

# StatsBomb API Season Player Stats Structure and Data Specification v2.0.0

[StatsBomb API - last updated 1 December 2021]

This document describes the API used to request stats (as found in Statsbomb-IQ) for a player for a season to which the user has licensed access. Credentials need to be supplied as described in the general API notes.

## Summary of Changes for API v2.0.0

1. Added fields:
  - a. *player\_season\_obv\_90*
  - b. *player\_season\_obv\_pass\_90*
  - c. *player\_season\_obv\_shot\_90*
  - d. *player\_season\_obv\_defensive\_action\_90*
  - e. *player\_season\_obv\_dribble\_carry\_90*
  - f. *player\_season\_obv\_gk\_90*
  - g. *player\_season\_deep\_completions\_90*
  - h. *player\_season\_ball\_recoveries\_90*
  - i. *player\_season\_np\_psxg\_90*
  - j. *player\_season\_penalties\_faced\_90*
  - k. *player\_season\_penalties\_conceded\_90*
  - l. *player\_season\_fhalf\_ball\_recoveries\_90*

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### **Accessing the API**

The API can be accessed by making a request to

<https://data.statsbombservices.com/api/v2/competitions/?/seasons/?/player-stats> . The question marks should be replaced by the desired competition ID and season ID.

An R package has been written for users to conveniently access the API and clean the data. The R package is available at <https://github.com/statsbomb/StatsBombR>.

### **Data Format**

The API data is read in JSON format, where each observation is one, unique event, with all variable values corresponding to that event and that event type included. Unlike the CSV format, JSON format allows for nested data frames, and thus, observations will never be replicated.

## Response

The response will be in JSON format. The response is an array containing statistical information.

Column	Type	Description
player_id	integer	The id of the player
player_name	string	The full name of the player
team_id	integer	The id of the team
team_name	string	The full name of the player's team
competition_id	integer	The id of the competition
competition_name	string	The title of the competition
season_id	integer	The id of the season
season_name	string	A description of the season (e.g. "2020/2021")
country_id	integer	The id of the country the competition season was in
birth_date	date	The date of birth of the player
player_female	boolean	Whether the player plays in a female team
player_weight	double	The weight of the player in kg
player_height	integer	The height of the player in cm
player_season_minutes	integer	The number of minutes played this season. This value is used to calculate all other stat values as per-90.
player_season_90s_played	integer	Number of 90s played
player_season_aerial_ratio	percentage	Percentage of aerial duels a player enters that they win
player_season_aerial_wins_90	double	Number of aerial duels a player wins.
player_season_aggressive_actions_90	double	Tackles, pressure events and fouls recorded within 2 seconds of an opposition ball receipt

player_season_appearances	double	The number of matches the player has participated in on-pitch this season (starts and substitute appearances).
player_season_assists_90	double	Number of assists.
player_season_op_assists_90	double	Number of assists from open play.
player_season_average_minutes	double	The average minutes played per match for the season
player_season_average_x_defensive_action	double	The average distance from the goal line that the player successfully makes a defensive action. The scale is the x-axis of the pitch, measured from 0-100.
player_season_average_x_pass	double	The average distance from the goal line that the player successfully makes a pass. The scale is the x-axis of the pitch, measured from 0-100.
player_season_average_x_pressure	double	The average distance from the goal line that the player presses opponents with the ball. The scale here is the x-axis of the pitch, measured from 0-100.
player_season_backward_pass_proportion	percentage	Proportion of a player's passes that are angled backwards. Backwards is defined as the arc of the circle from $5\pi/6$ to $7\pi/6$ , of the circle $0:2\pi$ ; angle-0 means a 0 change in y-coordinate (i.e. towards the opponent's goal line)
player_season_ball_recoveries_90	double	Number of ball recoveries
player_season_blocks_per_shot	double	Blocks made per shot faced.
player_season_box_cross_ratio	percentage	What percentage of a player's completed passes into the box are crosses. See Event Specification for details of cross location definition.
player_season_carries_90	double	A player controls the ball at their feet while moving or standing still.
player_season_carry_length	double	Average carry length.
player_season_carry_ratio	percentage	Percentage of a player's carries that were successful.

