

Package ‘cfbfastR’

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Title Functions to Access College Football Play by Play Data

Version 1.6.4

Description An R package for working with College Football Data. It is an R API wrapper around <https://collegefootballdata.com/> made available by the package development team. It provides users the capability to access a plethora of endpoints, and supplement that data with additional information (Expected Points Added/Win Probability added).

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URL <https://saiemgilani.github.io/cfbfastR/>,
<https://github.com/saiemgilani/cfbfastR>

BugReports <https://github.com/saiemgilani/cfbfastR/issues>

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cfbd_betting **CFBD Betting Lines Endpoint Overview**

Description

Get betting lines information for games

```
cfbd_betting_lines(year = 2018, week = 12, team = "Florida State")
```

```
# 7 OTs LSU at TAMU
```

```
cfbd_betting_lines(year = 2018, week = 13, team = "Texas A&M", conference = "SEC")
```

Usage

```
cfbd_betting_lines(
  game_id = NULL,
  year = NULL,
  week = NULL,
  season_type = "regular",
  team = NULL,
  home_team = NULL,
  away_team = NULL,
  conference = NULL,
  line_provider = NULL
)
```

Arguments

| | |
|---------------|---|
| game_id | (<i>Integer</i> optional): Game ID filter for querying a single game Can be found using the <code>cfbd_game_info()</code> function |
| year | (<i>Integer</i> required): Year, 4 digit format(YYYY) |
| week | (<i>Integer</i> optional): Week - values from 1-15, 1-14 for seasons pre-playoff (i.e. 2013 or earlier) |
| season_type | (<i>String</i> default regular): Select Season Type: regular or postseason |
| team | (<i>String</i> optional): D-I Team |
| home_team | (<i>String</i> optional): Home D-I Team |
| away_team | (<i>String</i> optional): Away D-I Team |
| conference | (<i>String</i> optional): Conference abbreviation - Select a valid FBS conference Conference abbreviations P5: ACC, B12, B1G, SEC, PAC Conference abbreviations G5 and FBS Independents: CUSA, MAC, MWC, Ind, SBC, AAC |
| line_provider | (<i>String</i> optional): Select Line Provider - Caesars, consensus, numberfire, or teamrankings |

Value

Betting information for games with the following columns:

game_id:**integer.** Unique game identifier - game_id.
 season:**integer.** Season parameter.
 season_type:**character.** Season Type (regular, postseason, both
 week:**integer.** Week, values from 1-15, 1-14 for seasons pre-playoff (i.e. 2013 or earlier).
 home_team:**character.** Home D-I Team.
 home_conference:**character.** Home D-I Conference.
 home_score:**integer.** Home Score.
 away_team:**character.** Away D-I Team.
 away_conference:**character.** Away D-I Conference.

away_score:**integer**. Away Score.
 provider:**character**. Line provider.
 spread:**character**. Spread for the game.
 formatted_spread:**character**. Formatted spread for the game.
 spread_open:**character**. Opening spread for the game.
 over_under:**character**. Over/Under for the game.
 over_under_open:**character**. Opening over/under for the game.
 home_moneyline:**character**. Home team moneyline.
 away_moneyline:**character**. Away team moneyline.

Examples

```

cfbd_betting_lines(year = 2018, week = 12, team = "Florida State")

# 7 OTs LSU at TAMU
cfbd_betting_lines(year = 2018, week = 13, team = "Texas A&M", conference = "SEC")

```

 cfbd_calendar

Get calendar of weeks by season.

Description

Get calendar of weeks by season.

Usage

```
cfbd_calendar(year)
```

Arguments

year *(Integer required)*: Year, 4 digit format (YYYY)

Value

`cfbd_calendar()` - A data frame with 5 variables:

season: **character**. Calendar season.
 week: **integer**. Calendar game week.
 season_type: **character**. Season type of calendar week.
 first_game_start: **character**. First game start time of the calendar week.
 last_game_start: **character**. Last game start time of the calendar week.

Examples

```
cfbd_calendar(2019)
```

cfbd_coaches

CFBD Coaches Endpoint Overview

Description

Coach information search A coach search function which provides coaching records and school history for a given coach

```
cfbd_coaches(first = "Nick", last = "Saban", team = "alabama")
```

Usage

```
cfbd_coaches(
  first = NULL,
  last = NULL,
  team = NULL,
  year = NULL,
  min_year = NULL,
  max_year = NULL
)
```

Arguments

| | |
|-----------------------|---|
| <code>first</code> | <i>(String optional)</i> : First name for the coach you are trying to look up |
| <code>last</code> | <i>(String optional)</i> : Last name for the coach you are trying to look up |
| <code>team</code> | <i>(String optional)</i> : Team - Select a valid team, D1 football |
| <code>year</code> | <i>(Integer optional)</i> : Year, 4 digit format (YYYY). |
| <code>min_year</code> | <i>(Integer optional)</i> : Minimum Year filter (inclusive), 4 digit format (YYYY). |
| <code>max_year</code> | <i>(Integer optional)</i> : Maximum Year filter (inclusive), 4 digit format (YYYY) |

Value

first_name:character. First name of coach.

last_name:character. Last name of coach.

hire_date:character. Hire date of coach.

school:character. School of coach.

year:integer. Season of record.

games:integer. Games as coach.

wins:integer. Wins for the season.

losses:integer. Losses for the season.
ties:integer. Ties for the season.
preseason_rank:integer. Preseason rank for the school of coach.
postseason_rank:integer. Postseason rank for the school of coach.
srs:character. Simple Rating System adjustment for team.
sp_overall:character. Bill Connelly's SP+ overall for team.
sp_offense:character. Bill Connelly's SP+ offense for team.
sp_defense:character. Bill Connelly's SP+ defense for team.

Examples

```
cfbd_coaches(first = "Nick", last = "Saban", team = "alabama")
```

cfbd_conferences

CFBD Conferences Endpoint Overview

Description

Get college football conference information Pulls all college football conferences and returns as data frame You can call this function simply with:

```
cfbd_conferences()
```

Usage

```
cfbd_conferences()
```

Value

`cfbd_conferences()` - A data frame with 94 rows and 5 variables:

conference_id: Referencing conference id.

name: Conference name.

long_name: Long name for Conference.

abbreviation: Conference abbreviation.

classification: Conference classification (fbs,fcs,ii,iii) ...

Examples

```
cfbd_conferences()
```

`cfbd_draft`**CFBD NFL Draft Endpoint Overview**

Description

`cfbd_draft_teams()`: Get list of NFL teams.

`cfbd_draft_positions()`: Get list of NFL positions for mapping to college positions.

`cfbd_draft_picks()`: Get list of NFL Draft picks.

Details**Get list of NFL teams:**

```
cfbd_draft_teams()
```

Get list of NFL positions for mapping to collegiate:

```
cfbd_draft_positions()
```

Get list of NFL Draft picks:

```
cfbd_draft_picks(year = 2020, college = "Texas")
```

```
cfbd_draft_picks(nfl_team = "Cincinnati")
```

`cfbd_draft_picks`**Get list of NFL draft picks**

Description**Get list of NFL draft picks****Usage**

```
cfbd_draft_picks(  
  year = NULL,  
  nfl_team = NULL,  
  college = NULL,  
  conference = NULL,  
  position = NULL  
)
```


Arguments

| | |
|------------|--|
| year | (<i>Integer</i> required): NFL draft class, 4 digit format (YYYY) |
| nfl_team | (<i>String</i>): NFL drafting team, see cfbd_draft_teams() for valid selections. |
| college | (<i>String</i>): NFL draftee college team, see cfbd_team_info() for valid selections. |
| conference | (<i>String</i>): NFL draftee college team conference, see cfbd_conferences() for valid selections. |
| position | (<i>String</i>): NFL position abbreviation, see cfbd_draft_positions() for valid selections. |

Value

[cfbd_draft_picks\(\)](#) - A data frame with 23 variables:

college_athlete_id: **integer**. College athlete referencing id.
nfl_athlete_id: **integer** NFL athlete referencing id.
college_id: **integer** College team referencing id.
college_team: **character** College team name.
college_conference: **character** Conference of college team.
nfl_team: **character** NFL team name of drafted player.
year: **integer**. NFL draft class year.
overall: **integer**. Overall draft pick number.
round: **integer**. Round of NFL draft the draftee was picked in.
pick: **integer**. Pick number of the NFL draftee within the round they were picked in.
name: **character**. NFL draftee name.
position: **character**. NFL draftee position.
height: **double**. NFL draftee height.
weight: **integer**. NFL draftee weight.
pre_draft_ranking: **integer** Pre-draft ranking (ESPN).
pre_draft_position_ranking: **integer**. Pre-draft position ranking (ESPN).
pre_draft_grade: **double**. Pre-draft scouts grade (ESPN).
hometown_info_city: **character**. Hometown of the NFL draftee.
hometown_info_state_province: **character**. Hometown state of the NFL draftee.
hometown_info_country: **character**. Hometown country of the NFL draftee.
hometown_info_latitude: **character**. Hometown latitude of the NFL draftee.
hometown_info_longitude: **character**. Hometown longitude of the NFL draftee.
hometown_info_county_fips: **character**. Hometown FIPS code of the NFL draftee.

