

# Codebook v 1.0

The Fjelstul World Cup Database

Joshua C. Fjelstul, Ph.D.

## Datasets

---

tournaments . . . . .	3
confederations . . . . .	5
teams . . . . .	6
players . . . . .	8
managers . . . . .	10
referees . . . . .	11
stadiums . . . . .	13
matches . . . . .	15
awards . . . . .	19
qualified_teams . . . . .	20
squads . . . . .	21
manager_appointments . . . . .	23
referee_appointments . . . . .	25
team_appearances . . . . .	27
player_appearances . . . . .	30
manager_appearances . . . . .	32
referee_appearances . . . . .	34
goals . . . . .	36
penalty_kicks . . . . .	39
bookings . . . . .	41
substitutions . . . . .	44

host_countries . . . . .	47
tournament_stages . . . . .	48
groups . . . . .	50
group_standings . . . . .	52
tournament_standings . . . . .	54
award_winners . . . . .	55

# 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 21 observations.

### Variables

---

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 <code>1</code> if one of the host countries won and <code>0</code> 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 <code>1</code> if the match is a group stage match and <code>0</code> otherwise.
second_group_stage	boolean	Whether there was a second group stage. Coded <code>1</code> if there was a second group stage and <code>0</code> otherwise.
final_round	boolean	Whether there was a final round. Coded <code>1</code> if there was a final round and <code>0</code> otherwise.
round_of_16	boolean	Whether there was a round of 16 stage. Coded <code>1</code> if there was a round of 16 stage and <code>0</code> otherwise.
quarter_finals	boolean	Whether there was a quarter-finals stage. Coded <code>1</code> if there was a quarter-finals stage and <code>0</code> otherwise.
semi_finals	boolean	Whether there was a semi-finals stage. Coded <code>1</code> if there was a semi-finals stage and <code>0</code> otherwise.
third_place_match	boolean	Whether there was a third-place match. Coded <code>1</code> if there was a third-place match and <code>0</code> otherwise.
final	boolean	Whether there was a final match. Coded <code>1</code> if there was a final match and <code>0</code> otherwise.

# confederations

## Confederations

### Description

---

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

### Variables

---

key_id	integer	The unique ID number for the observation.
confederation_id	text	The unique ID number for the confederation. Has the format <code>CF-#</code> , where the number is a counter that is assigned with the confederations sorted in alphabetical order.
confederation_name	text	The name of the confederation.
confederation_code	text	The abbreviation for the confederation.
confederation_wikipedia_link	text	The Wikipedia link for the confederation.

# 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 and information about each country's national federation and FIFA confederation. There are 11 variables and 84 observations.

### Variables

key_id	integer	The unique ID number for the observation.
team_id	text	The unique ID number for the team. Has the format <code>T-##</code> , 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.
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 <code>confederation_id</code> in the <code>confederations</code> dataset.

confederation_name	text	The name of the confederation.
confederation_code	text	The abbreviation for the confederation.
team_wikipedia_link	text	The Wikipedia link for the team.
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, 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 12 variables and 7907 observations.

### Variables

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 .
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 home country, and a link to their Wikipedia page, if they have one. There are 6 variables and 357 observations.

### Variables

---

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.
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 home country, their confederation, and a link to their Wikipedia page, if they have one. There are 9 variables and 380 observations.

### Variables

key_id	integer	The unique ID number for the observation.
referee_id	text	The unique ID number for the referee. Has the format 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.
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 185 observations.

### Variables

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 37 variables and 900 observations.

### Variables

<code>key_id</code>	<code>integer</code> The unique ID number for the observation.
<code>tournament_id</code>	<code>text</code> The unique ID number for the tournament. References <code>tournament_id</code> in the <code>tournaments</code> dataset.
<code>tournament_name</code>	<code>text</code> The name of the tournament.
<code>match_id</code>	<code>text</code> The unique ID number for the match. Has the format <code>M-####-##</code> , 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.
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.
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.
home_team_code	text	The 3-letter code for the home team.

away_team_id	text	The unique ID number for the away team. References <code>team_id</code> in the <code>teams</code> dataset.
away_team_name	text	The name of the away team. See the <code>teams</code> dataset.
away_team_code	text	The 3-letter code for the away team.
score	text	The score of the match in the format <code>#-#</code> , 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 <code>1</code> if the match went to extra time and <code>0</code> otherwise.
penalty_shootout	boolean	Whether the match ended in a penalty shootout. Coded <code>1</code> if the match ended in a penalty shootout and <code>0</code> otherwise.
score_penalties	text	The score of the penalty shootout in the format <code>#-#</code> . Coded <code>0-0</code> if there was not a penalty shootout.
home_team_score_penalties	integer	The score of the home team in the penalty shootout. Coded <code>NA</code> if there was not a penalty shootout.
away_team_score_penalties	integer	The score of the away team in the penalty shootout. Coded <code>NA</code> if there was not a penalty shootout.
result	enum	The result of the match. The possible values are: <code>home team win</code> , <code>away team win</code> , <code>draw</code> , <code>replayed</code> .
home_team_win	boolean	Whether the home team won the match. Coded <code>1</code> if the home team won the match and <code>0</code> otherwise.
away_team_win	boolean	Whether the home team won the match. Coded <code>1</code> if the home team won the match and <code>0</code> otherwise.