player_season_challenge_ratio	percentage	Percentage of time a player makes a tackle when going into a duel vs getting dribbled past.
player_season_change_in_passing_ratio	percentage	How does passing % change when under pressure? This is calculated as Pressured Pass % minus Pass %.
player_season_clcaa	percentage	Claims or CCAA% (Claimable Collection Attempts over Average), is a measure of how likely the goalkeeper is to attempt to claim a "claimable" pass, versus the average goalkeeper attempted claim rate.
player_season_clearance_90	double	Number of clearances made by a player.
player_season_conversion_ratio	percentage	Percentage of non-penalty shots a player takes that are converted into goals.
player_season_counterpressure_regains_90	double	Times a player's team won the ball back within 5 seconds of the player counterpressuring an opponent.
player_season_counterpressures_90	double	Number of counterpressures. Counterpressures are pressures exerted within 5 seconds of a turnover.
player_season_crosses_90	double	Completed crosses.
player_season_crossing_ratio	percentage	Percentage of attempted crosses that are successful and received by a teammate
player_season_da_aggressive_distance	double	An average value of how far from the goal the goalkeeper is coming forward to perform defensive actions.
player_season_deep_completions_90	double	Number of deep completions
player_season_deep_progressions_90	double	Passes and dribbles/carries into the opposition final third.
player_season_defensive_action_regains_90	double	Times a player's team won the ball back within 5 seconds of the player making a defensive action against an opponent.
player_season_dispossessions_90	double	Number of times a player loses the ball by getting tackled.
player_season_dribble_faced_ratio	percentage	Of the dribbles faced by this player, what % of them were unsuccessful (stopped).

player_season_dribble_ratio	percentage	Percentage of dribbles that were successful
player_season_dribbled_past_90	double	How often a player fails a challenge and is dribbled past.
player_season_dribbles_90	double	How often a player successfully dribbles past an opponent
player_season_errors_90	double	How many errors the player makes per 90. An error is an on the ball mistake that led to a shot.
player_season_op_f3_backward_pass_proportion	percentage	Proportion of a player's passes in the final third that are angled backwards. Backwards is defined as the arc of the circle from $5\pi/6$ to $7\pi/6$ , of the circle $0:2\pi$ ; angle-0 means a 0 change in y-coordinate (i.e. towards the opponent's goal line)
player_season_op_f3_forward_pass_proportion	percentage	Proportion of a player's passes in the final third that are angled forwards. Forwards is defined as the arc of the circle from $11\pi/6$ to $\pi/6$ , of the circle $0:2\pi$ ; angle-0 means a 0 change in y-coordinate (i.e. towards the opponent's goal line)
player_season_op_f3_passes_90	double	Successful open play final third passes.
player_season_op_f3_sideways_pass_proportion	percentage	Proportion of a player's passes in the final third that are angled sideways. Sideways is defined as the arc of the circle from $\pi/6$ to $5\pi/6$ , and from $7\pi/6$ to $11\pi/6$ , of the circle $0:2\pi$ ; angle-0 means a 0 change in y-coordinate (i.e. towards the opponent's goal line)
player_season_failed_dribbles_90	double	Number of dribbles attempted that were unsuccessful.
player_season_fhalf_ball_recoveries_90	double	How many ball recoveries the player made in the opposition (final) half of the pitch
player_season_fhalf_counterpressures_90	double	How many counterpressures the player is exerting in the opposition (final) half of the pitch.
player_season_fhalf_counterpressures_ratio	percentage	How many counterpressures the player is exerting in the opposition (final) half of the pitch, as a percentage of their total counterpressures.
player_season_fhalf_pressures_90	double	How many pressures the player is exerting in the opposition (final) half of the pitch.

player_season_fhalf_pressures_ratio	percentage	How many pressures the player is exerting in the opposition (final) half of the pitch, as a percentage of their total pressures.
player_season_forward_pass_proportion	percentage	Proportion of a player's passes that are angled forwards. Forwards is defined as the arc of the circle from $11\pi/6$ to $\pi/6$ , of the circle $0:2\pi$ ; angle-0 means a 0 change in y-coordinate (i.e. towards the opponent's goal line)
player_season_fouls_90	double	How many fouls a player commits
player_season_fouls_won_90	double	How many times a player is fouled.
player_season_goals_90	double	All goals scored by the player, including penalties.
player_season_goals_faced_90	double	Count of all goals conceded by the goalkeeper.
player_season_gsaa_90	double	How many goals did the keeper save/concede versus expectation (post-shot xG faced)? This is representative of how many goals the goalkeeper's saves prevented within a season.
player_season_gsaa_ratio	percentage	The measure of goals saved above average, as a percentage of shots faced by the goalkeeper.
player_season_interceptions_90	double	Number of interceptions.
player_season_key_passes_90	double	Passes that create shots for teammates. Can also be seen to be referred to as "shot assists" or "chances created"
player_season_op_key_passes_90	double	Passes that create shots for teammates, just from open play
player_season_left_foot_ratio	percentage	Proportion of footed passes made by this player with their left foot. Players can be considered left-footed when this value is over 60% (and right-footed at less than 40%).
player_season_long_ball_ratio	percentage	Percentage of attempted long balls that are actually completed.
player_season_long_balls_90	double	Number of completed long balls
player_season_minutes	integer	The number of minutes played this season. This value is used to calculate all other stat values as per-90.
player_season_most_recent_match	integer	The id of the most recent match