Examples

```
cfbd_draft_picks(year = 2020)

### **ROBERT000000000000000000**
cfbd_draft_picks(year = 2016, position = "PK")
```

cfbd_draft_positions **Get list of NFL positions**

Description

Get list of NFL positions

Usage

```
cfbd_draft_positions()
```

Value

`cfbd_draft_positions()` - A data frame with 2 variables:

position_name: **character**. NFL Position group name.

position_abbreviation: **integer** NFL position group abbreviation.

Examples

```
cfbd_draft_positions()
```

cfbd_draft_teams **Get list of NFL teams**

Description

Get list of NFL teams

Usage

```
cfbd_draft_teams()
```

Value

`cfbd_draft_teams()` - A data frame with 4 variables:

`nfl_location`: **character**. NFL team location (city).

`nfl_nickname`: **integer** NFL team nickname (mascot).

`nfl_display_name`: **integer** NFL team display name (usually more neat/complete).

`nfl_logo`: **character** URL for NFL team logo.

Examples

```
cfbd_draft_teams()
```

cfbd_drives

CFBD Drives Endpoint

Description**Get college football game drives**

```
cfbd_drives(2018, week = 1, team = "TCU")
```

```
cfbd_drives(2018, team = "Texas A&M", defense_conference = "SEC")
```

Arguments

| | |
|---------------------------------|--|
| <code>year</code> | (<i>Integer</i> required): Year, 4 digit format (YYYY) |
| <code>season_type</code> | (<i>String</i> default regular): Select Season Type: regular, postseason, or both |
| <code>week</code> | (<i>Integer</i> optional): Week - values from 1-15, 1-14 for seasons pre-playoff, i.e. 2013 or earlier |
| <code>team</code> | (<i>String</i> optional): D-I Team |
| <code>offense_team</code> | (<i>String</i> optional): Offense D-I Team |
| <code>defense_team</code> | (<i>String</i> optional): Defense D-I Team |
| <code>conference</code> | (<i>String</i> optional): DI Conference abbreviation - Select a valid FBS conference Conference abbreviations P5: ACC, B12, B1G, SEC, PAC Conference abbreviations G5 and FBS Independents: CUSA, MAC, MWC, Ind, SBC, AAC |
| <code>offense_conference</code> | (<i>String</i> optional): Offense DI Conference abbreviation - Select a valid FBS conference Conference abbreviations P5: ACC, B12, B1G, SEC, PAC Conference abbreviations G5 and FBS Independents: CUSA, MAC, MWC, Ind, SBC, AAC |

defense_conference

(*String* optional): Defense DI Conference abbreviation - Select a valid FBS conference

Conference abbreviations P5: ACC, B12, BIG, SEC, PAC

Conference abbreviations G5 and FBS Independents: CUSA, MAC, MWC, Ind, SBC, AAC

Value

`cfbd_drives()` - A data frame with 23 variables as follows:

offense:character. Drive offense.

offense_conference:character. Drive offense's conference.

defense:character. Drive defense.

defense_conference:character. Drive defense's conference.

game_id:integer. Unique game identifier - `game_id`.

drive_id:character. Unique drive identifier - `drive_id`.

drive_number:integer. Drive number in game.

scoring:logical. Drive ends in a score.

start_period:integer. Period (or Quarter) in which the drive starts.

start_yardline:integer. Yard line at the drive start.

start_yards_to_goal:integer. Yards-to-Goal at the drive start.

end_period:integer. Period (or Quarter) in which the drive ends.

end_yardline:integer. Yard line at drive end.

end_yards_to_goal:integer. Yards-to-Goal at drive end.

plays:integer. Number of drive plays.

yards:integer. Total drive yards.

drive_result:character. Result of the drive description.

is_home_offense:logical. Flag for if the offense on the field is the home offense

start_offense_score:numeric. Offense score at the start of the drive.

start_defense_score:numeric. Defense score at the start of the drive.

end_offense_score:numeric. Offense score at the end of the drive.

end_defense_score:numeric. Defense score at the end of the drive.

time_minutes_start:integer. Minutes at drive start.

time_seconds_start:integer. Seconds at drive start.

time_minutes_end:integer. Minutes at drive end.

time_seconds_end:integer. Seconds at drive end.

time_minutes_elapsed:double. Minutes elapsed during drive.

time_seconds_elapsed:integer. Seconds elapsed during drive.

Examples

```
cfbd_drives(2018, week = 1, team = "TCU")
```

```
cfbd_drives(2018, team = "Texas A&M", defense_conference = "SEC")
```

 cfbd_games

CFBD Games Endpoint Overview

Description

Get results, statistics and information for games

cfbd_game_box_advanced(): Get game advanced box score information.

cfbd_game_player_stats(): Get results information from games.

cfbd_game_team_stats(): Get team statistics by game.

cfbd_game_info(): Get results information from games.

cfbd_game_weather(): Get weather from games.

cfbd_game_records(): Get team records by year.

cfbd_calendar(): Get calendar of weeks by season.

cfbd_game_media(): Get game media information (TV, radio, etc).

Details**Get game advanced box score information.:**

```
cfbd_game_box_advanced(game_id = 401114233)
```

Get player statistics by game:

```
cfbd_game_player_stats(2018, week = 15, conference = "Ind")
```

```
cfbd_game_player_stats(2013, week = 1, team = "Florida State", category = "passing")
```

Get team records by year:

```
cfbd_game_records(2018, team = "Notre Dame")
```

```
cfbd_game_records(2013, team = "Florida State")
```

Get team statistics by game:

```
cfbd_game_team_stats(2019, team = "LSU")
```

```
cfbd_game_team_stats(2013, team = "Florida State")
```

Get results information from games.:

```
cfbd_game_info(2018, week = 1)

cfbd_game_info(2018, week = 7, conference = "Ind")

# 7 OTs LSU @ TAMU
cfbd_game_info(2018, week = 13, team = "Texas A&M", quarter_scores = TRUE)

### **Get weather from games.**
```r
cfbd_game_weather(2018, week = 1)

cfbd_game_info(2018, week = 7, conference = "Ind")
```

**Get calendar of weeks by season.:**

```
cfbd_calendar(2019)
```

**Get game media information (TV, radio, etc).:**

```
cfbd_game_media(2019, week = 4, conference = "ACC")
```

---

```
cfbd_game_box_advanced
```

**Get game advanced box score information.****Description**

**Get game advanced box score information.**

**Usage**

