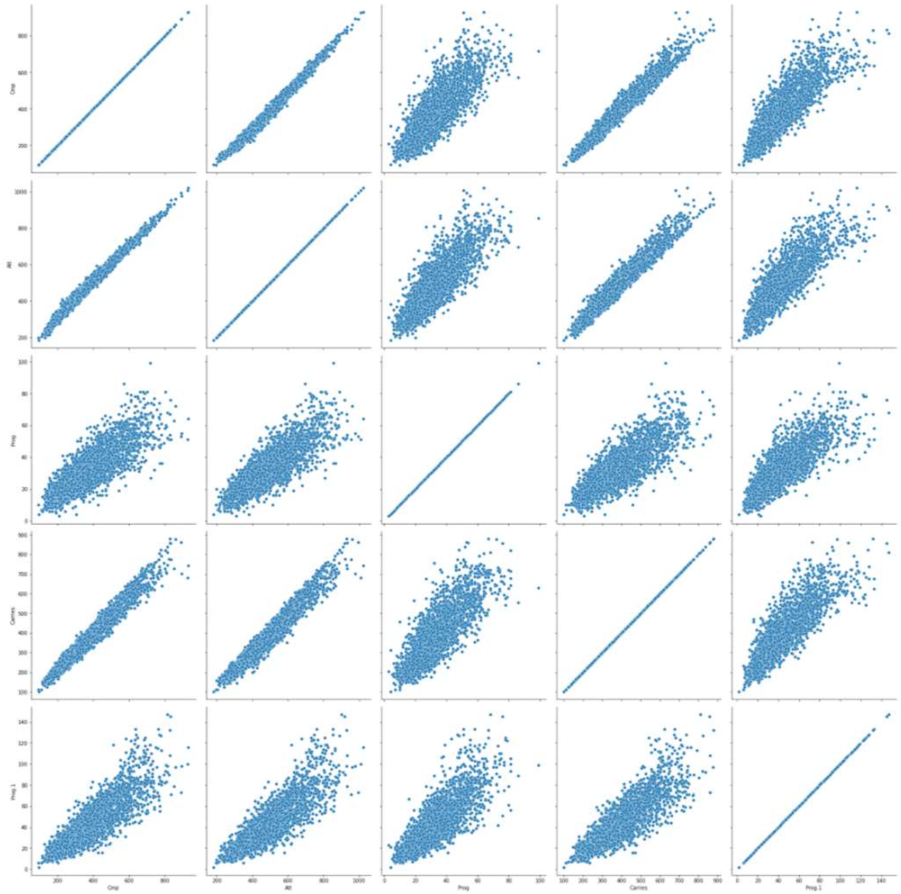
| Player | # | Nation | Pos | Age | Min | Gls | Ast | PK | PKatt | Sh | SoT | CrdY | CrdR | Touches | Press | Tkl | Int_x | Blocks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alexandre Lacazette | 9.0 | fr FRA | FW | 26-104 | 75.0 | 1 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 22.0 | 26.0 | 1.0 | 1 | 0.0 |
| Olivier Giroud | 12.0 | fr FRA | FW | 30-344 | 15.0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 14.0 | 4.0 | 0.0 | 1 | 0.0 |
| Danny Welbeck | 23.0 | eng ENG | AM | 26-287 | 75.0 | 2 | 1 | 0 | 0 | 3 | 2 | 0 | 0 | 36.0 | 21.0 | 0.0 | 0 | 4.0 |
| Alexis Sánchez | 7.0 | cl CHI | AM | 28-264 | 15.0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 13.0 | 4.0 | 0.0 | 0 | 0.0 |
| Mesut Özil | 11.0 | de GER | AM | 28-329 | 90.0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 65.0 | 33.0 | 2.0 | 0 | 1.0 |

| Match | Home | Away | Stadium | Attendance | Gls | Ast | PK | PKatt | Sh | SoT | CrdY | CrdR | Touches | Press | Tkl | Int_x | Blocks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenal_vs_Bournemouth | Arsenal | Bournemouth | Emirates Stadium, London | 59262 | 3 | 3 | 0 | 0 | 16 | 8 | 0 | 0 | 717.0 | 169.0 | 18.0 | 19 | 8.0 |
| Arsenal_vs_Bournemouth | Bournemouth | Arsenal | Emirates Stadium, London | 59262 | 0 | 0 | 0 | 0 | 8 | 2 | 1 | 0 | 560.0 | 225.0 | 8.0 | 23 | 10.0 |

