



FIFA WORLD CUP
Qatar2022

Predicting the FIFA World Cup

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Introduction

- **Biggest and most watched sporting event in the world.**
- **Involves 32 qualified men's national football (soccer) teams that compete in a specific host nation(s). It is usually hosted in the summer and lasts a month.**
- **This year, the world cup is hosted in Qatar and it taking place from 20 November to 18 December.**
- **The most successful teams are Brazil (5), Germany (4), and Italy (4)**

Key Questions

- What are some of the best metrics to consider when predicting a game of football (soccer)?
- Does player rating drive performances or does historical data have a greater influence on the outcome of games between two teams?
- Can we use our findings to successfully predict the Qatar World Cup?

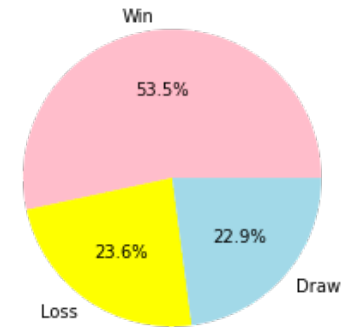


Exploratory Data Analysis

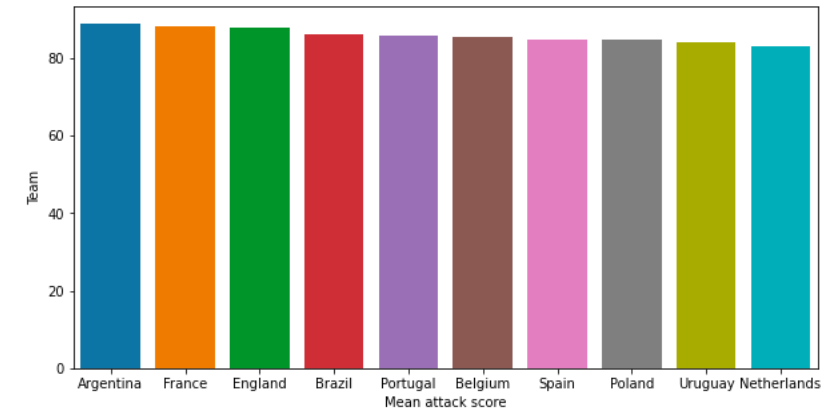
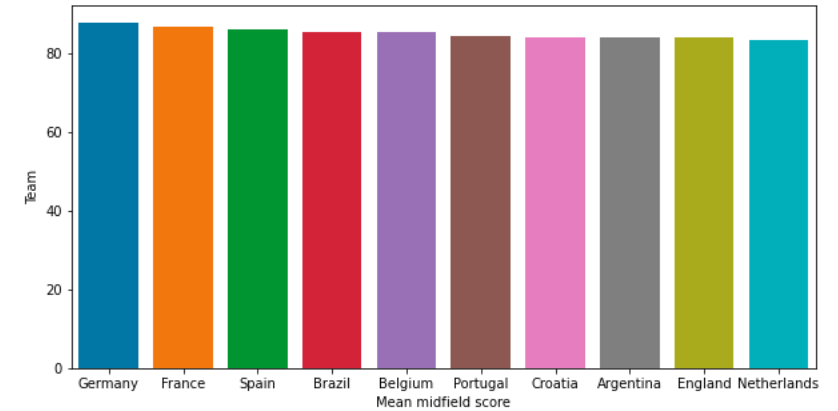
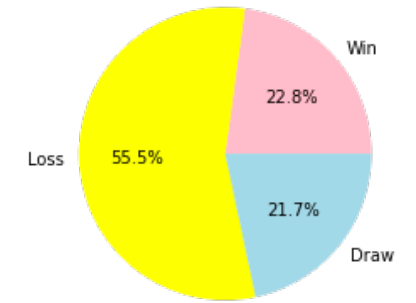
➤ Ranking of each variable as independent predictors:

Predictor	Accuracy
FIFA Ranking	73.44%
Historical WDLG	62.86%
Team Form (Last 5 games)	70.67%
Squad Rating	67.69%
Head-to-Head Data	60.49%
Betting Odds*	74.23%