```
cfbd_game_box_advanced(game_id, long = FALSE)
```

**Arguments**

|         |                                                                                                                                     |
|---------|-------------------------------------------------------------------------------------------------------------------------------------|
| game_id | ( <i>Integer</i> required): Game ID filter for querying a single game Can be found using the <code>cfbd_game_info()</code> function |
| long    | ( <i>Logical</i> default FALSE): Return the data in a long format.                                                                  |

**Value**

`cfbd_game_box_advanced()` - A data frame with 2 rows and 69 variables:

team: **character**. Team name.

plays: **double**. Number of plays.

ppa\_overall\_total: **double**. Predicted points added (PPA) overall total.

ppa\_overall\_quarter1: **double**. Predicted points added (PPA) overall Q1.

ppa\_overall\_quarter2: **double**. Predicted points added (PPA) overall Q2.  
ppa\_overall\_quarter3: **double**. Predicted points added (PPA) overall Q3.  
ppa\_overall\_quarter4: **double**. Predicted points added (PPA) overall Q4.  
ppa\_passing\_total: **double**. Passing predicted points added (PPA) total.  
ppa\_passing\_quarter1: **double**. Passing predicted points added (PPA) Q1.  
ppa\_passing\_quarter2: **double**. Passing predicted points added (PPA) Q2.  
ppa\_passing\_quarter3: **double**. Passing predicted points added (PPA) Q3.  
ppa\_passing\_quarter4: **double**. Passing predicted points added (PPA) Q4.  
ppa\_rushing\_total: **double**. Rushing predicted points added (PPA) total.  
ppa\_rushing\_quarter1: **double**. Rushing predicted points added (PPA) Q1.  
ppa\_rushing\_quarter2: **double**. Rushing predicted points added (PPA) Q2.  
ppa\_rushing\_quarter3: **double**. Rushing predicted points added (PPA) Q3.  
ppa\_rushing\_quarter4: **double**. Rushing predicted points added (PPA) Q4.  
cumulative\_ppa\_plays: **double**. Cumulative predicted points added (PPA) added total.  
cumulative\_ppa\_overall\_total: **double**. Cumulative predicted points added (PPA) total.  
cumulative\_ppa\_overall\_quarter1: **double**. Cumulative predicted points added (PPA) Q1.  
cumulative\_ppa\_overall\_quarter2: **double**. Cumulative predicted points added (PPA) Q2.  
cumulative\_ppa\_overall\_quarter3: **double**. Cumulative predicted points added (PPA) Q3.  
cumulative\_ppa\_overall\_quarter4: **double**. Cumulative predicted points added (PPA) Q4.  
cumulative\_ppa\_passing\_total: **double**. Cumulative passing predicted points added (PPA) total.  
cumulative\_ppa\_passing\_quarter1: **double**. Cumulative passing predicted points added (PPA) Q1.  
cumulative\_ppa\_passing\_quarter2: **double**. Cumulative passing predicted points added (PPA) Q2.  
cumulative\_ppa\_passing\_quarter3: **double**. Cumulative passing predicted points added (PPA) Q3.  
cumulative\_ppa\_passing\_quarter4: **double**. Cumulative passing predicted points added (PPA) Q4.  
cumulative\_ppa\_rushing\_total: **double**. Cumulative rushing predicted points added (PPA) total.  
cumulative\_ppa\_rushing\_quarter1: **double**. Cumulative rushing predicted points added (PPA) Q1.  
cumulative\_ppa\_rushing\_quarter2: **double**. Cumulative rushing predicted points added (PPA) Q2.  
cumulative\_ppa\_rushing\_quarter3: **double**. Cumulative rushing predicted points added (PPA) Q3.  
cumulative\_ppa\_rushing\_quarter4: **double**. Cumulative rushing predicted points added (PPA) Q4.  
success\_rates\_overall\_total: **double**. Success rates overall total.

success\_rates\_overall\_quarter1: **double**. Success rates overall Q1.  
 success\_rates\_overall\_quarter2: **double**. Success rates overall Q2.  
 success\_rates\_overall\_quarter3: **double**. Success rates overall Q3.  
 success\_rates\_overall\_quarter4: **double**. Success rates overall Q4.  
 success\_rates\_standard\_downs\_total: **double**. Success rates standard downs total.  
 success\_rates\_standard\_downs\_quarter1: **double**. Success rates standard downs Q1.  
 success\_rates\_standard\_downs\_quarter2: **double**. Success rates standard downs Q2.  
 success\_rates\_standard\_downs\_quarter3: **double**. Success rates standard downs Q3.  
 success\_rates\_standard\_downs\_quarter4: **double**. Success rates standard downs Q4.  
 success\_rates\_passing\_downs\_total: **double**. Success rates passing downs total.  
 success\_rates\_passing\_downs\_quarter1: **double**. Success rates passing downs Q1.  
 success\_rates\_passing\_downs\_quarter2: **double**. Success rates passing downs Q2.  
 success\_rates\_passing\_downs\_quarter3: **double**. Success rates passing downs Q3.  
 success\_rates\_passing\_downs\_quarter4: **double**. Success rates passing downs Q4.  
 explosiveness\_overall\_total: **double**. Explosiveness rates overall total.  
 explosiveness\_overall\_quarter1: **double**. Explosiveness rates overall Q1.  
 explosiveness\_overall\_quarter2: **double**. Explosiveness rates overall Q2.  
 explosiveness\_overall\_quarter3: **double**. Explosiveness rates overall Q3.  
 explosiveness\_overall\_quarter4: **double**. Explosiveness rates overall Q4.  
 rushing\_power\_success: **double**. Rushing power success rate.  
 rushing\_stuff\_rate: **double**. Rushing stuff rate.  
 rushing\_line\_yds: **double**. Rushing offensive line yards.  
 rushing\_line\_yds\_avg: **double**. Rushing line yards average.  
 rushing\_second\_lvl\_yds: **double**. Rushing second-level yards.  
 rushing\_second\_lvl\_yds\_avg: **double**. Average second level yards per rush.  
 rushing\_open\_field\_yds: **double**. Rushing open field yards.  
 rushing\_open\_field\_yds\_avg: **double**. Average rushing open field yards average.  
 havoc\_total: **double**. Total havoc rate.  
 havoc\_front\_seven: **double**. Front-7 players havoc rate.  
 havoc\_db: **double**. Defensive back players havoc rate.  
 scoring\_opps\_opportunities: **double**. Number of scoring opportunities.  
 scoring\_opps\_points: **double**. Points on scoring opportunity drives.  
 scoring\_opps\_pts\_per\_opp: **double**. Points per scoring opportunity drives.  
 field\_pos\_avg\_start: **double**. Average starting field position.  
 field\_pos\_avg\_starting\_predicted\_pts: **double**. Average starting predicted points (PP) for the average starting field position.

## Examples

```
cfbd_game_box_advanced(game_id = 401114233)
```



---

|                |                                            |
|----------------|--------------------------------------------|
| cfbd_game_info | <b>Get results information from games.</b> |
|----------------|--------------------------------------------|

---

## Description

**Get results information from games.**

## Usage

```
cfbd_game_info(
 year,
 week = NULL,
 season_type = "regular",
 team = NULL,
 home_team = NULL,
 away_team = NULL,
 conference = NULL,
 game_id = NULL,
 quarter_scores = FALSE
)
```

## Arguments

|                |                                                                                                                                                                                                                                                                       |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| year           | ( <i>Integer</i> required): Year, 4 digit format(YYYY)                                                                                                                                                                                                                |
| week           | ( <i>Integer</i> optional): Week - values from 1-15, 1-14 for seasons pre-playoff (i.e. 2013 or earlier)                                                                                                                                                              |
| season_type    | ( <i>String</i> default regular): Select Season Type: regular, postseason, or both                                                                                                                                                                                    |
| team           | ( <i>String</i> optional): D-I Team                                                                                                                                                                                                                                   |
| home_team      | ( <i>String</i> optional): Home D-I Team                                                                                                                                                                                                                              |
| away_team      | ( <i>String</i> optional): Away D-I Team                                                                                                                                                                                                                              |
| conference     | ( <i>String</i> optional): Conference abbreviation - Select a valid FBS conference<br>Conference abbreviations P5: ACC, B12, B1G, SEC, PAC<br>Conference abbreviations G5 and FBS Independents: CUSA, MAC, MWC, Ind, SBC, AAC                                         |
| game_id        | ( <i>Integer</i> optional): Game ID filter for querying a single game                                                                                                                                                                                                 |
| quarter_scores | ( <i>Logical</i> default FALSE): This is a parameter to return the list columns that give the score at each quarter: home_line_scores and away_line_scores.<br>I have defaulted the parameter to false so that you will not have to go to the trouble of dropping it. |

**Value**

`cfbd_game_info()` - A data frame with 22 variables:

`game_id`: **integer**. Referencing game id.

`season`: **integer**. Season of the game.

`week`: **integer**. Game week.

`season_type`: **character**. Season type of the game.

`start_date`: **character**. Game date.

`start_time_tbd`: **logical**. TRUE/FALSE flag for if the game's start time is to be determined.

`neutral_site`: **logical**. TRUE/FALSE flag for the game taking place at a neutral site.

`conference_game`: **logical**. TRUE/FALSE flag for this game qualifying as a conference game.

`attendance`: **integer**. Reported attendance at the game.

`venue_id`: **integer**. Referencing venue id.

`venue`: **character**. Venue name.

`home_id`: **integer**. Home team referencing id.

`home_team`: **character**. Home team name.

`home_conference`: **character**. Home team conference.

`home_points`: **integer**. Home team points.

`home_post_win_prob`: **character**. Home team post-game win probability.

`home_pregame_elo`: **character**. Home team pre-game ELO rating.

`home_postgame_elo`: **character**. Home team post-game ELO rating.

`away_id`: **integer**. Away team referencing id.

`away_team`: **character**. Away team name.

`away_conference`: **character**. Away team conference.

`away_points`: **integer**. Away team points.

`away_post_win_prob`: **character**. Away team post-game win probability.

`away_pregame_elo`: **character**. Away team pre-game ELO rating.

`away_postgame_elo`: **character**. Away team post-game ELO rating.

`excitement_index`: **character**. Game excitement index.

`highlights`: **character**. Game highlight urls.

`notes`: **character**. Game notes.

**Examples**

