# Codebook v1.2.0

The Fjelstul World Cup Database

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## tournaments

### Tournaments

## **Description**

This dataset records all World Cup tournaments. There is one observation per tournament. It includes the host of the tournament, the winner of the tournament, the start and end dates of the tournament, and information about the format of the tournament. There are 18 variables and 30 observations.

key_id	integer The unique ID number for the observation.
tournament_id	text The unique ID number for the tournament. Has the format WC-####, where the number is the year of the tournament.
tournament_name	text The name of the tournament.
year	integer The year of the tournament.
start_date	date The start date of the tournament in the format YYYY-MM-DD .
end_date	date The end date of the tournament in the format YYYY-MM-DD .
host_country	text The unique ID number for the country that hosted the tournament. References team_id in the teams dataset.

winner text The name of the team that won the tournament.

host\_won boolean Whether one of the host countries won the tournament.

Coded 1 if one of the host countries won and 0 otherwise.

count\_teams integer The number of teams that participated in the

tournament.

group\_stage boolean Whether the match is a group stage match. Coded 1

if the match is a group stage match and 0 otherwise.

second\_group\_stage boolean Whether there was a second group stage. Coded 1 if

there was a second group stage and 0 otherwise.

final\_round boolean Whether there was a final round. Coded 1 if there

was a final round and 0 otherwise.

round\_of\_16 boolean Whether there was a round of 16 stage. Coded 1 if

there was a round of 16 stage and 0 otherwise.

quarter\_finals boolean Whether there was a quarter-finals stage. Coded 1 if

there was a quarter-finals stage and 0 otherwise.

semi\_finals boolean Whether there was a semi-finals stage. Coded 1 if

there was a semi-finals stage and 0 otherwise.

third\_place\_match boolean Whether there was a third-place match. Coded 1 if

there was a third-place match and 0 otherwise.

final boolean Whether there was a final match. Coded 1 if there

was a final match and 0 otherwise.

## confederations

#### Confederations

### **Description**

This dataset records all FIFA confederations. There is one observation per confederation. There are 5 variables and 6 observations.

#### **Variables**

## teams

#### Teams

### **Description**

This dataset records all teams who have participated in a World Cup match. There is one observation per team. It includes the 3-letter ISO code for each country, whether the country's men's and women's team have qualified for a tournament, the name of the country's national federation, the country's FIFA confederation, and links to the Wikipedia pages for their men's and women's teams, if the team has qualified for a tournament. There are 14 variables and 88 observations.

key_id	integer The unique ID number for the observation.
team_id	T-## , where the number is a counter that is assigned with the data sorted by the year of the team's first tournament and then by the team's name.
team_name	text The name of the team.
team_code	text The 3-letter code for the team.
mens_team	boolean Whether the country's men's team has qualified for a tournament.
womens_team	boolean Whether the country's women's team has qualified for a tournament.

federation\_name text The name of the team's federation.

region\_name text The name of the region that the country is located in.

confederation\_id text The unique ID number for the confederation. References

confederation\_id in the confederations dataset.

confederation\_name text The name of the confederation.

confederation\_code text The abbreviation for the confederation.

mens\_team\_wikipedia\_link text The Wikipedia link for country's men's team. Coded

not applicable if the country's men's team has not qualified for

a tournament.

not applicable if the country's women's team has not qualified

for a tournament.

federation\_wikipedia\_link text The Wikipedia link of the team's federation.

## players

## Players

## **Description**

This dataset records all players who have participated in a World Cup match, including players on the bench. There is one observation per player. It includes their name, their birth date, their sex, and a link to their Wikipedia page, if they have one. Note that it does not include their team, as a small number of players represent different countries in different tournaments. There are 13 variables and 10401 observations.

key_id	integer The unique ID number for the observation.
player_id	text The unique ID number for the player. Has the format P-#### , where the number is a randomly drawn, uniquely identifying number.
family_name	text The family name of the player.
given_name	text The given name of the player.
birth_date	date The birth date of the player in the format YYYY-MM-DD.
female	boolean Whether the player is female. Coded 1 if the player is female and 0 if the player is male.

goal\_keeper boolean Whether the player was a goal keeper. Coded 1 if the

player was a goal keeper and 0 otherwise.

defender boolean Whether the player was a defender. Coded 1 if the

player was a defender and 0 otherwise.

midfielder boolean Whether the player was a midfielder. Coded 1 if the

player was a midfielder and 0 otherwise.

forward boolean Whether the player was a forward. Coded 1 if the

player was a forward and 0 otherwise.

count\_tournaments integer The number of tournaments that the player

participated in.

list\_tournaments text A list of tournaments that the player participated in,

separated by a comma.

player\_wikipedia\_link text The name of the team of the player.