`draw`

`boolean` Whether the match ended in a draw. Coded `1` if 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.

### Variables

---

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 457 observations.

### Variables

---

key_id	integer	The unique ID number for the observation.
tournament_id	text	The unique ID number for the tournament. References <code>tournament_id</code> in the <code>tournaments</code> dataset.
tournament_name	text	The name of the tournament.
team_id	text	The unique ID number for the team. References <code>team_id</code> in the <code>teams</code> 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 12 variables and 10142 observations.

### Variables

---

<code>key_id</code>	<code>integer</code> The unique ID number for the observation.
<code>tournament_id</code>	<code>text</code> The unique ID number for the tournament. References <code>tournament_id</code> in the <code>tournaments</code> dataset.
<code>tournament_name</code>	<code>text</code> The name of the tournament.
<code>team_id</code>	<code>text</code> The unique ID number for the team. References <code>team_id</code> in the <code>teams</code> dataset.
<code>team_name</code>	<code>text</code> The name of the team of the player.
<code>team_code</code>	<code>text</code> The 3-letter code for the team.
<code>player_id</code>	<code>text</code> The unique ID number for the player. References <code>player_id</code> in the <code>players</code> 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 469 observations.

### Variables

key_id	integer	The unique ID number for the observation.
tournament_id	text	The unique ID number for the tournament. References <code>tournament_id</code> in the <code>tournaments</code> dataset.
tournament_name	text	The name of the tournament.
team_id	text	The unique ID number for the team. References <code>team_id</code> in the <code>teams</code> dataset.
team_name	text	The name of the team of the manager.
team_code	text	The 3-letter code for the team.
manager_id	text	The unique ID number for the manager. References <code>manager_id</code> in the <code>managers</code> 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\_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 511 observations.

### Variables

key_id	integer	The unique ID number for the observation.
tournament_id	text	The unique ID number for the tournament. References <code>tournament_id</code> in the <code>tournaments</code> dataset.
tournament_name	text	The name of the tournament.
referee_id	text	The unique ID number for the referee. References <code>referee_id</code> in the <code>referees</code> dataset.
family_name	text	The family name of the referee.
given_name	text	The given name for the referee.
country_name	text	The name of the referee's home country.
confederation_id	text	The unique ID number for the confederation. References <code>confederation_id</code> in the <code>confederations</code> 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 36 variables and 1800 observations.

### Variables

key_id	integer	The unique ID number for the observation.
tournament_id	text	The unique ID number for the tournament. References <code>tournament_id</code> in the <code>tournaments</code> dataset.
tournament_name	text	The name of the tournament.
match_id	text	The unique ID number for the match. References <code>match_id</code> in the <code>matches</code> 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: <code>first round</code> , <code>second round</code> , <code>group stage</code> , <code>round of sixteen</code> , <code>quarter-finals</code> ,

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

<code>group_name</code>	<code>text</code> The name of the group.
<code>group_stage</code>	<code>boolean</code> Whether the match is a group stage match. Coded <code>1</code> if the match is a group stage match and <code>0</code> otherwise.
<code>knockout_stage</code>	<code>boolean</code> Whether the match is a knockout stage match. Coded <code>1</code> if the match is a knockout stage match and <code>0</code> otherwise.
<code>replayed</code>	<code>boolean</code> Whether the match was replayed. Coded <code>1</code> if the match was replayed and <code>0</code> otherwise.
<code>replay</code>	<code>boolean</code> Whether the match was a replay. Coded <code>1</code> if the match was a replay and <code>0</code> otherwise.
<code>match_date</code>	<code>date</code> The date of the match in the format <code>YYYY-MM-DD</code> .
<code>match_time</code>	<code>integer</code> The time of the match in the format <code>HH:MM</code> .
<code>stadium_id</code>	<code>text</code> The unique ID number for the stadium. References <code>stadium_id</code> in the <code>stadiums</code> dataset.
<code>stadium_name</code>	<code>text</code> The name of the stadium.
<code>city_name</code>	<code>text</code> The city in which the match was played.
<code>country_name</code>	<code>text</code> The name of the country in which the match was played.
<code>team_id</code>	<code>text</code> The unique ID number for the team. References <code>team_id</code> in the <code>teams</code> dataset.
<code>team_name</code>	<code>text</code> The name of the team.
<code>team_code</code>	<code>text</code> The 3-letter code for the team.
<code>opponent_id</code>	<code>text</code> The unique ID number for the team's opponent. References <code>team_id</code> in the <code>teams</code> dataset.
<code>opponent_name</code>	<code>text</code> 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.
goals_for	integer	The number of goals scored by the team.
goals_against	integer	The number of goals scored against the team.
goal_differential	integer	The team's goal differential.
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.
penalties_for	integer	The number of penalties scored by the opponent, if the match ended in a penalty shootout. Coded 0 if there was not a shootout.
penalties_against	integer	The number of penalties scored by the team, if the 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 .
win	boolean	Whether the team won the match. Coded 1 if the 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.
draw	boolean	Whether the match ended in a draw. Coded 1 if the 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 22 variables and 18623 observations.