```
cfbd_game_info(2018, week = 1)
```

```
cfbd_game_info(2018, week = 7, conference = "Ind")
```

```
7 OTs LSU @ TAMU
```

```
cfbd_game_info(2018, week = 13, team = "Texas A&M", quarter_scores = TRUE)
```

---

|                 |                                                     |
|-----------------|-----------------------------------------------------|
| cfbd_game_media | <b>Get game media information (TV, radio, etc).</b> |
|-----------------|-----------------------------------------------------|

---

## Description

**Get game media information (TV, radio, etc).**

## Usage

```
cfbd_game_media(
 year,
 week = NULL,
 season_type = "both",
 team = NULL,
 conference = NULL,
 media_type = NULL
)
```

## Arguments

|             |                                                                                                                                                                                                                               |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| year        | ( <i>Integer</i> required): Year, 4 digit format (YYYY)                                                                                                                                                                       |
| week        | ( <i>Integer</i> optional): Week, values from 1-15, 1-14 for seasons pre-playoff (i.e. 2013 or earlier)                                                                                                                       |
| season_type | ( <i>String</i> default both): Select Season Type, regular, postseason, or both                                                                                                                                               |
| team        | ( <i>String</i> optional): D-I Team                                                                                                                                                                                           |
| conference  | ( <i>String</i> optional): Conference abbreviation - Select a valid FBS conference<br>Conference abbreviations P5: ACC, B12, B1G, SEC, PAC<br>Conference abbreviations G5 and FBS Independents: CUSA, MAC, MWC, Ind, SBC, AAC |
| media_type  | ( <i>String</i> optional): Media type filter: tv, radio, web, ppv, or mobile                                                                                                                                                  |

## Value

`cfbd_game_media()` - A data frame with 13 variables:

`game_id`: **integer**. Referencing game id.  
`season`: **integer**. Season of the game.  
`week`: **integer**. Game week.  
`season_type`: **character**. Season type of the game.  
`start_time`: **character**. Game start time.  
`is_start_time_tbd`: **logical**. TRUE/FALSE flag for if the start time is still to be determined.  
`home_team`: **character**. Home team of the game.  
`home_conference`: **character**. Conference of the home team.

away\_team: **character.** Away team of the game.

away\_conference: **character.** Conference of the away team.

tv: **list.** TV broadcast networks.

radio: **logical.** Radio broadcast networks.

web: **list.** Web viewing platforms carrying the game.

## Examples

```
cfbd_game_media(2019, week = 4, conference = "ACC")
```

---

cfbd\_game\_player\_stats

### Get player statistics by game

---

## Description

### Get player statistics by game

## Usage

```
cfbd_game_player_stats(
 year,
 week = NULL,
 season_type = "regular",
 team = NULL,
 conference = NULL,
 category = NULL,
 game_id = NULL
)
```

## Arguments

|             |                                                                                                                                                                                                                               |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| year        | ( <i>Integer</i> required): Year, 4 digit format(YYYY)                                                                                                                                                                        |
| week        | ( <i>Integer</i> optional): Week - values from 1-15, 1-14 for seasons pre-playoff (i.e. 2013 or earlier)                                                                                                                      |
| season_type | ( <i>String</i> default regular): Select Season Type: regular or postseason                                                                                                                                                   |
| team        | ( <i>String</i> optional): D-I Team                                                                                                                                                                                           |
| conference  | ( <i>String</i> optional): Conference abbreviation - Select a valid FBS conference<br>Conference abbreviations P5: ACC, B12, B1G, SEC, PAC<br>Conference abbreviations G5 and FBS Independents: CUSA, MAC, MWC, Ind, SBC, AAC |

|          |                                                                                                                                                                                                               |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| category | ( <i>String</i> optional): Category filter (e.g defensive)<br>Offense: passing, receiving, rushing<br>Defense: defensive, fumbles, interceptions<br>Special Teams: punting, puntReturns, kicking, kickReturns |
| game_id  | ( <i>Integer</i> optional): Game ID filter for querying a single game Can be found using the <code>cfbd_game_info()</code> function                                                                           |

### Value

`cfbd_game_player_stats()` - A data frame with 32 variables:

game\_id: **integer**. Referencing game id.  
team: **character**. Team name.  
conference: **character**. Conference of the team.  
home\_away: **character**. Flag for if the team was the home or away team.  
points: **integer**. Team points.  
category: **character**. Statistic category.  
athlete\_id: **character**. Athlete referencing id.  
name: **character**. Player name.  
c\_att: **character**. Completions - Pass attempts.  
yds: **double**. Statistic yardage.  
avg: **double**. Average per statistic.  
td: **double**. Touchdowns scored.  
int: **double**. Interceptions thrown.  
qbr: **double**. Quarterback rating.  
car: **double**. Number of rushing carries.  
long: **double**. Longest carry/reception of the game.  
rec: **double**. Number of pass receptions.  
no: **double**. Player number.  
fg: **character**. Field goal attempts in the game.  
pct: **double**. Field goal percentage in the game.  
xp: **character**. Extra points kicked in the game.  
pts: **double**. Total kicking points in the game.  
tb: **double**. Touchbacks (for kicking) in the game.  
in\_20: **double**. Punts inside the 20 yardline in the game.  
fum: **double**. Player fumbles in the game.  
lost: **double**. Player fumbles lost in the game.  
tot: **double**. Total tackles in the game.  
solo: **double**. Solo tackles in the game.  
sacks: **double**. Total sacks in the game.  
tfl: **double**. Total tackles for loss in the game.  
pd: **double**. Total passes defensed in the game.  
qb\_hur: **double**. Total quarterback hurries in the game.

**Examples**

```
cfbd_game_player_stats(year = 2020, week = 15, team = "Alabama")
```

```
cfbd_game_player_stats(2013, week = 1, team = "Florida State", category = "passing")
```

---

cfbd\_game\_records      **Get team records by year**

---

**Description****Get team records by year****Usage**