Head to Head Results when the difference is positive



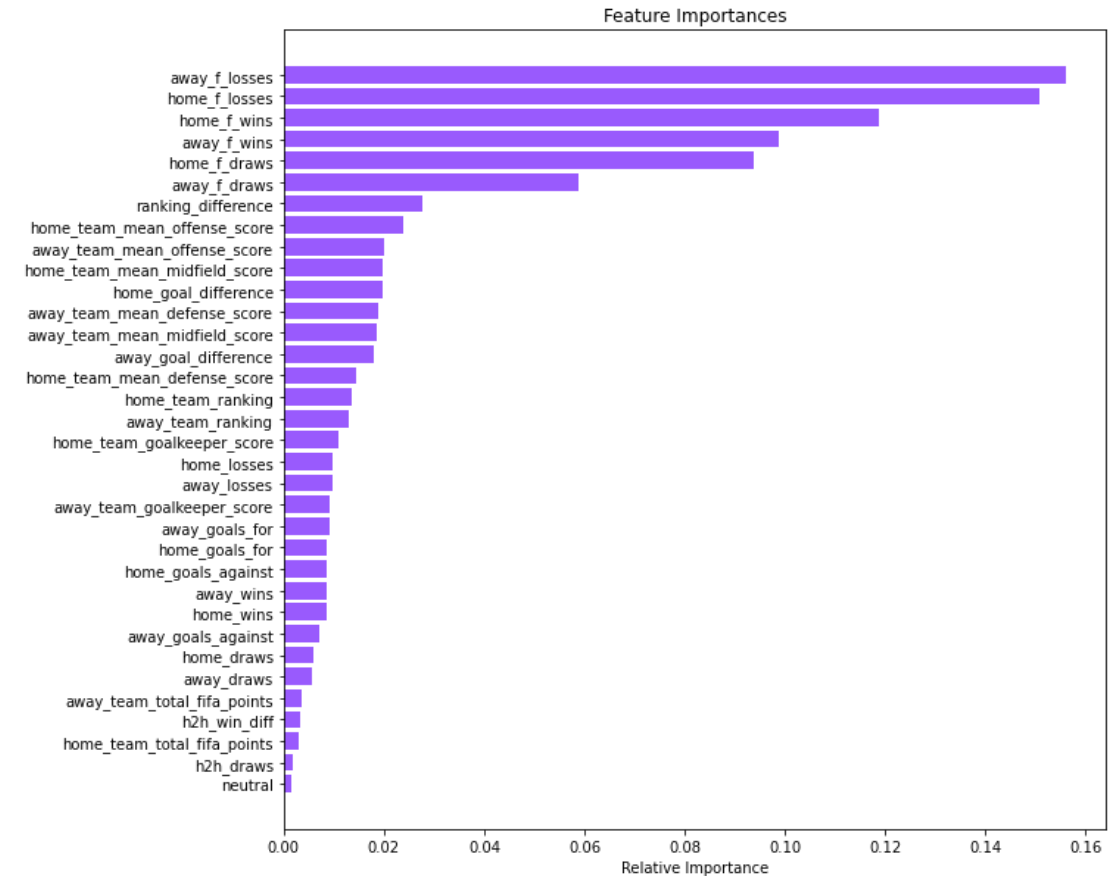
Head to Head Results when the difference is negative



Choosing the Best Model

➤ Model Evaluation:

Predictor	Accuracy
Logistic Regression	74.92%
Decision Tree	74.29%
Random Forest	75.63%
Gradient Boosting	73.65%
Neural Network	45.63%



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Group A

	team	group	points	wins	draws	losses	ranking
0	Netherlands	Group A	9	3	0	0	8.0
1	Qatar	Group A	4	1	1	1	48.0
3	Senegal	Group A	2	0	2	1	18.0
2	Ecuador	Group A	1	0	1	2	44.0

Group B

	team	group	points	wins	draws	losses	ranking
6	England	Group B	5	1	2	0	5.0
4	United States	Group B	5	1	2	0	14.0
5	Iran	Group B	3	0	3	0	22.0
7	Wales	Group B	1	0	1	2	19.0

Group C

	team	group	points	wins	draws	losses	ranking
8	Argentina	Group C	9	3	0	0	3.0
11	Mexico	Group C	6	2	0	1	12.0
10	Poland	Group C	1	0	1	2	26.0
9	Saudi Arabia	Group C	1	0	1	2	53.0

Group D

	team	group	points	wins	draws	losses	ranking
14	France	Group D	9	3	0	0	2.0
12	Australia	Group D	6	2	0	1	39.0
15	Denmark	Group D	3	1	0	2	10.0
13	Tunisia	Group D	0	0	0	3	30.0

Group E

	team	group	points	wins	draws	losses	ranking
18	Spain	Group E	9	3	0	0	6.0
17	Costa Rica	Group E	4	1	1	1	34.0
16	Japan	Group E	3	1	0	2	24.0
19	Germany	Group E	1	0	1	2	11.0

Group F

	team	group	points	wins	draws	losses	ranking
21	Morocco	Group F	5	1	2	0	23.0
20	Croatia	Group F	4	1	1	1	15.0
23	Belgium	Group F	3	0	3	0	4.0
22	Canada	Group F	2	0	2	1	43.0

Group G

	team	group	points	wins	draws	losses	ranking
24	Serbia	Group G	9	3	0	0	25.0
25	Brazil	Group G	6	2	0	1	1.0
27	Switzerland	Group G	3	1	0	2	16.0
26	Cameroon	Group G	0	0	0	3	38.0

Group H

	team	group	points	wins	draws	losses	ranking
28	Uruguay	Group H	9	3	0	0	13.0
31	South Korea	Group H	6	2	0	1	28.0
30	Ghana	Group H	3	1	0	2	60.0
29	Portugal	Group H	0	0	0	3	9.0

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Limitations & Future Work

- **Ambiguity in factors**
- **Time lag in data**
- **Lack of data**
- **Recent friendlies are not considered**
- **Other factors – Sentiment Analysis of News**