## managers

## Managers

## **Description**

This dataset records all managers who have participated in a World Cup match. There is one observation per manager. It includes their name, their sex, their home country, and a link to their Wikipedia page, if they have one. There are 7 variables and 475 observations.

key_id	integer The unique ID number for the observation.
manager_id	text The unique ID number for the manager. Has the format M-####, where the number is a counter that is assigned with the data sorted by the year of the manager's first appearance, then by the manager's family name, and then by the manager's given name.
family_name	text The family name of the manager.
given_name	text The given name of the manager.
female	boolean Whether the manager is female. Coded 1 if the manager is female and 0 if the manager is male.
country_name	text The name of the manager's home country.
manager_wikipedia_link	text The Wikipedia link for the manager.

## referees

### Referees

## **Description**

This dataset records all referees who have participated in a World Cup match. There is one observation per referee. It includes their name, their sex, their home country, their confederation, and a link to their Wikipedia page, if they have one. There are 10 variables and 493 observations.

key_id	integer The unique ID number for the observation.
referee_id	R-####, where the number is a counter that is assigned with the data sorted by the year of the referee's first appearance, then by the referee's family name, and then by the referee's given name.
family_name	text The family name of the referee.
given_name	text The given name of the referee.
female	boolean Whether the referee is female. Coded 1 if the referee is female and 0 if the referee is male.
country_name	text The name of the referee's home country.
confederation_id	text The unique ID number for the confederation. References confederation_id in the confederations dataset.

confederation\_name text The name of the confederation.

confederation\_code text The abbreviation for the confederation.

referee\_wikipedia\_link text The Wikipedia link for the referee.

## stadiums

### Stadiums

## **Description**

This dataset records all stadiums that have hosted a World Cup match. There is one observation per stadium. It includes the country and city of the stadium, the approximate capacity of the stadium, and the link to the Wikipedia pages for the city and the stadium. There are 8 variables and 240 observations.

key_id	integer The unique ID number for the observation.
stadium_id	text The unique ID number for the stadium. Has the format S-###, where the number is a count that is assigned with the data sorted by country, then by city, then by the name of the stadium.
stadium_name	text The name of the stadium.
city_name	text The city in which the match was played.
country_name	text The name of the country in which the stadium is located.
stadium_capacity	integer The approximate capacity of the stadium.
stadium_wikipedia_link	text The Wikipedia link for the stadium.

city\_wikipedia\_link

text The Wikipedia link for the city in which the match was played.

## matches

#### Matches

### **Description**

This dataset records all World Cup matches. There is one observation per match per tournament. It includes the home team, the away team, the date of the match, the country, city, and stadium that the match was played in, the final score, the score margin for each team, whether the match went to extra time, whether there was a penalty shootout, the number of penalties scored in the shootout (if applicable), the result of the match (home team win, away team win, draw, replayed), and the winner (if applicable). There are 38 variables and 1248 observations.

key_id	integer The unique ID number for the observation.
tournament_id	text The unique ID number for the tournament. References tournament_id in the tournaments dataset.
tournament_name	text The name of the tournament.
match_id	text The unique ID number for the match. Has the format M-###-##, where the first number is the year of the tournament and the second number is a within-tournament counter that is assigned with the data sorted by the date of the match, then by the time of the match, then by the name of the group, and then by name of the home team.

match\_name text The name of the match.

stage\_name enum The stage of the tournament in which the match occurred.

> The possible values are: first round, second round, group stage, round of sixteen, quarter-finals, semi-finals, third place match, final. Note that not all

values are applicable to all tournaments.

text The name of the group. group\_name

group\_stage boolean Whether the match is a group stage match. Coded 1

if the match is a group stage match and 0 otherwise.

boolean Whether the match is a knockout stage match. Coded knockout\_stage

1 if the match is a knockout stage match and 0 otherwise.

replayed boolean Whether the match was replayed. Coded 1 if the

match was replayed and 0 otherwise.

replay boolean Whether the match was a replay. Coded 1 if the

match was a replay and 0 otherwise.

match\_date date The date of the match in the format YYYY-MM-DD.

match\_time integer The time of the match in the format HH:MM.

stadium\_id text The unique ID number for the stadium. References

stadium\_id in the stadiums dataset.

text The name of the stadium. stadium\_name

text The city in which the match was played. city\_name

country\_name text The name of the country in which the match was played.

home\_team\_id text The unique ID number for the home team. References

team\_id in the teams dataset.

home\_team\_name text The name of the home team. See the teams dataset.

text The 3-letter code for the home team. home\_team\_code

away\_team\_id text The unique ID number for the away team. References

team\_id in the teams dataset.

away\_team\_name text The name of the away team. See the teams dataset.

away\_team\_code text The 3-letter code for the away team.

score text The score of the match in the format #-#, where the first

number is the score of the home team and the second number is

the score of the away team.

home\_team\_score integer The score of the home team.

away\_team\_score integer The score of the away team.

home\_team\_score\_margin integer The score margin for the home team.

away\_team\_score\_margin integer The score margin for the away team.

extra\_time boolean Whether the match went to extra time. Coded 1 if the

match went to extra time and 0 otherwise.

penalty\_shootout boolean Whether the match ended in a penalty shootout. Coded

1 if the match ended in a penalty shootout and 0 otherwise.