```
cfbd_game_records(year, team = NULL, conference = NULL)
```

**Arguments**

|            |                                                                                                                                                                                                                                  |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| year       | ( <i>Integer</i> optional): Year, 4 digit format (YYYY)                                                                                                                                                                          |
| team       | ( <i>String</i> optional): Team - Select a valid team, D1 football                                                                                                                                                               |
| conference | ( <i>String</i> optional): DI Conference abbreviation - Select a valid FBS conference<br>Conference abbreviations P5: ACC, B12, B1G, SEC, PAC<br>Conference abbreviations G5 and FBS Independents: CUSA, MAC, MWC, Ind, SBC, AAC |

**Value**

`cfbd_game_records()` - A data frame with 21 variables:

year: **integer**. Season of the games.

team: **character**. Team name.

conference: **character**. Conference of the team.

division: **character**. Division in the conference of the team.

expected\_wins: **numeric** Expected number of wins based on post-game win probability.

total\_games: **integer**. Total number of games played.

total\_wins: **integer**. Total wins.

total\_losses: **integer**. Total losses.

total\_ties: **integer**. Total ties.

conference\_games: **integer**. Number of conference games.

conference\_wins: **integer**. Total conference wins.

conference\_losses: **integer**. Total conference losses.

conference\_ties: **integer**. Total conference ties.  
 home\_games: **integer**. Total home games.  
 home\_wins: **integer**. Total home wins.  
 home\_losses: **integer**. Total home losses.  
 home\_ties: **integer**. Total home ties.  
 away\_games: **integer**. Total away games.  
 away\_wins: **integer**. Total away wins.  
 away\_losses: **integer**. Total away losses.  
 away\_ties: **integer**. Total away ties.

### Examples

```
cfbd_game_records(2018, team = "Notre Dame")
cfbd_game_records(2013, team = "Florida State")
```

---

cfbd\_game\_team\_stats **Get team statistics by game**

---

### Description

**Get team statistics by game**

### Usage

```
cfbd_game_team_stats(
 year,
 week = NULL,
 season_type = "regular",
 team = NULL,
 conference = NULL,
 game_id = NULL,
 rows_per_team = 1
)
```

### Arguments

|             |                                                                                                               |
|-------------|---------------------------------------------------------------------------------------------------------------|
| year        | ( <i>Integer</i> required): Year, 4 digit format (YYYY)                                                       |
| week        | ( <i>Integer</i> optional): Week - values range from 1-15, 1-14 for seasons pre-playoff, i.e. 2013 or earlier |
| season_type | ( <i>String</i> default: regular): Select Season Type - regular, postseason, or both                          |
| team        | ( <i>String</i> optional): D-I Team                                                                           |

|               |                                                                                                                                                                                                                               |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| conference    | ( <i>String</i> optional): Conference abbreviation - Select a valid FBS conference<br>Conference abbreviations P5: ACC, B12, B1G, SEC, PAC<br>Conference abbreviations G5 and FBS Independents: CUSA, MAC, MWC, Ind, SBC, AAC |
| game_id       | ( <i>Integer</i> optional): Game ID filter for querying a single game<br>Can be found using the <code>cfbd_game_info()</code> function                                                                                        |
| rows_per_team | ( <i>Integer</i> default 1): Both Teams for each game on one or two row(s), Options: 1 or 2                                                                                                                                   |

### Value

`cfbd_game_team_stats()` - A data frame with 78 variables:

`game_id`: **integer**. Referencing game id.

`school`: **character**. Team name.

`conference`: **character**. Conference of the team.

`home_away`: **character**. Home/Away Flag.

`points`: **integer**. Team points.

`total_yards`: **character**. Team total yards.

`net_passing_yards`: **character**. Team net passing yards.

`completion_attempts`: **character**. Team completion attempts.

`passing_tds`: **character**. Team passing touchdowns.

`yards_per_pass`: **character**. Team game yards per pass.

`passes_intercepted`: **character**. Team passes intercepted.

`interception_yards`: **character**. Interception yards.

`interception_tds`: **character**. Interceptions returned for a touchdown.

`rushing_attempts`: **character**. Team rushing attempts. see also: ESTABLISH IT.

`rushing_yards`: **character**. Team rushing yards.

`rush_tds`: **character**. Team rushing touchdowns.

`yards_per_rush_attempt`: **character**. Team yards per rush attempt.

`first_downs`: **character**. First downs earned by the team.

`third_down_eff`: **character**. Third down efficiency.

`fourth_down_eff`: **character**. Fourth down efficiency.

`punt_returns`: **character**. Team punt returns.

`punt_return_yards`: **character**. Team punt return yards.

`punt_return_tds`: **character**. Team punt return touchdowns.

`kick_return_yards`: **character**. Team kick return yards.

`kick_return_tds`: **character**. Team kick return touchdowns.

`kick_returns`: **character**. Team kick returns.



kicking\_points: **character**. Team points from kicking the ball.  
fumbles\_recovered: **character**. Team fumbles recovered.  
fumbles\_lost: **character**. Team fumbles lost.  
total\_fumbles: **character**. Team total fumbles.  
tackles: **character**. Team tackles.  
tackles\_for\_loss: **character**. Team tackles for a loss.  
sacks: **character**. Team sacks.  
qb\_hurries: **character**. Team QB hurries.  
interceptions: **character**. Team interceptions.  
passes\_deflected: **character**. Team passes deflected.  
turnovers: **character**. Team turnovers.  
defensive\_tds: **character**. Team defensive touchdowns.  
total\_penalties\_yards: **character**. Team total penalty yards.  
possession\_time: **character**. Team time of possession.  
conference\_allowed: **character**. Conference of the opponent team.  
home\_away\_allowed: **character**. Flag for if the opponent was the home or away team.  
points\_allowed: **integer**. Points for the opponent.  
total\_yards\_allowed: **character**. Opponent total yards.  
net\_passing\_yards\_allowed: **character**. Opponent net passing yards.  
completion\_attempts\_allowed: **character**. Opponent completion attempts.  
passing\_tds\_allowed: **character**. Opponent passing TDs.  
yards\_per\_pass\_allowed: **character**. Opponent yards per pass allowed.  
passes\_intercepted\_allowed: **character**. Opponent passes intercepted.  
interception\_yards\_allowed: **character**. Opponent interception yards.  
interception\_tds\_allowed: **character**. Opponent interception TDs.  
rushing\_attempts\_allowed: **character**. Opponent rushing attempts.  
rushing\_yards\_allowed: **character**. Opponent rushing yards.  
rush\_tds\_allowed: **character**. Opponent rushing touchdowns.  
yards\_per\_rush\_attempt\_allowed: **character**. Opponent rushing yards per attempt.  
first\_downs\_allowed: **character**. Opponent first downs.  
third\_down\_eff\_allowed: **character**. Opponent third down efficiency.  
fourth\_down\_eff\_allowed: **character**. Opponent fourth down efficiency.  
punt\_returns\_allowed: **character**. Opponent punt returns.  
punt\_return\_yards\_allowed: **character**. Opponent punt return yards.  
punt\_return\_tds\_allowed: **character**. Opponent punt return touchdowns.  
kick\_return\_yards\_allowed: **character**. Opponent kick return yards.  
kick\_return\_tds\_allowed: **character**. Opponent kick return touchdowns.

kick\_returns\_allowed: **character.** Opponent kick returns.  
 kicking\_points\_allowed: **character.** Opponent points from kicking.  
 fumbles\_recovered\_allowed: **character.** Opponent fumbles recovered.  
 fumbles\_lost\_allowed: **character.** Opponent fumbles lost.  
 total\_fumbles\_allowed:**character.** Opponent total number of fumbles.  
 tackles\_allowed:**character.** Opponent tackles.  
 tackles\_for\_loss\_allowed: **character.** Opponent tackles for loss.  
 sacks\_allowed: **character.** Opponent sacks.  
 qb\_hurries\_allowed: **character.** Opponent quarterback hurries.  
 interceptions\_allowed: **character.** Opponent interceptions.  
 passes\_deflected\_allowed: **character.** Opponent passes deflected.  
 turnovers\_allowed: **character.** Opponent turnovers.  
 defensive\_tds\_allowed: **character.** Opponent defensive touchdowns.  
 total\_penalties\_yards\_allowed: **character.** Opponent total penalty yards.  
 possession\_time\_allowed: **character.** Opponent time of possession.

### Examples

```
cfbd_game_team_stats(2019, team = "LSU")
cfbd_game_team_stats(2013, team = "Florida State")
```

---

|                   |                                |
|-------------------|--------------------------------|
| cfbd_game_weather | <b>Get weather from games.</b> |
|-------------------|--------------------------------|

---

### Description

**Get weather from games.**

### Usage