### Variables

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

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.
captain	boolean Whether the player was the captain of the team. Coded 1 if the player was the captain 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 1842 observations.

### Variables

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

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

<code>group_name</code>	<code>text</code> The name of the group.
<code>team_id</code>	<code>text</code> The unique ID number for the team of the manager. References <code>team_id</code> in the <code>teams</code> dataset.
<code>team_name</code>	<code>text</code> The name of the team of the manager.
<code>team_code</code>	<code>text</code> The 3-letter code for the team of the manager.
<code>home_team</code>	<code>boolean</code> Whether the team was the home team. Coded <code>1</code> if the team was the home team and <code>0</code> otherwise.
<code>away_team</code>	<code>boolean</code> Whether the team was the away team. Coded <code>1</code> if the team was the away team and <code>0</code> otherwise.
<code>manager_id</code>	<code>text</code> The unique ID number for the manager. References <code>manager_id</code> in the <code>managers</code> dataset.
<code>family_name</code>	<code>text</code> The family name of the manager.
<code>given_name</code>	<code>text</code> The given name of the manager.
<code>country_name</code>	<code>text</code> 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 900 observations.

### Variables

key_id	integer	The unique ID number for the observation.
tournament_id	text	The unique ID number for the tournament. References <code>tournament_id</code> in the <code>tournaments</code> dataset.
tournament_name	text	The name of the tournament.
match_id	text	The unique ID number for the match. References <code>match_id</code> in the <code>matches</code> dataset.
match_name	text	The name of the match.
match_date	date	The date of the match in the format <code>YYYY-MM-DD</code> .
stage_name	enum	The stage of the tournament in which the match occurred. The possible values are: <code>first round</code> , <code>second round</code> , <code>group stage</code> , <code>round of sixteen</code> , <code>quarter-finals</code> , <code>semi-finals</code> , <code>third place match</code> , <code>final</code> . 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 27 variables and 2548 observations.

### Variables

---

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

player_team_code	text	The 3-letter code for the team of the player who scored the goal.
minute_label	text	The minute of the match in which the goal occurred in the format <code>#'</code> or <code>#'+#'</code> .
minute_regulation	integer	The minute of regulation time in which the substitution occurred.
minute_stoppage	integer	The minute of stoppage time in which the goal occurred. Coded <code>0</code> 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: <code>first half</code> , <code>first half, stoppage time</code> , <code>second half</code> , <code>second half, stoppage time</code> , <code>extra time, first half</code> , <code>extra time, first half, stoppage time</code> , <code>extra time, second half</code> , <code>extra time, second half, stoppage time</code> , <code>after extra time</code> .
own_goal	boolean	Whether the goal was an own goal. Coded <code>1</code> if the goal was an own goal and <code>0</code> otherwise.
penalty	boolean	Whether the goal was a penalty that occurred during the game, as opposed to during a penalty shootout. Coded <code>1</code> if the goal was a penalty that occurred during the game and <code>0</code> 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 279 observations.

### Variables

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



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 2466 observations.

### Variables

---

<code>key_id</code>	<code>integer</code> The unique ID number for the observation.
<code>booking_id</code>	<code>text</code> The unique ID number for the booking. Has the format <code>B-####</code> , where the number is a counter that is assigned with the data sorted by the match ID, then the minute of the booking.
<code>tournament_id</code>	<code>text</code> The unique ID number for the tournament. References <code>tournament_id</code> in the <code>tournaments</code> dataset.
<code>tournament_name</code>	<code>text</code> The name of the tournament.
<code>match_id</code>	<code>text</code> The unique ID number for the match in which the booking occurred. References <code>match_id</code> in the <code>matches</code> dataset.
<code>match_name</code>	<code>text</code> 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.
group_name	text	The name of the group.
team_id	text	The unique ID number for the team of the player who was booked. References team_id in the teams dataset.
team_name	text	The name of the team of the player who was booked.
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 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 was booked. References player_id in the players dataset.
family_name	text	The family name of the player who was booked.
given_name	text	The given name of the player who was booked.
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 6464 observations.