 ${\sf score\_penalties}$  text The score of the penalty shootout in the format #-# .

Coded 0-0 if there was not a penalty shootout.

home\_team\_score\_penalties integer The score of the home team in the penalty shootout.

Coded NA if there was not a penalty shootout.

away\_team\_score\_penalties integer The score of the away team in the penalty shootout.

Coded NA if there was not a penalty shootout.

result enum The result of the match. The possible values are:

home team win , away team win , draw , replayed .

home\_team\_win boolean Whether the home team won the match. Coded 1 if

the home team won the match and 0 otherwise.

away\_team\_win boolean Whether the home team won the match. Coded 1 if

the home team won the match and 0 otherwise.

draw

boolean Whether the match ended in a draw. Coded 1 of the match ended in a draw and 0 otherwise.

## awards

### Awards

## **Description**

This dataset records all individual awards that are handed out to players. There is one observation per award. It includes the name of the award, the year the award was first introduced, and a description of the award. There are 5 variables and 8 observations.

key_id	integer The unique ID number for the observation.
award_id	text The unique ID number for the award. Has the format A-# , where the number is a counter.
award_name	enum The name of the award. The possible values are: Golden Ball , Silver Ball , Bronze Ball , Golden Boot , Silver Boot , Bronze Boot , Golden Glove , Best Young Player .
award_description	text A description of the award.
year_introduced	integer The year the award was first introduced.

## qualified\_teams

### Qualified teams

## **Description**

This dataset records all qualified teams. There is one observation per team per tournament. It includes the tournament, the team, and the performance of each team (the furthest stage reached). There are 8 variables and 625 observations.

key_id	integer The unique ID number for the observation.
tournament_id	text The unique ID number for the tournament. References tournament_id in the tournaments dataset.
tournament_name	text The name of the tournament.
team_id	text The unique ID number for the team. References team_id in the teams dataset.
team_name	text The name of the team.
team_code	text The 3-letter code for the team.
count_matches	integer The number of matches that the team played in the tournament.
performance	text The furthest stage of the tournament reached by the team.

## squads

## Squads

## **Description**

This dataset records the composition of each squad. There is one observation per player per team per tournament. It includes the position of each player, the shirt number of each player (from 1954), the current club of each player, and a link to the Wikipedia page for the club, if it has one. There are 14 variables and 13843 observations.

key_id	integer The unique ID number for the observation.
tournament_id	text   The unique ID number for the tournament. References tournament_id in the tournaments dataset.
tournament_name	text The name of the tournament.
team_id	text   The unique ID number for the team. References   team_id in the   teams   dataset.
team_name	text The name of the team of the player.
team_code	text The 3-letter code for the team.
player_id	text The unique ID number for the player. References player_id in the players dataset.

family\_name text The family name of the player.

given\_name text The given name of the player.

shirt\_number integer The shirt number of the player.

position\_name enum The position of the player. The possible values are:

goal keeper, defender, midfielder, forward.

position\_code enum The code for the position of the player. The possible values

are: GK , DF , MF , FW .

## manager\_appointments

### Manager appointments

### **Description**

This dataset records all manager appointments. There is one observation per manager per team per tournament. There are some teams that have co-managers. There are 10 variables and 637 observations.

#### **Variables**

key\_id integer The unique ID number for the observation. tournament\_id text The unique ID number for the tournament. References tournament\_id in the tournaments dataset. tournament\_name text The name of the tournament. team\_id text The unique ID number for the team. References team\_id in the teams dataset. team\_name text The name of the team of the manager. team\_code text The 3-letter code for the team. text The unique ID number for the manager. References manager\_id manager\_id in the managers dataset. text The family name of the manager. family\_name

given\_name text The given name of the manager.

country\_name text The name of the manager's home country.

## referee\_appointments

## Referee appointments

### **Description**

This dataset records all referee appointments. There is one observation per referee per tournament. This dataset only includes the main referee, not assistant referees, fourth officials, or video assistant referees. There are 10 variables and 668 observations.

key_id	integer The unique ID number for the observation.
tournament_id	text The unique ID number for the tournament. References tournament_id in the tournaments dataset.
tournament_name	text The name of the tournament.
referee_id	text The unique ID number for the referee. References referee_id in the referees dataset.
family_name	text The family name of the referee.
given_name	text The given name fo the referee.
country_name	text The name of the referee's home country.
confederation_id	text The unique ID number for the confederation. References confederation_id in the confederations dataset.

confederation\_name text The name of the confederation.

confederation\_code text The abbreviation for the confederation.