# EXPLORATORY DATA ANALYSIS & FEATURE ENGINEERING

## Fixtures Matches Stats

- Most of the features in the match stats are related.
- The grid on the right contains the scatter plot for:
  - Passes Completed (Cmp) > 1st Row
  - Passes Attempted (Att) > 2nd Row
  - Progressive Passes (Prog) > 3rd Row
  - Times the team controlled the ball (Carries) > 4th Row
  - Progressive Carries (Prog.1) > 5th Row
- Using the scatter plot, you can see the moderate to strong linear relationship between the features. These features have strong relationship.
- Based on my understanding, these features are related to passes and possession. Before a pass is carried out, the ball will be at the player's possession.



# EXPLORATORY DATA ANALYSIS & FEATURE ENGINEERING

## Past Matches Stats

- As we will not know future matches stats as the match will not been played, we will engineer the last three games and last five games average to determine the future.

| Match | last_3_avrg_Gls | last_5_avrg_Gls | last_3_avrg_Sh | last_5_avrg_Fls | last_3_avrg_Fld | last_5_avrg_PKwon |
|---|---|---|---|---|---|---|
| West_Bromwich_Albion_vs_Leicester_City | 0.666667 | 1.0 | 10.000000 | 15.0 | 10.000000 | 0.0 |
| Norwich_City_vs_Watford | 0.333333 | 0.4 | 9.000000 | 13.6 | 11.000000 | 0.0 |
| Burnley_vs_Arsenal | 1.333333 | 1.4 | 6.666667 | 14.8 | 14.333333 | 0.0 |
| Manchester_City_vs_Chelsea | 1.666667 | 1.4 | 15.000000 | 10.0 | 11.000000 | 0.2 |

# EXPLORATORY DATA ANALYSIS & FEATURE ENGINEERING

## Result & Match Goals

- There is no result feature. Therefore, create using the goals and own goals stats.

- The values will be as followed: 0 is Home Win, 1 is Draw and 2 is Away Win.

- The home goals feature does not include the away own goals and is the same for the away goal feature.

- Three new features were created, Home Total Goals, Away Total Goals and Total Goals.

| | match | home | h_gls | h_og | a_gls | a_og | result | h_total_goals | a_total_goals | total_goals |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Arsenal_vs_Leicester_City | Arsenal | 4 | 0 | 3 | 0 | 0 | 4 | 3 | 7 |
| 1 | Crystal_Palace_vs_Huddersfield_Town | Crystal Palace | 0 | 1 | 2 | 0 | 2 | 0 | 3 | 3 |
| 2 | Chelsea_vs_Burnley | Chelsea | 2 | 0 | 3 | 0 | 2 | 2 | 3 | 5 |
| 3 | Brighton_&_Hove_Albion_vs_Manchester_City | Brighton & Hove Albion | 0 | 1 | 1 | 0 | 2 | 0 | 2 | 2 |
| 4 | West_Bromwich_Albion_vs_Bournemouth | West Bromwich Albion | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 5 | Everton_vs_Stoke_City | Everton | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 6 | Watford_vs_Liverpool | Watford | 3 | 0 | 3 | 0 | 1 | 3 | 3 | 6 |

# EXPLORATORY DATA ANALYSIS & FEATURE ENGINEERING

## Combination of Fixtures and Team Stats

- After all necessary features are sorted, we combined the fixtures and team stats accordingly to the seasons they played in.
- Each season is ranged between two dates based on the table on the right
- Season 2020/2021 is currently ongoing.

| | Start Date | End Date |
|---|---|---|
| Season 2017/2018 | 2017-08-09 | 2018-05-13 |
| Season 2018/2019 | 2018-08-09 | 2019-05-13 |
| Season 2019/2020 | 2019-08-08 | 2020-07-27 |
| Season 2020/2021 | 2020-09-11 | Current |

# MODEL SELECTION & EVALUATION

With our data, we will be looking at three targets.

