Predicting FIFA 2022

by JEM Data (Team 11)

DataSoc x ATLASSIAN

JEM DATA

Our Predictions

UEFA

Belgium
Croatia
Denmark
England
France
Germany
Italy

Netherlands
Poland
Portugal
Romania
Spain
Sweden

CONMEBOL

Argentina
Brazil
Colombia
Peru
Uruguay

AFC

Australia
Iran
Japan
Qatar
South Korea

CAF

Algeria
Egypt
Nigeria
Senegal
Tunisia

Concacaf

Canada
Mexico
Honduras
USA

Our Method

For each pair of opposing teams, A and B, we calculated an index for each team based on the following -

1. Goals Scored
2. Home Advantage
3. Star Players
4. Coach
5. COVID-19

Then, we used the index values to predict the winning team.

Step 1: Goal-scoring Rate

For each pair of opposing teams, we filtered all FIFA qualifying matches since 1974 in which both teams played.

We calculated the weighted average of the number of goals scored by a particular team against all goals scored between both.

Step 2: Home Advantage

For each pair of opposing teams, we filtered all FIFA qualifying matches since 1974 in which both teams played.

We calculated the ratio of a team's win rate as the home team, against their win rate as the away team.

Step 3: Star Players

We treated every player with a rating above 83 as a star player.

For each country, we found their youngest star player and calculated the country's win rate since this player was 18 years old - assuming this is when they started playing.
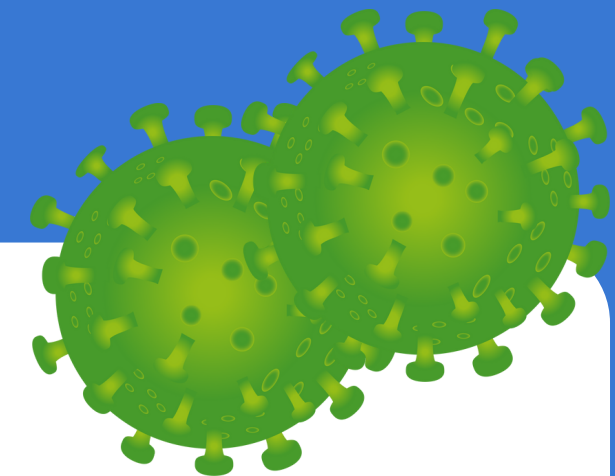
Step 4: Coaches

For each country, we found the date that their current coach **started** coaching the team.

We calculated the win rate of each country since this date.
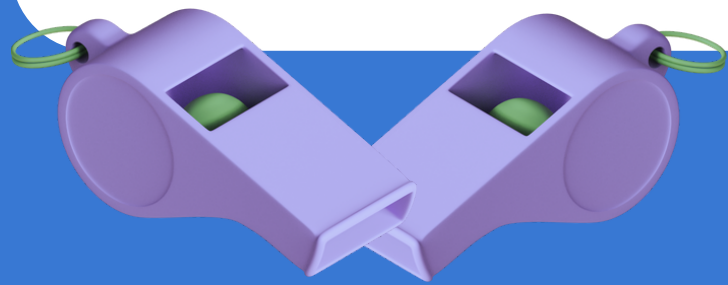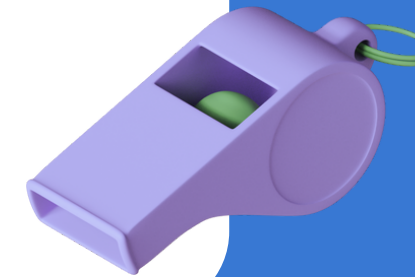
Step 5: COVID-19

For each continent, we found the date on which COVID-19 first impacted them.
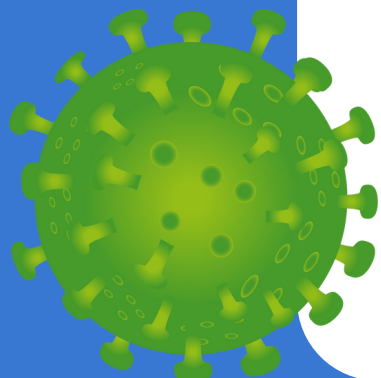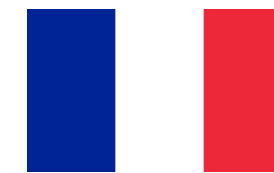
We calculated the win rate of each country since this date, based on the continent.

Calculating The Index

Finland (Home) vs France (Away)

Goals Scored

Finland: 0.19

France: 0.81

Coach

Finland: 0.36

France: 0.61

Home Advantage

Finland: 1.32

COVID-19

Finland: 0.45

France: 0.78

Star Players
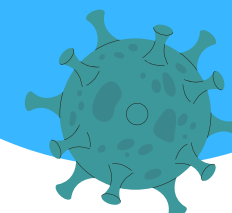
Finland: 0.56

France: 0.78

Simulating Qualifying Games

Example: UEFA Confederation qualification simulation (Round 1, Round 2, Round 3)

Group A		Point BEFORE SIMULATION	Points AFTER SIMULATION
1	Portugal	13	22
2	Serbia	11	17
4	Republic of Ireland	2	6
5	Azerbaijan	1	5
3	Luxembourg	6	0
Group B			
1	Spain	13	19
2	Sweden	9	18
3	Greece	6	12
4	Kosovo	4	7
5	Georgia	1	1
Group C			
1	Italy	14	20
2	Switzerland	8	17
3	Northern Ireland	5	8
4	Bulgaria	5	11
5	Lithuania	0	0
Group D			
1	France	12	18
2	Ukraine	5	8
3	Finland	5	8
4	Bosnia and Herzegovina	3	7
5	Kazakhstan	3	4
Group E			
1	Belgium	16	22
2	Czech Republic	7	16
3	Wales	7	13
4	Belarus	3	4
5	Estonia	1	2