## team\_appearances

### Team appearances

### **Description**

This dataset records all team appearances. There is one observation per team per match per tournament. It includes whether the team is the home team or the away team, the number of goals for and against, the goal difference, whether there was a penalty shootout, penalties for and against (if applicable), and whether the team wins, loses, or draws. There are 37 variables and 2496 observations.

key_id	integer The unique ID number for the observation.
tournament_id	text The unique ID number for the tournament. References tournament_id in the tournaments dataset.
tournament_name	text The name of the tournament.
match_id	text The unique ID number for the match. References match_id in the matches dataset.
match_name	text The name of the match.
stage_name	enum The stage of the tournament in which the match occurred.  The possible values are: first round, second round,
	group stage, round of sixteen, quarter-finals,

semi-finals, third place match, final. Note that not all values are applicable to all tournaments.

group\_name text The name of the group.

group\_stage boolean Whether the match is a group stage match. Coded 1

if the match is a group stage match and 0 otherwise.

knockout\_stage boolean Whether the match is a knockout stage match. Coded

1 if the match is a knockout stage match and 0 otherwise.

replayed boolean Whether the match was replayed. Coded 1 if the

match was replayed and 0 otherwise.

replay boolean Whether the match was a replay. Coded 1 if the

match was a replay and 0 otherwise.

match\_date date The date of the match in the format YYYY-MM-DD .

match\_time integer The time of the match in the format HH:MM.

stadium\_id text The unique ID number for the stadium. References

stadium\_id in the stadiums dataset.

stadium\_name text The name of the stadium.

city\_name text The city in which the match was played.

country\_name text The name of the country in which the match was played.

team\_id text The unique ID number for the team. References team\_id

in the teams dataset.

team\_name text The name of the team.

team\_code text The 3-letter code for the team.

opponent\_id text The unique ID number for the team's opponent.

References team\_id in the teams dataset.

opponent\_name text The name of the team's opponent.

opponent\_code text The 3-letter code for the team's opponent. home\_team boolean Whether the team was the home team. Coded 1 if the team was the home team and 0 otherwise. away\_team boolean Whether the team was the away team. Coded 1 if the team was the away team and 0 otherwise. integer The number of goals scored by the team. goals\_for integer The number of goals scored against the team. goals\_against integer The team's goal differential. goal\_differential boolean Whether the match went to extra time. Coded 1 if the extra\_time match went to extra time and 0 otherwise. penalty\_shootout boolean Whether the match ended in a penalty shootout. Coded 1 if the match ended in a penalty shootout and 0 otherwise. integer The number of penalties scored by the opponent, if the penalties\_for match ended in a penalty shootout. Coded 0 if there was not a shootout. integer The number of penalties scored by the team, if the penalties\_against match ended in a penalty shootout. Coded 0 if there was not a shootout. result enum The result of the match. The possible values are: home team win , away team win , draw , replayed . boolean Whether the team won the match. Coded 1 if the win team won the match and 0 otherwise. lose boolean Whether the team lost the match. Coded 1 if the team lost the match and 0 otherwise. boolean Whether the match ended in a draw. Coded 1 of the draw match ended in a draw and 0 otherwise.

## player\_appearances

### Player appearances

### **Description**

This dataset records all player appearances since 1970. There is one observation per player per team per match per tournament. It includes players who play in the match, including players who are in the starting eleven and players who come in as substitutes. FIFA match reports do not include information about substitutions before 1970. There are 21 variables and 27432 observations.

key_id	integer The unique ID number for the observation.
tournament_id	text The unique ID number for the tournament. References tournament_id in the tournaments dataset.
tournament_name	text The name of the tournament.
match_id	text The unique ID number for the match. References match_id in the matches dataset.
match_name	text The name of the match.
match_date	date The date of the match in the format YYYY-MM-DD .
stage_name	enum The stage of the tournament in which the match occurred.
	The possible values are: first round, second round,
	group stage, round of sixteen, quarter-finals,

semi-finals, third place match, final. Note that not all values are applicable to all tournaments.

group\_name text The name of the group.

team\_id text The unique ID number for the team of the player.

References team\_id in the teams dataset.

team\_name text The name of the team of the player.

team\_code text The 3-letter code for the team of the player.

home\_team boolean Whether the team was the home team. Coded 1 if

the team was the home team and 0 otherwise.

away\_team boolean Whether the team was the away team. Coded 1 if the

team was the away team and 0 otherwise.

player\_id text The unique ID number for the player. References

player\_id in the players dataset.

family\_name text The family name of the player.

given\_name text The given name of the player.

shirt\_number integer The shirt number of the player.

position\_name text The name of the position of the player.

position\_code text A 2-letter or 3-letter code that indicates the position of the

player.

starter boolean Whether the player started the match. Coded 1 if the

player started the match and 0 otherwise.

substitute boolean Whether the player was a substitute. Coded 1 if the

player was a substitute and 0 otherwise.