1. Result
2. Home Total Goals
3. Away Total Goals

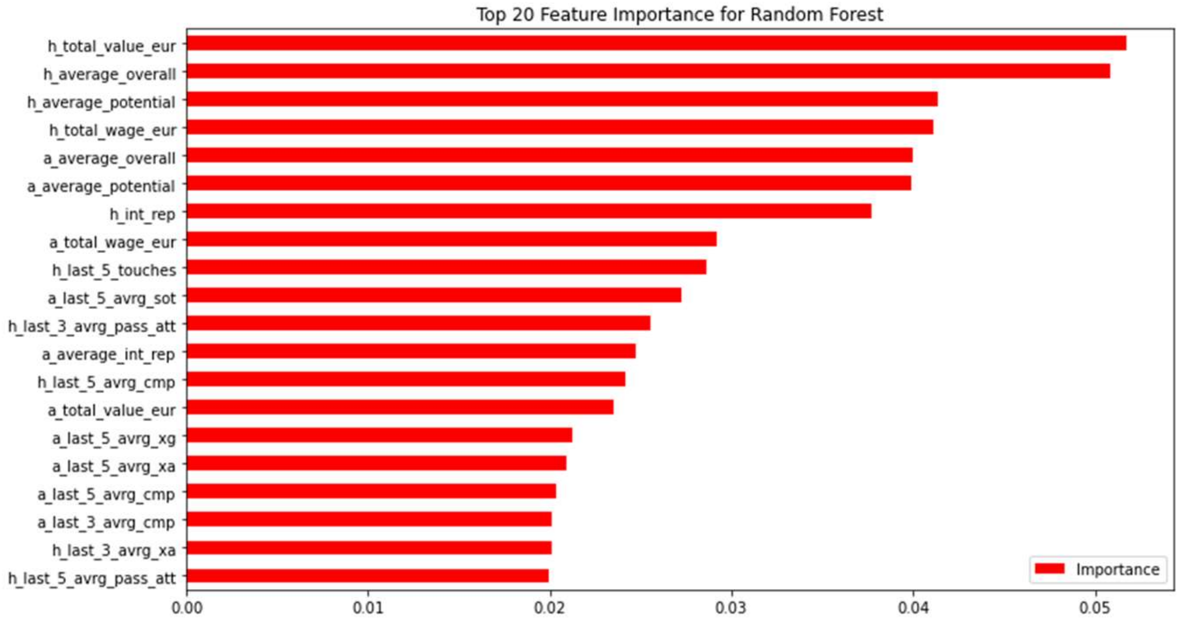
# MODEL SELECTION & EVALUATION:
## Result

- As we prepare for modeling, we have dropped rows with null values and features that are not so related to Result.
- F1 Score is used as the determinant metric. Micro Average is used as the data is not balanced.
- Random Forest is chosen.

| | Model Type | F1-Score | Recall | Precision | Train Accuracy | Test Accuracy |
|---|---|---|---|---|---|---|
| 1 | Random Forest | 0.534351 | 0.534351 | 0.534351 | 0.618197 | 0.534351 |
| 0 | Logistic Regression | 0.526718 | 0.526718 | 0.526718 | 0.564626 | 0.526718 |
| 5 | Support Vector Classifier | 0.519084 | 0.519084 | 0.519084 | 0.582483 | 0.519084 |
| 2 | Extra Trees | 0.511450 | 0.511450 | 0.511450 | 0.570578 | 0.511450 |
| 3 | AdaBoost | 0.496183 | 0.496183 | 0.496183 | 0.606293 | 0.496183 |
| 4 | GradientBoosting | 0.496183 | 0.496183 | 0.496183 | 0.601190 | 0.496183 |

# MODEL SELECTION & EVALUATION:
# Result

- Using Random Forest, most of the features that are important are individual team stats.