	Qualified for 2022 World Cup
	Qualified for next round
	Did not qualify for

Group F		Point BEFORE SIMULATION	Points AFTER SIMULATION
1	Denmark	18	30
2	Scotland	11	20
3	Israel	10	16
4	Austria	7	16
5	Faroe Islands	4	0
6	Moldova	1	0
Group G			
1	Netherlands	13	25
2	Norway	13	20
3	Turkey	11	19
4	Montenegro	8	4
5	Latvia	5	8
6	Gibraltar	0	0
Group H			
1	Croatia	13	25
2	Russia	13	20
3	Slovakia	9	3
4	Slovenia	7	17
5	Malta	4	4
6	Cyprus	4	7
Group I			
1	England	16	28
2	Albania	12	15
3	Poland	11	23
4	Hungary	10	16
5	Andorra	3	6
6	San Marino	0	0
Group J			
1	Germany	15	25
2	Armenia	11	15
3	Romania	10	19
4	North Macedonia	9	16
5	Iceland	4	8
6	Liechtenstein	1	1

UEFA ROUND 2 SIMULATION	
Home	Away
Poland	Czech Republic
Czech Republic	Poland
Switzerland	Norway
Norway	Switzerland
Ukraine	Scotland
Scotland	Ukraine
Sweden	Russia
Russia	Sweden
Bosnia and Herzegovina	Romania
Romania	Bosnia and Herzegovina
Iceland	Serbia
Serbia	Iceland

Romania	6
Norway	4
Scotland	4
Poland	3
Czech Republic	3
Sweden	3
Russia	3
Iceland	3
Switzerland	1
Ukraine	1
Bosnia and Herzegovina	0
Serbia	0

UEFA ROUND 3 SIMULATION	
Poland	Norway
Scotland	Sweden
Romania	Iceland

Poland	3
Scotland	3
Romania	3
Norway	0
Sweden	0
Iceland	0

Prediction of 32 Qualifying Countries

UEFA	CONMEBOL	AFC	CAF	CONCACAF	OFC
Belgium	Argentina	Australia	Algeria	Canada	New Zealand
Croatia	Brazil	Iran	Egypt	Mexico	
Denmark	Peru	Japan	Nigeria	Honduras	
England	Uruguay	Qatar	Senegal	USA	
France	Colombia	South Korea	Tunisia	Honduras	
Germany		Iraq			
Italy					
Netherlands					
Poland					
Portugal					
Romania			Qualified for 2022 World Cup		
Spain			Qualified for Inter-confederation play-offs		
Sweden			Did not qualify for 2022 World Cup		

Inter-confederation play-offs	
Colombia	3
Iraq	0
Honduras	3
New Zealand	0

Compared to 2018 FIFA

If we exclude the FIFA hosts (Qatar in 2022 and Russia in 2018) then **24 of the 31 teams** that we predicted, played in the 2018 FIFA World Cup.
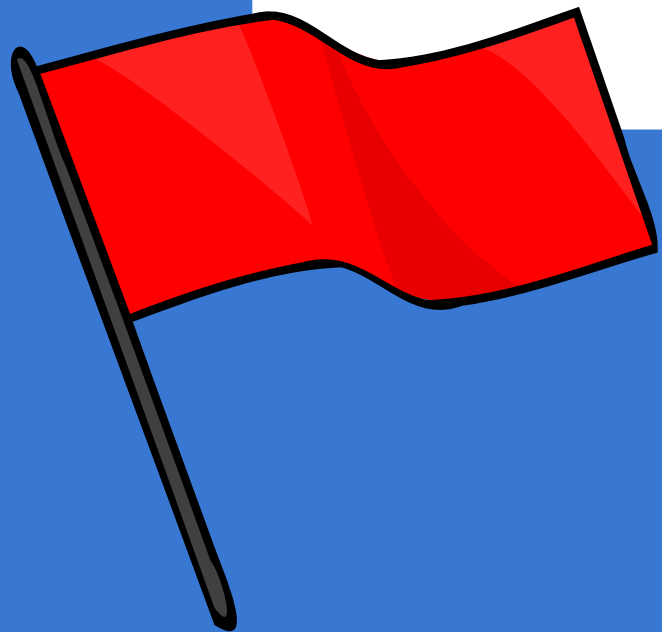
Compared to 2014 FIFA

If we exclude the FIFA hosts (Qatar in 2022 and Brazil in 2014) then **21 of the 31 teams** that we predicted, played in the 2014 FIFA World Cup.

Assumptions & Limitations

- Any matches prior to 1974 would be irrelevant because the oldest (active) soccer player played their first match in 1974.
- There is no home advantage factor if we don't know which team is the home team.
- If teams drawed, we used external data to decide the winner.

Appendix

- https://drive.google.com/drive/folders/1rsmtooS6AcaLU6PV23a12qENIhsU10PL
- https://www.kaggle.com/martj42/international-football-results-from-1872-to-2017?select=results.csv
- https://www.kaggle.com/roshansharma/fifa-data-visualization/data
- https://au.soccerway.com/

Q&A

Do you have any questions for us?

Comparing Indices

Team A
Index

Team B
Index

Index > 0.55 is a **win**.

Index in (0.45, 0.55) is a draw.

Win = 3 pts
Draw = 1 pts
Loss = 0 pts

The winning team has the most points.

If the teams tie, we use **external data sources**.