## manager\_appearances

### Manager appearances

### **Description**

This dataset records all manager appearances. There is one observation per manager per team per match per tournament. There are some teams that have co-managers. There are 17 variables and 2538 observations.

key_id	integer The unique ID number for the observation.
tournament_id	text The unique ID number for the tournament. References tournament_id in the tournaments dataset.
tournament_name	text The name of the tournament.
match_id	text The unique ID number for the match. References match_id in the matches dataset.
match_name	text The name of the match.
match_date	date The date of the match in the format YYYY-MM-DD.
stage_name	enum The stage of the tournament in which the match occurred.
	The possible values are: first round, second round,
	group stage, round of sixteen, quarter-finals,

semi-finals, third place match, final. Note that not all values are applicable to all tournaments.

group\_name text The name of the group.

team\_id text The unique ID number for the team of the manager.

References team\_id in the teams dataset.

team\_name text The name of the team of the manager.

team\_code text The 3-letter code for the team of the manager.

home\_team boolean Whether the team was the home team. Coded 1 if

the team was the home team and 0 otherwise.

away\_team boolean Whether the team was the away team. Coded 1 if the

team was the away team and 0 otherwise.

manager\_id text The unique ID number for the manager. References

manager\_id in the managers dataset.

family\_name text The family name of the manager.

given\_name text The given name of the manager.

country\_name text The name of the manager's home country.

## referee\_appearances

## Referee appearances

## **Description**

This dataset records all referee appearances. There is one observation per referee per match per tournament. There are 15 variables and 1248 observations.

key_id	integer The unique ID number for the observation.
tournament_id	text The unique ID number for the tournament. References tournament_id in the tournaments dataset.
tournament_name	text The name of the tournament.
match_id	text The unique ID number for the match. References match_id in the matches dataset.
match_name	text The name of the match.
match_date	date The date of the match in the format YYYY-MM-DD.
stage_name	enum The stage of the tournament in which the match occurred.  The possible values are: first round, second round,
	group stage, round of sixteen, quarter-finals,
	semi-finals , third place match , final . Note that not all
	values are applicable to all tournaments.

group\_name text The name of the group.

referee\_id text The unique ID number for the referee. References

referee\_id in the referees dataset.

family\_name text The family name of the referee.

given\_name text The given name of the referee.

country\_name text The name of the referee's home country.

confederation\_id text The unique ID number for the confederation. References

confederation\_id in the confederations dataset.

confederation\_name text The name of the confederation.

confederation\_code text The abbreviation for the confederation.

# goals

#### Goals

### **Description**

This dataset records all goals. There is one observation per goal. It indicates the team that scored the goal, player who scored the goal, the team of the player who scored the goal (to account for own goals), minute of the goal, and whether the goal was scored in the run of play by the opposition, was an own goal, or was a penalty. This dataset does not include converted penalties in a penalty shootout. There are 26 variables and 3637 observations.

key_id	integer The unique ID number for the observation.
goal_id	text The unique ID number for the goal. Has the format G-####, where the number is a counter that is assigned with the data sorted by the match ID, then the minute of the goal.
tournament_id	text The unique ID number for the tournament. References tournament_id in the tournaments dataset.
tournament_name	text The name of the tournament.
match_id	text The unique ID number for the match in which the goal occurred. References match_id in the matches dataset.
match_name	text The name of the match in which the goal occurred.

match_date	date The date of the match in the format YYYY-MM-DD.
stage_name	enum The stage of the tournament in which the match occurred. The possible values are: first round, second round, group stage, round of sixteen, quarter-finals, semi-finals, third place match, final. Note that not all values are applicable to all tournaments.
group_name	text The name of the group.
team_id	text The unique ID number for the team that scored the goal.  References team_id in the teams dataset. For own goals, this is the team that is awarded the goal, not the team of the player who scored the own goal.
team_name	text The name of the team of the player who scored the goal.
team_code	text The 3-letter code for the team of the player who scored the goal.
home_team	boolean Whether the team was the home team. Coded 1 if the team was the home team and 0 otherwise.
away_team	boolean Whether the team was the away team. Coded 1 if the team was the away team and 0 otherwise.
player_id	text The unique ID number for the player who scored the goal.  References player_id in the players dataset.
family_name	text The family name of the player who scored the goal.
given_name	text The given name of the player who scored the goal.
shirt_number	integer The shirt number of the player who scored the goal.
player_team_id	text The unique ID number for the team of the player who scored the goal. References team_id in the teams dataset. For own goals, this is the team of the player who scored the own goal, not the team that is awarded the goal.
player_team_name	text The name of the team of the player who scored the goal.