# MODEL SELECTION & EVALUATION:
## Home Total Goals

- Similarly, we will drop null values and features not very correlated to Home Total Goals. There are a total of 9 classes. However, we remove 2 of them as there are only two matches in it.
- The data is still very imbalanced, so they are SMOTE before being trained.
- F1 Score is used as the determinant metric. Micro Average is used as the data is not balanced. However, the test accuracy is lower than the base line.
- Gradient Boosting is chosen.

| | Model Type | F1-Score | Recall | Precision | Train Accuracy | Test Accuracy |
|---|---|---|---|---|---|---|
| 4 | GradientBoosting | 0.312883 | 0.312883 | 0.312883 | 0.987692 | 0.312883 |
| 3 | AdaBoost | 0.300613 | 0.300613 | 0.300613 | 0.465055 | 0.300613 |
| 5 | Support Vector Classifier | 0.285276 | 0.285276 | 0.285276 | 0.802637 | 0.285276 |
| 1 | Random Forest | 0.279141 | 0.279141 | 0.279141 | 0.639560 | 0.279141 |
| 0 | Logistic Regression | 0.254601 | 0.254601 | 0.254601 | 0.507253 | 0.254601 |
| 2 | Extra Trees | 0.245399 | 0.245399 | 0.245399 | 0.599560 | 0.245399 |

# MODEL SELECTION & EVALUATION:
## Away Total Goals

- Similarly, we will drop null values and features not very correlated to Away Total Goals. There are also a total of 9 classes. However, we remove 2 of them as there are only two matches in it.
- The data is still very imbalanced, so they are SMOTE before being trained.
- F1 Score is used as the determinant metric. Micro Average is used as the data is not balanced. However, the test accuracy is lower than the base line.
- Support Vector Classifier is chosen.

| | Model Type | F1-Score | Recall | Precision | Train Accuracy | Test Accuracy |
|---|---|---|---|---|---|---|
| 5 | Support Vector Classifier | 0.322086 | 0.322086 | 0.322086 | 0.706398 | 0.322086 |
| 4 | GradientBoosting | 0.315951 | 0.315951 | 0.315951 | 0.994303 | 0.315951 |
| 3 | AdaBoost | 0.306748 | 0.306748 | 0.306748 | 0.315074 | 0.306748 |
| 2 | Extra Trees | 0.303681 | 0.303681 | 0.303681 | 0.688431 | 0.303681 |
| 1 | Random Forest | 0.300613 | 0.300613 | 0.300613 | 0.713409 | 0.300613 |
| 0 | Logistic Regression | 0.263804 | 0.263804 | 0.263804 | 0.534181 | 0.263804 |

# PREDICTIONS:
# Result Odds with Singapore Pools

- To test the model, we decide to take matches that are to be played this week for predictions.
- We use the current season dataset to determine the upcoming matches.
- On the right is the table of matches with the predicted results and probabilities.
- As some matches have just been played, the below table is the result.