player_season_np_optimal_gk_dlength	double	How far from the optimal position for facing a shot the Goalkeeper is (on average). This metric is modelled from a starting point of the average location of goalkeepers from 20 shots from similar locations and the deviation from that average is the distance away from the "optimal" location for any given goalkeeper location on a shot.
player_season_np_psxg_faced_90	double	The post shot expected goals faced
player_season_np_shots_90	double	Number of non-penalty shots a player takes.
player_season_np_xg_90	double	Non-penalty expected goals produced by the player.
player_season_np_xg_faced_90	double	Total xG from all non-penalty shots faced (including off target shots)
player_season_np_xg_per_shot	double	A measure of shot quality, this looks at the average non-penalty expected goal value per shot a player takes.
player_season_npg_90	double	Goals scored (not including penalties).
player_season_npga_90	double	Non-penalty goals and assists. A combined measure of the direct goal contribution of a player via goalscoring or goal assisting
player_season_npot_psxg_faced_90	double	Total post-shot xG of on-target shots faced by the goalkeeper, as predicted from a trained and calibrated model of only shots on target. Penalties not included.
player_season_npxgxa_90	double	Non-penalty xG and xG Assisted. A combined measure of a player's contribution to shots via shots themselves or the key pass prior to the shot, measured in terms of expected goal values
player_season_np_psxg_90	double	Post Shot xG earned from on-target shots
player_season_obv_90	double	On Ball Value Added (net) total (all event types)
player_season_obv_pass_90	double	On Ball Value Added (net) from Passes
player_season_obv_shot_90	double	On Ball Value Added (net) from Shots
player_season_obv_defensive_action_90	double	On Ball Value Added (net) from Defensive Actions



player_season_obv_dribble_carry_90	double	On Ball Value Added (net) from Dribbles and Carries
player_season_obv_gk_90	double	On Ball Value Added (net) Goalkeeper
player_season_ot_shots_faced_90	double	Count of on-target shots faced by the goalkeeper.
player_season_ot_shots_faced_ratio	percentage	Percentage of shots faced by the goalkeeper that were on-target.
player_season_over_under_performance_90	double	Goals and assists above expectation. The difference between scoring contribution (actual contribution to goals) and xG & xG Assisted (expected contribution to goals)
player_season_p_pass_length	double	Average pass length of passes made under pressure.
player_season_padj_clearances_90	double	Number of clearances adjusted proportionally to the possession volume of a team
player_season_padj_interceptions_90	double	Number of interceptions adjusted proportionally to the possession volume of a team
player_season_padj_pressures_90	double	Possession adjusted pressures.
player_season_padj_tackles_90	double	Number of tackles adjusted proportionally to the possession volume of a team
player_season_padj_tackles_and_interceptions_90	double	Number of tackles and interceptions adjusted proportionally to the possession volume of a team
player_season_pass_into_danger_ratio	percentage	Percentage of passes made where the recipient was deemed to be under pressure or was next engaged with a defensive action
player_season_pass_into_pressure_ratio	percentage	Percentage of passes made where the recipient was under pressure
player_season_pass_length	double	Average pass length.
player_season_pass_length_ratio	double	Ratio between the completed pass length and pass length.
player_season_op_passes_90	double	Number of attempted passes in open play.
player_season_passes_inside_box_90	double	Passes completed inside the box.
player_season_op_passes_into_and_touches_inside_box_90	double	Successful passes into the box from outside the box (open play) and touches inside the box combined

player_season_op_passes_into_box_90	double	Successful passes into the box from outside the box (open play).
player_season_passes_into_box_90	double	Successful passes into box from outside the box
player_season_passes_pressed_ratio	percentage	Proportion of passes that were made while under opponent pressure
player_season_passing_ratio	percentage	Percentage of all passes attempted that were completed.
player_season_penalty_conversion_ratio	percentage	Percentage of penalty shots a player takes that are converted into goals.
player_season_penalties_conceded_90	double	Number of penalties faced that resulted in goals
player_season_penalties_faced_90	double	Number of penalties faced
player_season_penalty_wins_90	double	Number of penalties won.
player_season_positive_outcome_90	double	A possession that connected through the player and resulted in either a shot, free kick in the attacking half or a corner
player_season_positive_outcome_score	percentage	How frequently is the player involved in sequences that resolve with a positive outcome while on the pitch
player_season_pressure_regains_90	double	Times a player's team won the ball back within 5 seconds of the player pressuring an opponent.
player_season_pressured_change_in_pass_length	double	Difference in the pass length when under pressure. This is calculated as the pressured pass length minus pass length.
player_season_pressured_long_balls_90	double	Number of clearances or long balls attempted while under pressure.
player_season_pressured_pass_length_ratio	percentage	Ratio between the completed pass length and pass length of passes made under pressure
player_season_pressured_passing_ratio	percentage	Proportion of pressured passes that were completed
player_season_pressures_90	double	The number of times a player pressures an opposition player.
primary_position	integer	The primary position
player_season_ps_pass_length	double	Pass length of successful passes made under pressure.