text The 3-letter code for the team of the player who scored the player\_team\_code goal. minute\_label text The minute of the match in which the goal occurred in the format #' or #'+#'. minute\_regulation integer The minute of regulation time in which the substitution occurred. integer The minute of stoppage time in which the goal minute\_stoppage occurred. Coded 0 if the substitution did not occur during stoppage time. match\_period enum The period of the match in which the goal occurred. The possible values are: first half, first half, stoppage time, second half, second half, stoppage time, extra time, first half, extra time, first half, stoppage time, extra time, second half, extra time, second half, stoppage time, after extra time. boolean Whether the goal was an own goal. Coded 1 if the own\_goal goal was an own goal and 0 otherwise. penalty boolean Whether the goal was a penalty that occurred during the game, as opposed to during a penalty shootout. Coded 1 if the goal was a penalty that occurred during the game and 0 otherwise.

# penalty\_kicks

# Penalty kicks

### **Description**

This dataset records all penalty kicks taken during penalty shootouts. There is one observation per penalty kick. This dataset does not include attempted penalty kicks during matches. It indicates minute of each kick, the player who took the kick, and whether the penalty was converted. There are 19 variables and 396 observations.

key_id	integer The unique ID number for the observation.
penalty_kick_id	text The unique ID number for the penalty kick. Has the format PK-####, where the number is a counter that is assigned with the data sorted by the match ID, then the minute of the penalty kick.
tournament_id	text The unique ID number for the tournament. References tournament_id in the tournaments dataset.
tournament_name	text The name of the tournament.
match_id	text The unique ID number for the match in which the penalty kick occurred. References match_id in the matches dataset.
match_name	text The name of match in which the penalty kick occurred.
match_date	date The date of the match in the format YYYY-MM-DD .

stage_name	enum The stage of the tournament in which the match occurred. The possible values are: first round, second round, group stage, round of sixteen, quarter-finals, semi-finals, third place match, final. Note that not all values are applicable to all tournaments.
group_name	text The name of the group.
team_id	text The unique ID number for the team of the player who took the penalty kick. References team_id in the teams dataset.
team_name	text The name of the team of the player who took the penalty kick.
team_code	text The 3-letter code for the team of the player who took the penalty kick.
home_team	boolean Whether the team was the home team. Coded 1 if the team was the home team and 0 otherwise.
away_team	boolean Whether the team was the away team. Coded 1 if the team was the away team and 0 otherwise.
player_id	text The unique ID number for the player who took the penalty kick. References player_id in the players dataset.
family_name	text The family name of the player who took the penalty kick.
given_name	text The given name of the player who took the penalty kick.
shirt_number	integer The shirt number of the player who took the penalty kick.
converted	boolean Whether the penalty kick was converted. Coded 1 if the penalty kick was converted and 0 otherwise.

# bookings

# Bookings

### **Description**

This dataset records all bookings, including yellow cards and red cards, since 1970. The modern system of yellow and red cards was introduced in 1970. There is one observation per booking. It indicates the minute of each booking, the player who was booked, whether the booking was a yellow card or a red card, whether the card was a second yellow card, and whether the player was sent off as a result of the booking. There are 26 variables and 3178 observations.

key_id	integer The unique ID number for the observation.
booking_id	text The unique ID number for the booking. Has the format B-####, where the number is a counter that is assigned with the data sorted by the match ID, then the minute of the booking.
tournament_id	text The unique ID number for the tournament. References tournament_id in the tournaments dataset.
tournament_name	text The name of the tournament.
match_id	text The unique ID number for the match in which the booking occurred. References match_id in the matches dataset.
match_name	text The name of the match in which the booking occurred.

match\_date date The date of the match in the format YYYY-MM-DD. stage\_name enum The stage of the tournament in which the match occurred. The possible values are: first round, second round, group stage, round of sixteen, quarter-finals, semi-finals, third place match, final. Note that not all values are applicable to all tournaments. text The name of the group. group\_name team\_id text The unique ID number for the team of the player who was booked. References team\_id in the teams dataset. text The name of the team of the player who was booked. team\_name team\_code text The 3-letter code for the team of the player who was booked. home\_team boolean Whether the team was the home team. Coded 1 if the team was the home team and ootherwise. boolean Whether the team was the away team. Coded 1 if the away\_team team was the away team and 0 otherwise. player\_id text The unique ID number for the player who was booked. References player\_id in the players dataset. text The family name of the player who was booked. family\_name text The given name of the player who was booked. given\_name shirt\_number integer The shirt number of the player who was booked. minute\_label text The minute of the match in which the booking occurred in the format #' or #'+#'. minute\_regulation integer The minute of regulation time in which the booking occurred.

minute\_stoppage integer The minute of stoppage time in which the booking

occurred. Coded 0 if the substitution did not occur during

stoppage time.

match\_period enum The period of the match in which the booking occurred.