### Variables

---

<code>key_id</code>	<code>integer</code> The unique ID number for the observation.
<code>substitution_id</code>	<code>text</code> The unique ID number for the substitution. Has the format <code>S-####</code> , 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.
<code>tournament_id</code>	<code>text</code> The unique ID number for the tournament. References <code>tournament_id</code> in the <code>tournaments</code> dataset.
<code>tournament_name</code>	<code>text</code> The name of the tournament.
<code>match_id</code>	<code>text</code> The unique ID number for the match in which the substitution occurred. References <code>match_id</code> in the <code>matches</code> dataset.
<code>match_name</code>	<code>text</code> 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.
group_name	text	The name of the group.
team_id	text	The unique ID number for the team of the player who was substituted. References team_id in the teams dataset.
team_name	text	The name of the team of the player who was substituted.
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 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 was substituted. References player_id in the players dataset.
family_name	text	The family name of the player who was substituted.
given_name	text	The given name of the player who was substituted.
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.

minute_stoppage	integer The minute of stoppage time in which the substitution 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.
coming_on	boolean Whether the player was coming on the field. Coded 1 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 22 observations.

### Variables

key_id	integer	The unique ID number for the observation.
tournament_id	text	The unique ID number for the tournament. References <code>tournament_id</code> in the <code>tournaments</code> dataset.
tournament_name	text	The name of the tournament.
team_id	text	The unique ID number for the team. References <code>team_id</code> in the <code>teams</code> 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 107 observations.

### Variables

key_id	integer	The unique ID number for the observation.
tournament_id	text	The unique ID number for the tournament. References <code>tournament_id</code> in the <code>tournaments</code> 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: <code>first round</code> , <code>second round</code> , <code>group stage</code> , <code>round of sixteen</code> , <code>quarter-finals</code> , <code>semi-finals</code> , <code>third place match</code> , <code>final</code> . Note that not all values are applicable to all tournaments.

group_stage	boolean Whether the match is a group stage match. Coded <code>1</code> if the match is a group stage match and <code>0</code> otherwise.
knockout_stage	boolean Whether there was a knockout stage. Coded <code>1</code> if there was a knockout stage and <code>0</code> otherwise.
unbalanced_groups	boolean Whether there were unbalanced groups. Coded <code>1</code> if there were unbalanced groups and <code>0</code> otherwise.
start_date	date The start date of the stage in the format <code>YYYY-MM-DD</code> .
end_date	date The end date of the stage in the format <code>YYYY-MM-DD</code> .
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.

### Variables

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

count\_teams

integer The number of 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 458 observations.

### Variables

key_id	integer	The unique ID number for the observation.
tournament_id	text	The unique ID number for the tournament. References <code>tournament_id</code> in the <code>tournaments</code> 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: <code>first round</code> , <code>second round</code> , <code>group stage</code> , <code>round of sixteen</code> , <code>quarter-finals</code> , <code>semi-finals</code> , <code>third place match</code> , <code>final</code> . Note that not all values are applicable to all tournaments.

group_name	text	The name of the group.
position	integer	The team's final position in the group.
team_id	text	The unique ID number for the team. References <code>team_id</code> in the <code>teams</code> dataset.
team_name	text	The name of the team.
team_code	text	The 3-letter code for the team.
played	integer	The number of matches that the team played in the group.
wins	integer	The number of matches that the team won in the group stage.
draws	integer	The number of matches that the team drew in the group stage.
losses	integer	The number of matches that the team lost in the group stage.
goals_for	integer	The number of goals scored by the team in the group stage.
goals_against	integer	The number of goals scored against the team in the group stage.
goal_difference	integer	The team's goal difference in the group stage.
points	integer	The number of points that the team earned in the group.
advanced	boolean	Whether the team advanced out of the group. Coded <code>1</code> if the team advanced and <code>0</code> 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 84 observations.

### Variables

---

<code>key_id</code>	<code>integer</code> The unique ID number for the observation.
<code>tournament_id</code>	<code>text</code> The unique ID number for the tournament. References <code>tournament_id</code> in the <code>tournaments</code> dataset.
<code>tournament_name</code>	<code>text</code> The name of the tournament.
<code>position</code>	<code>integer</code> The place of the team in the final standings.
<code>team_id</code>	<code>text</code> The unique ID number for the team. References <code>team_id</code> in the <code>teams</code> dataset.
<code>team_name</code>	<code>text</code> The name of the team.
<code>team_code</code>	<code>text</code> 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 133 observations.

### Variables

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



player_id	text	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.