```
cfbd_game_weather(
 year,
 week = NULL,
 season_type = "regular",
 team = NULL,
 conference = NULL
)
```

**Arguments**

|             |                                                                                                                                                                                                                               |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| year        | ( <i>Integer</i> required): Year, 4 digit format(YYYY)                                                                                                                                                                        |
| week        | ( <i>Integer</i> optional): Week - values from 1-15, 1-14 for seasons pre-playoff (i.e. 2013 or earlier)                                                                                                                      |
| season_type | ( <i>String</i> default regular): Select Season Type: regular, postseason, or both                                                                                                                                            |
| team        | ( <i>String</i> optional): D-I Team                                                                                                                                                                                           |
| conference  | ( <i>String</i> optional): Conference abbreviation - Select a valid FBS conference<br>Conference abbreviations P5: ACC, B12, B1G, SEC, PAC<br>Conference abbreviations G5 and FBS Independents: CUSA, MAC, MWC, Ind, SBC, AAC |

**Value**

`cfbd_game_weather()` - A data frame with 23 variables:

game\_id: **integer**. Referencing game id.  
 season: **integer**. Season of the game.  
 week: **integer**. Game week.  
 season\_type: **character**. Season type of the game.  
 start\_date: **character**. Game date.  
 start\_time\_tbd: **logical**. TRUE/FALSE flag for if the game's start time is to be determined.  
 game\_indoors: **logical**. TRUE/FALSE flag for if the game is indoors  
 home\_team: **character**. Home team name.  
 home\_conference: **character**. Home team conference.  
 away\_team: **character**. Away team name.  
 away\_conference: **character**. Away team conference.  
 venue\_id: **integer**. Referencing venue id.  
 venue: **character**. Venue name.  
 temperature: **integer**. Temperature.  
 dew\_point: **integer**. Dew Point.  
 humidity: **integer**. Humidity.  
 precipitation: **integer**. Precipitation.  
 snowfall: **integer**. Snowfall.  
 wind\_direction: **integer**. Wind direction.  
 wind\_speed: **integer**. Wind Speed.  
 pressure: **integer**. Pressure.  
 weather\_condition\_code: **integer**. Weather condition code.  
 weather\_condition: **character**. Weather condition.

**Description**

cfbd\_metrics\_ppa\_games(): Get team game averages for predicted points added (PPA).

cfbd\_metrics\_ppa\_players\_games(): Get player game averages for predicted points added (PPA).

cfbd\_metrics\_ppa\_players\_season(): Get player season averages for predicted points added (PPA).

cfbd\_metrics\_ppa\_predicted(): Calculate predicted points using Down and Distance.

cfbd\_metrics\_ppa\_teams(): Get team averages for predicted points added (PPA).

cfbd\_metrics\_wp\_pregame(): Get pre-game win probability data from CFBD API.

cfbd\_metrics\_wp(): Get win probability chart data from CFBD API.

**Get team game averages for predicted points added (PPA):**

```
cfbd_metrics_ppa_games(year = 2019, team = "TCU")
```

**Get player game averages for predicted points added (PPA):**

```
cfbd_metrics_ppa_players_games(year = 2019, week = 3, team = "TCU")
```

**Get player season averages for predicted points added (PPA):**

```
cfbd_metrics_ppa_players_season(year = 2019, team = "TCU")
```

**Get team averages for predicted points added (PPA):**

```
cfbd_metrics_ppa_teams(year = 2019, team = "TCU")
```

**Get pre-game and post-game win probability data from CFBD API:**

```
cfbd_metrics_wp_pregame(year = 2019, week = 9, team = "Texas A&M")
cfbd_metrics_wp(game_id = 401012356)
```

**Calculate predicted points using down and distance:**

```
cfbd_metrics_ppa_predicted(down = 1, distance = 10)
```

---

 cfbd\_metrics\_ppa\_games

### Get team game averages for predicted points added (PPA)

---

#### Description

Get team game averages for predicted points added (PPA)

#### Usage

```
cfbd_metrics_ppa_games(
 year,
 week = NULL,
 team = NULL,
 conference = NULL,
 excl_garbage_time = FALSE
)
```

#### Arguments

|                   |                                                                                                                                                                                                                               |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| year              | ( <i>Integer</i> required): Year, 4 digit format (YYYY)                                                                                                                                                                       |
| week              | ( <i>Integer</i> optional): Week - values range from 1-15, 1-14 for seasons pre-playoff, i.e. 2013 or earlier                                                                                                                 |
| team              | ( <i>String</i> optional): D-I Team                                                                                                                                                                                           |
| conference        | ( <i>String</i> optional): Conference abbreviation - Select a valid FBS conference<br>Conference abbreviations P5: ACC, B12, B1G, SEC, PAC<br>Conference abbreviations G5 and FBS Independents: CUSA, MAC, MWC, Ind, SBC, AAC |
| excl_garbage_time | ( <i>Logical</i> default FALSE): Select whether to exclude Garbage Time (TRUE or FALSE)                                                                                                                                       |

#### Value

`cfbd_metrics_ppa_games()` - A data frame with 18 variables:

`game_id`: **integer**. Referencing game id.  
`season`: **integer**. Season of the game.  
`week`: **integer**. Game week of the season.  
`conference`: **character**. Conference of the team.  
`team`: **character**. Team name.  
`opponent`: **character**. Team Opponent.  
`off_overall`: **character**. Offense overall predicted points added (PPA).

off\_passing: **character.** Offense passing predicted points added (PPA).  
off\_rushing: **character.** Offense rushing predicted points added (PPA).  
off\_first\_down: **character.** Offense 1st down predicted points added (PPA).  
off\_second\_down: **character.** Offense 2nd down predicted points added (PPA).  
off\_third\_down: **character.** Offense 3rd down predicted points added (PPA).  
def\_overall: **character.** Defense overall predicted points added (PPA).  
def\_passing: **character.** Defense passing predicted points added (PPA).  
def\_rushing: **character.** Defense rushing predicted points added (PPA).  
def\_first\_down: **character.** Defense 1st down predicted points added (PPA).  
def\_second\_down: **character.** Defense 2nd down predicted points added (PPA).  
def\_third\_down: **character.** Defense 3rd down predicted points added (PPA).

### Examples

```
cfbd_metrics_ppa_games(year = 2019, team = "TCU")
```

---

cfbd\_metrics\_ppa\_players\_games

**Get player game averages for predicted points added (PPA)**

---

### Description

**Get player game averages for predicted points added (PPA)**

### Usage

```
cfbd_metrics_ppa_players_games(
 year = NULL,
 week = NULL,
 team = NULL,
 position = NULL,
 athlete_id = NULL,
 threshold = NULL,
 excl_garbage_time = FALSE
)
```

**Arguments**

|                   |                                                                                                                                                                                                                                                                                                                |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| year              | ( <i>Integer</i> required): Year, 4 digit format (YYYY)                                                                                                                                                                                                                                                        |
| week              | ( <i>Integer</i> optional): Week - values range from 1-15, 1-14 for seasons pre-playoff, i.e. 2013 or earlier                                                                                                                                                                                                  |
| team              | ( <i>String</i> optional): D-I Team. Required if year not provided.                                                                                                                                                                                                                                            |
| position          | ( <i>string</i> optional): Position abbreviation of the player you are searching for. Position Group - options include: <ul style="list-style-type: none"> <li>• Offense: QB, RB, FB, TE, OL, G, OT, C, WR</li> <li>• Defense: DB, CB, S, LB, DE, DT, NT, DL</li> <li>• Special Teams: K, P, LS, PK</li> </ul> |
| athlete_id        | ( <i>Integer</i> optional): Athlete ID filter for querying a single athlete<br>Can be found using the <a href="#">cfbd_player_info()</a> function.                                                                                                                                                             |
| threshold         | ( <i>Integer</i> optional): Minimum threshold of plays.                                                                                                                                                                                                                                                        |
| excl_garbage_time | ( <i>Logical</i> default FALSE): Select whether to exclude Garbage Time (TRUE or FALSE)                                                                                                                                                                                                                        |

**Value**

[cfbd\\_metrics\\_ppa\\_players\\_games\(\)](#) - A data frame with 9 variables:

season: **integer**. Season of the game.

week: **integer**. Game week of the season.

name: **character**. Athlete name.

position: **character**. Athlete position.

team: **character**. Team name.

opponent: **character**. Team Opponent name.

avg\_PPA\_all: **double**. Average overall predicted points added (PPA).

avg\_PPA\_pass: **double**. Average passing predicted points added (PPA).

avg\_PPA\_rush: **double**. Average rushing predicted points added (PPA).

**Examples**