The possible values are: first half,

first half, stoppage time, second half,

second half, stoppage time, extra time, first half,

extra time, first half, stoppage time,

extra time, second half,

extra time, second half, stoppage time,

after extra time.

yellow\_card boolean Whether the booking was a yellow card. Coded 1 if

the card is a yellow card and 0 otherwise.

red\_card boolean Whether the booking was a red card. Coded 1 if the

card is a red card and 0 otherwise.

second\_yellow\_card boolean Whether the booking was a second yellow card. Coded

1 if the booking is a second yellow and 0 otherwise.

sending\_off boolean Whether the booking resulted in the player being sent

off. Coded 1 if the player was sent off and 0 otherwise.

# substitutions

### Substitutions

# **Description**

This dataset records all substitutions since 1970. FIFA match reports do not include information about substitutions before 1970. There is one observation per player per substitution. It indicates the minute of the substitution, the player who went off, and the player who came on. There are 24 variables and 10222 observations.

key_id	integer The unique ID number for the observation.
substitution_id	text The unique ID number for the substitution. Has the format S-####, where the number is a counter that is assigned with the data sorted by the match ID, then the minute of the substitution, then whether the player is going off.
tournament_id	text The unique ID number for the tournament. References tournament_id in the tournaments dataset.
tournament_name	text The name of the tournament.
match_id	text The unique ID number for the match in which the substitution occurred. References match_id in the matches dataset.
match_name	text The name of the match in which the substitution occurred.

match\_date date The date of the match in the format YYYY-MM-DD. stage\_name enum The stage of the tournament in which the match occurred. The possible values are: first round, second round, group stage, round of sixteen, quarter-finals, semi-finals, third place match, final. Note that not all values are applicable to all tournaments. text The name of the group. group\_name team\_id text The unique ID number for the team of the player who was substituted. References team\_id in the teams dataset. text The name of the team of the player who was substituted. team\_name team\_code text The 3-letter code for the team of the player who was substituted. home\_team boolean Whether the team was the home team. Coded 1 if the team was the home team and ootherwise. boolean Whether the team was the away team. Coded 1 if the away\_team team was the away team and 0 otherwise. player\_id text The unique ID number for the player who was substituted. References player\_id in the players dataset. text The family name of the player who was substituted. family\_name text The given name of the player who was substituted. given\_name shirt\_number integer The shirt number of the player who was substituted. minute\_label text The minute of the match in which the substitution occurred in the format #' or #'+#'. minute\_regulation integer The minute of regulation time in which the substitution occurred.

integer The minute of stoppage time in which the substitution minute\_stoppage occurred. Coded 0 if the substitution did not occur during stoppage time. match\_period enum The period of the match in which the substitution occurred. The possible values are: first half, first half, stoppage time, second half, second half, stoppage time, extra time, first half, extra time, first half, stoppage time, extra time, second half, extra time, second half, stoppage time, after extra time. going\_off boolean Whether the player was going off the field. Coded 1 if the player was going off and 0 otherwise. boolean Whether the player was coming on the field. Coded 1 coming\_on if the player was coming on and 0 otherwise.

# host\_countries

Host countries

## **Description**

This dataset records all host countries. There is one observation per host country per tournament. A tournament can have multiple host countries. It indicates the performance of each host country (the furthest stage reached). There are 7 variables and 31 observations.

key_id	integer The unique ID number for the observation.
tournament_id	text The unique ID number for the tournament. References tournament_id in the tournaments dataset.
tournament_name	text The name of the tournament.
team_id	text The unique ID number for the team. References team_id in the teams dataset.
team_name	text The name of the team.
team_code	text The 3-letter code for the team.
performance	text The furthest stage of the tournament reached by the host country's team.

# tournament\_stages

### Tournament stages

### **Description**

This dataset records the stages in each tournament. There is one observation per stage per tournament. It indicates the name of the stage, whether the stage was a group stage or a knockout stage, if the stage was a group stage, whether there were unbalanced groups, the start and end dates of the stage, and how many matches there were in the stage, how many teams participated in each stage, how many games were scheduled, how many replays there were, how many walkovers there were, and how many playoffs there were. There are 16 observations and 155 observations.

key_id	integer The unique ID number for the observation.
tournament_id	text The unique ID number for the tournament. References tournament_id in the tournaments dataset.
tournament_name	text The name of the tournament.
stage_number	integer The number of the stage.
stage_name	enum The stage of the tournament in which the match occurred.  The possible values are: first round, second round, group stage, round of sixteen, quarter-finals, semi-finals, third place match, final. Note that not all
	values are applicable to all tournaments.

group_stage	boolean Whether the match is a group stage match. Coded 1 if the match is a group stage match and 0 otherwise.
knockout_stage	boolean Whether there was a knockout stage. Coded 1 if there was a knockout stage and 0 otherwise.
unbalanced_groups	boolean Whether there were unbalanced groups. Coded 1 if there were unbalanced groups and 0 otherwise.
start_date	date The start date of the stage in the format YYYY-MM-DD.
end_date	date The end date of the stage in the format YYYY-MM-DD .
count_matches	integer The number of matches in the stage.
count_teams	integer The number of teams that participated in the stage.
count_scheduled	integer The number of games that were scheduled in the stage.
count_replays	integer The number of replays in the stage.
count_playoffs	integer The number of playoff games in the stage.
count_walkovers	integer The number of walkovers in the stage.