player_season_red_cards_90	double	How many red cards the player obtains
player_season_s_pass_length	double	Average pass length of completed passes.
player_season_save_ratio	percentage	Percentage of on-target shots that were saved by the goalkeeper.
player_season_second_yellow_cards_90	double	How many times a player obtains a second yellow card
secondary_position	integer	The secondary position
player_season_shot_on_target_ratio	percentage	The percentage of total shots by a player that are on target (includes goals, saved, and cleared off line).
player_season_shot_touch_ratio	percentage	The amount of shots a player takes as a proportion of their touches of the ball.
player_season_shots_faced_90	double	Count of all shots faced by the goalkeeper (including off-target shots.)
player_season_shots_key_passes_90	double	Non-penalty shots and key passes. A combined measure of a player's contribution to shots via shots themselves or the key pass prior to the shot
player_season_sideways_pass_proportion	percentage	Proportion of a player's passes that are angled sideways. Sideways is defined as the arc of the circle from $\pi/6$ to $5\pi/6$ , and from $7\pi/6$ to $11\pi/6$ , of the circle $0:2\pi$ ; angle-0 means a 0 change in y-coordinate (i.e. towards the opponent's goal line)
player_season_sp_assists_90	double	Number of assists from set pieces
player_season_sp_key_passes_90	double	Passes that create shots for teammates, just from set pieces
player_season_sp_passes_into_box_90	double	A pass into the box from a set piece situation (indirect free kick, corner, throw in)
player_season_sp_xa_90	double	xG assisted from set pieces
player_season_starting_appearances	double	The number of starts the player has made this season
player_season_tackles_90	double	Successful challenges made.
player_season_tackles_and_interceptions_90	double	Combination of tackles and interceptions

player_season_through_balls_90	double	A completed pass splitting the defence for a teammate to run onto.
player_season_total_dribbles_90	double	An attempt by the player to beat the opponent with the ball at their feet
player_season_touches_inside_box_90	double	Successful footed touches inside the box (including shots)
player_season_turnovers_90	double	How often a player loses the ball via a miscontrol or a failed dribble.
player_season_unpressured_long_balls_90	double	Times a player plays a long ball while not under pressure
player_season_op_xa_90	double	xG assisted from open play.
player_season_xa_90	double	xG assisted. This is calculated from the expected goal value of the assisted shot
player_season_op_xgbuildup	double	A model that attributes the xG value of the final shot to all players involved in the entire possession. The buildup version omits xG and xG Assisted to focus on possession work prior to the end of the chain
player_season_op_xgbuildup_90	double	A model that attributes the xG value of the final shot to all players involved in the entire possession. The buildup version omits xG and xG Assisted to focus on possession work prior to the end of the chain
player_season_xgbuildup	double	A model that attributes the xG value of the final shot to all players involved in the entire possession. The buildup version omits xG and xG Assisted to focus on possession work prior to the end of the chain
player_season_xgbuildup_90	double	A model that attributes the xG value of the final shot to all players involved in the entire possession. The buildup version omits xG and xG Assisted to focus on possession work prior to the end of the chain
player_season_op_xgbuildup_per_possession	double	A model that attributes the xG value of the final shot to all players involved in the entire possession. The buildup version omits xG

		and xG Assisted to focus on possession work prior to the end of the chain
player_season_xgbuildup_per_possession	double	A model that attributes the xG value of the final shot to all players involved in the entire possession. The buildup version omits xG and xG Assisted to focus on possession work prior to the end of the chain
player_season_op_xgchain	double	A model that attributes the xG value of the final shot to all players involved in the entire possession.
player_season_op_xgchain_90	double	A model that attributes the xG value of the final shot to all players involved in the entire possession.
player_season_xgchain	double	A model that attributes the xG value of the final shot to all players involved in the entire possession.
player_season_xgchain_90	double	A model that attributes the xG value of the final shot to all players involved in the entire possession.
player_season_op_xgchain_per_possession	double	A model that attributes the xG value of the final shot to all players involved in the entire possession.
player_season_xgchain_per_possession	double	A model that attributes the xG value of the final shot to all players involved in the entire possession.
player_season_xs_ratio	percentage	Given the post-shot xG (modelled from on frame location) of shots faced by the goalkeeper what % would we expect them to save?
player_season_yellow_cards_90	double	How many yellow cards the player obtains

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