| | date | match | home | away | predicted result | home_win | draw | away_win |
|---|---|---|---|---|---|---|---|---|
| 0 | 2021-01-26 | Newcastle_United_vs_Leeds_United | Newcastle United | Leeds United | 2 | 0.285313 | 0.304331 | 0.410356 |
| 1 | 2021-01-26 | Crystal_Palace_vs_West_Ham_United | Crystal Palace | West Ham United | 0 | 0.365430 | 0.271783 | 0.362788 |
| 2 | 2021-01-26 | West_Bromwich_Albion_vs_Manchester_City | West Bromwich Albion | Manchester City | 2 | 0.158648 | 0.105513 | 0.735839 |
| 3 | 2021-01-26 | Southampton_vs_Arsenal | Southampton | Arsenal | 2 | 0.312912 | 0.224345 | 0.462744 |
| 4 | 2021-01-27 | Burnley_vs_Aston_Villa | Burnley | Aston Villa | 2 | 0.345117 | 0.279015 | 0.375868 |
| 5 | 2021-01-27 | Everton_vs_Leicester_City | Everton | Leicester City | 0 | 0.432772 | 0.252232 | 0.314996 |
| 6 | 2021-01-27 | Chelsea_vs_Wolverhampton_Wanderers | Chelsea | Wolverhampton Wanderers | 0 | 0.642730 | 0.228803 | 0.128467 |
| 7 | 2021-01-27 | Manchester_United_vs_Sheffield_United | Manchester United | Sheffield United | 0 | 0.720578 | 0.194367 | 0.085056 |
| 8 | 2021-01-27 | Brighton_&_Hove_Albion_vs_Fulham | Brighton & Hove Albion | Fulham | 0 | 0.441512 | 0.267817 | 0.290671 |
| 9 | 2021-01-28 | Tottenham_Hotspur_vs_Liverpool | Tottenham Hotspur | Liverpool | 1 | 0.316149 | 0.371714 | 0.312137 |

| ENGLAND - PREMIER LEAGUE | | | | JANUARY 27 |
|---|---|---|---|---|
| FT | Crystal Palace | 2 - 3 | West Ham United | |
| FT | Newcastle United | 1 - 2 | Leeds United | |
| FT | Southampton | 1 - 3 | Arsenal | |
| FT | West Bromwich Albion | 0 - 5 | Manchester City | |

# PREDICTIONS:
## Result Odds with Singapore Pools

- Using probability, we managed to calculate the odds created from our model.

- We then compared the odds to the odds by Singapore Pools. This is to see whether we think alike.

| | date | match | home | away | predicted result | home_win | draw | away_win |
|---|---|---|---|---|---|---|---|---|
| 0 | 2021-01-26 | Newcastle_United_vs_Leeds_United | Newcastle United | Leeds United | 2 | 3.50 | 3.29 | 2.44 |
| 1 | 2021-01-26 | Crystal_Palace_vs_West_Ham_United | Crystal Palace | West Ham United | 0 | 2.74 | 3.68 | 2.76 |
| 2 | 2021-01-26 | West_Bromwich_Albion_vs_Manchester_City | West Bromwich Albion | Manchester City | 2 | 6.30 | 9.48 | 1.36 |
| 3 | 2021-01-26 | Southampton_vs_Arsenal | Southampton | Arsenal | 2 | 3.20 | 4.46 | 2.16 |
| 4 | 2021-01-27 | Burnley_vs_Aston_Villa | Burnley | Aston Villa | 2 | 2.90 | 3.58 | 2.66 |
| 5 | 2021-01-27 | Everton_vs_Leicester_City | Everton | Leicester City | 0 | 2.31 | 3.96 | 3.17 |
| 6 | 2021-01-27 | Chelsea_vs_Wolverhampton_Wanderers | Chelsea | Wolverhampton Wanderers | 0 | 1.56 | 4.37 | 7.78 |
| 7 | 2021-01-27 | Manchester_United_vs_Sheffield_United | Manchester United | Sheffield United | 0 | 1.39 | 5.14 | 11.76 |
| 8 | 2021-01-27 | Brighton_&_Hove_Albion_vs_Fulham | Brighton & Hove Albion | Fulham | 0 | 2.26 | 3.73 | 3.44 |
| 9 | 2021-01-28 | Tottenham_Hotspur_vs_Liverpool | Tottenham Hotspur | Liverpool | 1 | 3.16 | 2.69 | 3.20 |