```
cfbd_metrics_ppa_players_games(year = 2019, week = 3, team = "TCU")
```

---

 cfbd\_metrics\_ppa\_players\_season

### Get player season averages for predicted points added (PPA)

---

#### Description

**Get player season averages for predicted points added (PPA)**

#### Usage

```
cfbd_metrics_ppa_players_season(
 year = NULL,
 team = NULL,
 conference = NULL,
 position = NULL,
 athlete_id = NULL,
 threshold = NULL,
 excl_garbage_time = FALSE
)
```

#### Arguments

|                   |                                                                                                                                                                                                                                                                                                                   |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| year              | ( <i>Integer</i> required): Year, 4 digit format (YYYY)                                                                                                                                                                                                                                                           |
| team              | ( <i>String</i> optional): D-I Team                                                                                                                                                                                                                                                                               |
| conference        | ( <i>String</i> optional): Conference abbreviation - S&P+ information by conference<br>Conference abbreviations P5: ACC, B12, B1G, SEC, PAC<br>Conference abbreviations G5 and FBS Independents: CUSA, MAC, MWC, Ind, SBC, AAC                                                                                    |
| position          | ( <i>string</i> optional): Position abbreviation of the player you are searching for.<br>Position Group - options include: <ul style="list-style-type: none"> <li>• Offense: QB, RB, FB, TE, OL, G, OT, C, WR</li> <li>• Defense: DB, CB, S, LB, DE, DT, NT, DL</li> <li>• Special Teams: K, P, LS, PK</li> </ul> |
| athlete_id        | ( <i>Integer</i> optional): Athlete ID filter for querying a single athlete<br>Can be found using the <a href="#">cfbd_player_info()</a> function.                                                                                                                                                                |
| threshold         | ( <i>Integer</i> optional): Minimum threshold of plays.                                                                                                                                                                                                                                                           |
| excl_garbage_time | ( <i>Logical</i> default FALSE): Select whether to exclude Garbage Time (TRUE or FALSE)                                                                                                                                                                                                                           |



**Value**

`cfbd_metrics_ppa_players_season()` - A data frame with 23 variables:

`season`: **integer**. Season.

`athlete_id`: **character**. Athlete referencing id.

`name`: **character**. Athlete name.

`position`: **character**. Athlete Position.

`team`: **character**. Team name.

`conference`: **character**. Team conference.

`countable_plays`: **integer**. Number of plays which can be counted.

`avg_PPA_all`: **double**. Average overall predicted points added (PPA).

`avg_PPA_pass`: **double**. Average passing predicted points added (PPA).

`avg_PPA_rush`: **double**. Average rushing predicted points added (PPA).

`avg_PPA_first_down`: **double**. Average 1st down predicted points added (PPA).

`avg_PPA_second_down`: **double**. Average 2nd down predicted points added (PPA).

`avg_PPA_third_down`: **double**. Average 3rd down predicted points added (PPA).

`avg_PPA_standard_downs`: **double**. Average standard down predicted points added (PPA).

`avg_PPA_passing_downs`: **double**. Average passing down predicted points added (PPA).

`total_PPA_all`: **double**. Total overall predicted points added (PPA).

`total_PPA_pass`: **double**. Total passing predicted points added (PPA).

`total_PPA_rush`: **double**. Total rushing predicted points added (PPA).

`total_PPA_first_down`: **double**. Total 1st down predicted points added (PPA).

`total_PPA_second_down`: **double**. Total 2nd down predicted points added (PPA).

`total_PPA_third_down`: **double**. Total 3rd down predicted points added (PPA).

`total_PPA_standard_downs`: **double**. Total standard down predicted points added (PPA).

`total_PPA_passing_downs`: **double**. Total passing down predicted points added (PPA).

**Examples**

```
cfbd_metrics_ppa_players_season(year = 2019, team = "TCU")
```

---

cfbd\_metrics\_ppa\_predicted

**Calculate predicted points using down and distance**

---

**Description**

**Calculate predicted points using down and distance**

**Usage**

```
cfbd_metrics_ppa_predicted(down, distance)
```

**Arguments**

down            (*Integer* required): Down filter

distance        (*Integer* required): Distance filter

**Value**

`cfbd_metrics_ppa_predicted()` - A data frame with 2 variables:

yard\_line: **integer**. Yards to goal

predicted\_points: **character**. Predicted points at in that down-distance-yardline scenario

**Examples**

```
cfbd_metrics_ppa_predicted(down = 1, distance = 10)
```

```
cfbd_metrics_ppa_predicted(down = 3, distance = 10)
```

---

cfbd\_metrics\_ppa\_teams

**Get team averages for predicted points added (PPA)**

---

**Description**

**Get team averages for predicted points added (PPA)**

**Usage**

```
cfbd_metrics_ppa_teams(
 year = NULL,
 team = NULL,
 conference = NULL,
 excl_garbage_time = FALSE
)
```

**Arguments**

**year** *(Integer optional)*: Year, 4 digit format (YYYY)

**team** *(String optional)*: D-I Team

**conference** *(String optional)*: Conference name - select a valid FBS conference  
 Conference names P5: ACC, Big 12, Big Ten, SEC, Pac-12  
 Conference names G5 and FBS Independents: Conference USA, Mid-American, Mountain West, FBS Independents, American Athletic

**excl\_garbage\_time** *(Logical default FALSE)*: Select whether to exclude Garbage Time (TRUE or FALSE)

**Value**

`cfbd_metrics_ppa_teams()` - A data frame with 21 variables:

**season: integer.** .

**conference: character.** .

**team: character.** .

**off\_overall: character.** Offense overall predicted points added (PPA).

**off\_passing: character.** Offense passing predicted points added (PPA).

**off\_rushing: character.** Offense rushing predicted points added (PPA).

**off\_first\_down: character.** Offense 1st down predicted points added (PPA).

**off\_second\_down: character.** Offense 2nd down predicted points added (PPA).

**off\_third\_down: character.** Offense 3rd down predicted points added (PPA).

**off\_cumulative\_total: character.** Offense cumulative total predicted points added (PPA).

**off\_cumulative\_passing: character.** Offense cumulative total passing predicted points added (PPA).

**off\_cumulative\_rushing: character.** Offense cumulative total rushing predicted points added (PPA).

**def\_overall: character.** Defense overall predicted points added (PPA).

**def\_passing: character.** Defense passing predicted points added (PPA).

**def\_rushing: character.** Defense rushing predicted points added (PPA).

**def\_first\_down: character.** Defense 1st down predicted points added (PPA).

def\_second\_down: **character**. Defense 2nd down predicted points added (PPA).  
 def\_third\_down: **character**. Defense 3rd down predicted points added (PPA).  
 def\_cumulative\_total: **character**. Defense cumulative total predicted points added (PPA).  
 def\_cumulative\_passing: **character**. Defense cumulative total passing predicted points added (PPA).  
 def\_cumulative\_rushing: **character**. Defense cumulative total rushing predicted points added (PPA).

## Examples

```
cfbd_metrics_ppa_teams(year = 2019, team = "TCU")
```

---

cfbd\_metrics\_wp

**Get win probability chart data from API**

---

## Description

**Get win probability chart data from API**

## Usage