# groups

## Groups

# **Description**

This dataset records the names of the groups for each group stage. There is one observation per group per group stage per tournament. Some tournaments have multiple group stages. It indicates the stage, the name of the group, and how many teams were in the group. There are 7 variables and 117 observations.

key_id	integer The unique ID number for the observation.
tournament_id	text The unique ID number for the tournament. References tournament_id in the tournaments dataset.
tournament_name	text The name of the tournament.
stage_number	integer The number of the stage.
stage_name	enum The stage of the tournament in which the match occurred. The possible values are: first round, second round, group stage, round of sixteen, quarter-finals, semi-finals, third place match, final. Note that not all values are applicable to all tournaments.
group_name	text The name of the group.

count\_teams in the group.

# group\_standings

### Group standings

### **Description**

This dataset records group standings for each group stage. There is one observation per team per group per group stage per tournament. Some tournaments have multiple group stages. It includes the final position of the team (factoring in tie breakers), the name of the team, the number of matches played, the number of wins, the number of losses, the number of draws, the number of goals for, the number of goals against, the goal difference, the total number of points earned, and whether the team advanced out of the group. There are 19 variables and 626 observations.

key_id	integer The unique ID number for the observation.
tournament_id	text The unique ID number for the tournament. References tournament_id in the tournaments dataset.
tournament_name	text The name of the tournament.
stage_number	integer The number of the stage.
stage_name	enum The stage of the tournament in which the match occurred.
	The possible values are: first round, second round,
	group stage, round of sixteen, quarter-finals,
	semi-finals , third place match , final . Note that not all
	values are applicable to all tournaments.

text The name of the group. group\_name position integer The team's final position in the group. team\_id text The unique ID number for the team. References team\_id in the teams dataset. text The name of the team. team\_name team\_code text The 3-letter code for the team. integer The number of matches that the team played in the played group. wins integer The number of matches that the team won in the group stage. integer The number of matches that the team drew in the draws group stage. losses integer The number of matches that the team lost in the group stage. integer The number of goals scored by the team in the group goals\_for stage. integer The number of goals scored against the team in the goals\_against group stage. integer The team's goal difference in the group stage. goal\_difference points integer The number of points that the team earned in the group. advanced boolean Whether the team advanced out of the group. Coded 1 if the team advanced and 0 otherwise.

# tournament\_standings

## Tournament standings

### **Description**

This dataset records the final standings for each tournament. There is one observation per position per tournament. The top four teams are ranked. In most tournaments, these are the winner of the final, the loser of the final, the winner of the third-place match, and the loser of the third-place match. There are 7 variables and 120 observations.

key_id	integer The unique ID number for the observation.
tournament_id	text The unique ID number for the tournament. References tournament_id in the tournaments dataset.
tournament_name	text The name of the tournament.
position	integer The place of the team in the final standings.
team_id	text The unique ID number for the team. References team_id in the teams dataset.
team_name	text The name of the team.
team_code	text The 3-letter code for the team.

# award\_winners

#### Award winners

### **Description**

This dataset records all award winners. There is one observation per player per award per tournament. Some awards are shared by multiple players. It indicates the name of the award, the player(s) who won the award, the team of the player(s) who won the award, and whether the award was shared. There are 12 variables and 200 observations.

key_id	integer The unique ID number for the observation.
tournament_id	text   The unique ID number for the tournament. References tournament_id in the tournaments dataset.
tournament_name	text The name of the tournament.
award_id	text The unique ID number for the award. References award_id in the awards dataset.
award_name	enum The name of the award. The possible values are: Golden Ball , Silver Ball , Bronze Ball , Golden Boot , Silver Boot , Bronze Boot , Golden Glove , Best Young Player .
shared	boolean Whether the award was shared between multiple players. Coded 1 if the award was shared and 0 otherwise.

rest The unique ID number for the player who won the award.

References player\_id in the players dataset.

family\_name

text The family name of the player who won the award.

given\_name

text The given name of the player who won the award.

team\_id

text The unique ID number for the team. References team\_id
in the teams dataset.

team\_name

text The name of the team of the player who won the award.

team\_code

text The 3-letter code for the team of the player who won the award.