**Wed, 27 Jan 2021**

| Time | | Event | Home (1) | Draw (X) | Away (2) | |
|---|---|---|---|---|---|---|
| 2.00am | 0304 | Crystal Palace vs West Ham | 01 2.80 | 02 3.00 | 03 2.30 | M (+11) |
| 2.00am | 0360 | Newcastle vs Leeds | 01 3.40 | 02 3.50 | 03 1.85 | M (+11) |
| 4.15am | 0359 | Southampton vs Arsenal | 01 2.95 | 02 3.10 | 03 2.15 | M (+11) |
| 4.15am | 0380 | West Bromwich vs Manchester City | 01 13.00 | 02 6.50 | 03 1.15 | M (+11) |

**Thu, 28 Jan 2021**

| Time | | Event | Home (1) | Draw (X) | Away (2) | |
|---|---|---|---|---|---|---|
| 2.00am | 0384 | Burnley vs Aston Villa | 01 3.30 | 02 3.30 | 03 1.92 | M (+11) |
| 2.00am | 0375 | Chelsea vs Wolverhampton | 01 1.53 | 02 3.80 | 03 5.00 | M (+11) |
| 3.30am | 0387 | Brighton vs Fulham | 01 2.00 | 02 3.10 | 03 3.30 | M (+11) |
| 4.15am | 0362 | Everton vs Leicester | 01 2.60 | 02 3.05 | 03 2.45 | M (+11) |
| 4.15am | 0377 | Manchester Utd vs Sheffield Utd | 01 1.23 | 02 5.20 | 03 10.00 | M (+10) |

**Fri, 29 Jan 2021**

| Time | | Event | Home (1) | Draw (X) | Away (2) | |
|---|---|---|---|---|---|---|
| 4.00am | 0374 | Tottenham vs Liverpool | 01 3.00 | 02 3.20 | 03 2.10 | M (+11) |

# PREDICTIONS:

## Exact Score Prediction Using Home & Away Goals

- Similarly, we also tested the home total and away total goals of the matches.
- We also compare the odds created from the model and Singapore Pools'.

| date | match | home | away | predicted home goals | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2021-01-26 | Newcastle_United_vs_Leeds_United | Newcastle United | Leeds United | 2 | 0.146333 | 0.251213 | 0.496062 | 0.086157 | 0.019816 | 0.000418 | 2.142927e-07 |
| 2021-01-26 | Crystal_Palace_vs_West_Ham_United | Crystal Palace | West Ham United | 1 | 0.229635 | 0.408571 | 0.282619 | 0.071780 | 0.006631 | 0.000763 | 3.548526e-07 |
| 2021-01-26 | West_Bromwich_Albion_vs_Manchester_City | West Bromwich Albion | Manchester City | 1 | 0.274107 | 0.520543 | 0.176362 | 0.021963 | 0.006256 | 0.000767 | 2.692472e-07 |
| 2021-01-26 | Southampton_vs_Arsenal | Southampton | Arsenal | 1 | 0.125436 | 0.568376 | 0.121136 | 0.175364 | 0.008872 | 0.000816 | 3.261212e-07 |

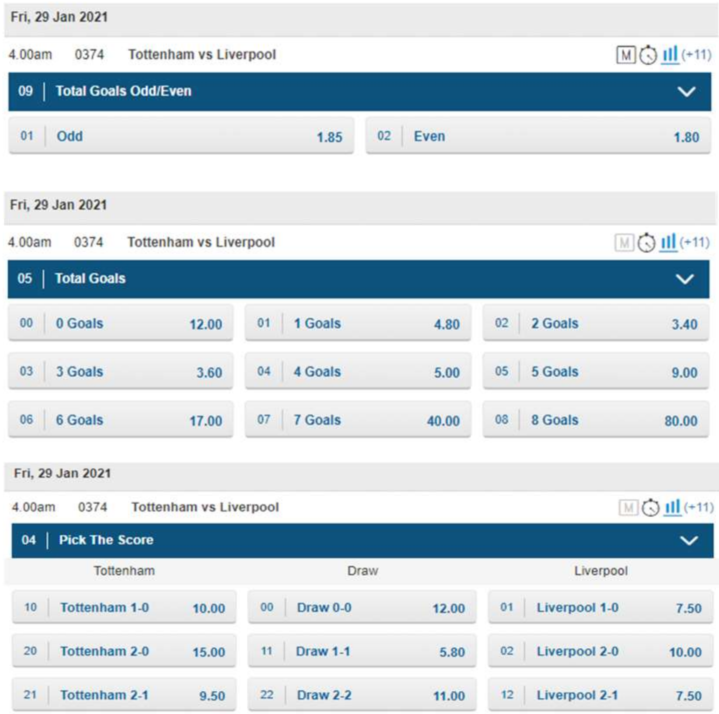
| date | match | home | away | predicted away goals | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2021-01-26 | Newcastle_United_vs_Leeds_United | Newcastle United | Leeds United | 0 | 0.337836 | 0.273955 | 0.267260 | 0.108636 | 0.011249 | 0.000807 | 0.000257 |
| 2021-01-26 | Crystal_Palace_vs_West_Ham_United | Crystal Palace | West Ham United | 4 | 0.066043 | 0.051624 | 0.090841 | 0.057788 | 0.733177 | 0.000306 | 0.000221 |
| 2021-01-26 | West_Bromwich_Albion_vs_Manchester_City | West Bromwich Albion | Manchester City | 4 | 0.052679 | 0.091526 | 0.118555 | 0.275707 | 0.391460 | 0.056247 | 0.013825 |
| 2021-01-26 | Southampton_vs_Arsenal | Southampton | Arsenal | 2 | 0.125005 | 0.186355 | 0.327388 | 0.234166 | 0.113269 | 0.009975 | 0.003844 |

| ENGLAND - PREMIER LEAGUE | | | | JANUARY 27 |
|---|---|---|---|---|
| FT | Crystal Palace | 2 - 3 | West Ham United | ★ |
| FT | Newcastle United | 1 - 2 | Leeds United | ★ |
| FT | Southampton | 1 - 3 | Arsenal | ★ |
| FT | West Bromwich Albion | 0 - 5 | Manchester City | ★ |

# PREDICTIONS:

## Exact Score Prediction Using Home & Away Goals

- Here we compared a match's Home & Away Goals odds with Singapore Pools'.
- With this target variable, our prediction enables betting sites to produce three different betting method.




| date | match | home | away | predicted home goals | 0 | 1 | 2 | 3 | 4 | 5 | 6 | predicted away goals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2021-01-28 | Tottenham_Hotspur_vs_Liverpool | Tottenham Hotspur | Liverpool | 2.0 | 4.53 | 4.13 | 2.27 | 12.46 | 207.42 | 83.34 | 3707662.94 | NaN |
| 2021-01-28 | Tottenham_Hotspur_vs_Liverpool | Tottenham Hotspur | Liverpool | NaN | 3.89 | 3.33 | 4.04 | 5.29 | 426.23 | 1939.09 | 351.94 | 1.0 |

# CONCLUSION

We are only able to get 53% accuracy and F1-Score for the Result prediction.

For Home and Away Goals predictions,we are only able to get 31.2% and 32.2%.

Football prediction is not as easy as it seems to be.

Other factors such match-fixing, players injuries, etc, can also affect the match outcome.

# Moving Forward

More data like events during a match, players data and players to players data.

More targets can be explored.

Half-Time and Full-Time scores, which team to score first, which player to score first, number of corners,
number of yellow cards etc.

# THANK YOU

Do you have any questions?

And please do not use the predictions to gamble.

## SOURCES


- English Premier League – www.premierleague.com
- FBREF – www.fbref.com
- EA FIFA - https://www.ea.com/games/fifa
- Kaggle Dataset - https://www.kaggle.com/stefanoleone992/fifa-21-complete-player-dataset