```
cfbd_metrics_wp(game_id)
```

## Arguments

game\_id *(Integer required)*: Game ID filter for querying a single game  
 Can be found using the [cfbd\\_game\\_info\(\)](#) function

## Value

[cfbd\\_metrics\\_wp\(\)](#) - A data frame with 16 variables:

play\_id: **character**. Play referencing id.  
 play\_text: **character**. A text description of the play.  
 home\_id: **integer**. Home team referencing id.  
 home: **character**. Home team name.  
 away\_id: **integer**. Away team referencing id.  
 away: **character**. Away team name.  
 spread: **character**. Betting lines provider spread.  
 home\_ball: **logical**. Home team has the ball.  
 home\_score: **integer**. Home team score.

away\_score: **integer**. Away team score.

down: **integer**. Down of the play.

distance: **integer**. Distance to the sticks (to 1st down marker of goal-line in goal-to-go situations).

home\_win\_prob: **character**. Home team win probability.

away\_win\_prob: **double**. Away team win probability.

play\_number: **integer**. Game play number.

yard\_line: **integer**. Yard line of the play (0-100 yards).

## Examples

```
cfbd_metrics_wp(game_id = 401012356)
```

---

```
cfbd_metrics_wp_pregame
```

### Get pre-game win probability data from API

---

## Description

**Get pre-game win probability data from API**

## Usage

```
cfbd_metrics_wp_pregame(
 year = NULL,
 week = NULL,
 team = NULL,
 season_type = "regular"
)
```

## Arguments

|             |                                                                                                         |
|-------------|---------------------------------------------------------------------------------------------------------|
| year        | ( <i>Integer</i> optional): Year, 4 digit format (YYYY)                                                 |
| week        | ( <i>Integer</i> optional): Week - values from 1-15, 1-14 for seasons pre-playoff, i.e. 2013 or earlier |
| team        | ( <i>String</i> optional): D-I Team                                                                     |
| season_type | ( <i>String</i> default regular): Select Season Type: regular or postseason                             |

**Value**

`cfbd_metrics_wp_pregame()` - A data frame with 9 variables:

**season: integer.** Season of game.

**season\_type: character.** Season type of game.

**week: integer.** Game week of the season.

**game\_id: integer.** Referencing game id.

**home\_team: character.** Home team name.

**away\_team: character.** Away team name.

**spread: integer.** Betting line provider spread.

**home\_win\_prob: double.** Home win probability - pre-game prediction.

**away\_win\_prob: double.** Away win probability - pre-game prediction.

**Examples**

```
cfbd_metrics_wp_pregame(year = 2019, week = 9, team = "Texas A&M")
```

---

cfbd\_pbp\_data

**Get college football play by play data with cfbfastR expected points/win probability added**

---

**Description**

Extract college football (D-I) play by play Data - for plays

**Usage**

```
cfbd_pbp_data(
 year,
 season_type = "regular",
 week = 1,
 team = NULL,
 play_type = NULL,
 epa_wpa = FALSE,
 ...
)
```

**Arguments**

|             |                                                                                                    |
|-------------|----------------------------------------------------------------------------------------------------|
| year        | Select year, (example: 2018)                                                                       |
| season_type | Select Season Type (regular, postseason, both)                                                     |
| week        | Select week, this is optional (also numeric)                                                       |
| team        | Select team name (example: Texas, Texas A&M, Clemson)                                              |
| play_type   | Select play type (example: see the <a href="#">cfbd_play_type_df</a> )                             |
| epa_wpa     | Logical parameter (TRUE/FALSE) to return the Expected Points Added/Win Probability Added variables |
| ...         | Additional arguments passed to an underlying function.                                             |

**Value**

A data frame with 351 variables:

```

season: double. .
wk: double. .
id_play: character. .
game_id: integer. .
game_play_number: double. .
half_play_number: double. .
pos_team: character. .
def_pos_team: character. .
half: integer. .
period: integer. .
clock.minutes: integer. .
clock.seconds: integer. .
play_type: character. .
play_text: character. .
down: double. .
distance: double. .
yards_to_goal: double. .
yards_gained: double. .
penalty_1st_conv: logical. .
new_series: double. .
change_of_pos_team: double. .
lag_change_of_pos_team: double. .
orig_play_type: character. .
lead_play_type: character. .
lag_play_type: character. .

```

lag\_play\_type2: **character**. .  
lag\_play\_type3: **character**. .  
row: **integer**. .  
drive\_play\_number: **double**. .  
drive\_event\_number: **double**. .  
lag\_play\_text: **character**. .  
lag\_play\_text2: **character**. .  
lead\_play\_text: **character**. .  
firstD\_by\_kickoff: **double**. .  
firstD\_by\_poss: **double**. .  
firstD\_by\_penalty: **double**. .  
firstD\_by\_yards: **double**. .  
lag\_first\_by\_penalty: **double**. .  
lag\_first\_by\_penalty2: **double**. .  
lag\_first\_by\_yards: **double**. .  
lag\_first\_by\_yards2: **double**. .  
first\_by\_penalty: **double**. .  
first\_by\_yards: **double**. .  
play\_after\_turnover: **double**. .  
lag\_change\_of\_poss: **double**. .  
lag\_kickoff\_play: **double**. .  
lag\_punt: **double**. .  
lag\_scoring\_play: **double**. .  
lag\_turnover\_vec: **double**. .  
lag\_downs\_turnover: **double**. .  
lag\_defense\_score\_play: **double**. .  
EPA: **double**. .  
ep\_before: **double**. .  
ep\_after: **double**. .  
wpa: **double**. .  
wp\_before: **double**. .  
wp\_after: **double**. .  
def\_wp\_before: **double**. .  
def\_wp\_after: **double**. .  
penalty\_detail: **character**. .  
yds\_penalty: **double**. .  
downs\_turnover: **double**. .



turnover: **double**. .  
pos\_score\_diff\_start: **double**. .  
pos\_score\_pts: **double**. .  
pos\_team\_score: **integer**. .  
def\_pos\_team\_score: **integer**. .  
log\_ydstogo: **double**. .  
ExpScoreDiff: **double**. .  
ExpScoreDiff\_Time\_Ratio: **double**. .  
half\_clock.minutes: **double**. .  
TimeSecsRem: **double**. .  
adj\_TimeSecsRem: **double**. .  
Goal\_To\_Go: **logical**. .  
Under\_two: **logical**. .  
home: **character**. .  
away: **character**. .  
home\_wp\_before: **double**. .  
away\_wp\_before: **double**. .  
home\_wp\_after: **double**. .  
away\_wp\_after: **double**. .  
end\_of\_half: **double**. .  
pos\_team\_receives\_2H\_kickoff: **double**. .  
lead\_pos\_team: **character**. .  
lag\_pos\_team: **character**. .  
Under\_three: **logical**. .  
down\_end: **integer**. .  
distance\_end: **double**. .  
log\_ydstogo\_end: **double**. .  
yards\_to\_goal\_end: **double**. .  
TimeSecsRem\_end: **double**. .  
Goal\_To\_Go\_end: **logical**. .  
Under\_two\_end: **logical**. .  
def\_EPA: **double**. .  
offense\_score\_play: **double**. .  
defense\_score\_play: **double**. .  
ppa: **character**. .  
yard\_line: **integer**. .  
scoring: **logical**. .

pos\_team\_timeouts\_rem\_before: **double**. .  
def\_pos\_team\_timeouts\_rem\_before: **double**. .  
pos\_team\_timeouts: **integer**. .  
def\_pos\_team\_timeouts: **integer**. .  
pos\_score\_diff: **integer**. .  
pos\_score\_diff\_start\_end: **double**. .  
offense\_play: **character**. .  
defense\_play: **character**. .  
offense\_receives\_2H\_kickoff: **double**. .  
change\_of\_poss: **double**. .  
score\_pts: **double**. .  
score\_diff\_start: **double**. .  
score\_diff: **integer**. .  
offense\_score: **integer**. .  
defense\_score: **integer**. .  
offense\_conference: **character**. .  
defense\_conference: **character**. .  
off\_timeout\_called: **double**. .  
def\_timeout\_called: **double**. .  
offense\_timeouts: **integer**. .  
defense\_timeouts: **integer**. .  
off\_timeouts\_rem\_before: **double**. .  
def\_timeouts\_rem\_before: **double**. .  
rusher\_player\_name: **character**. .  
yds\_rushed: **double**. .  
passer\_player\_name: **character**. .  
receiver\_player\_name: **character**. .  
yds\_receiving: **double**. .  
yds\_sacked: **double**. .  
sack\_players: **character**. .  
sack\_player\_name: **character**. .  
sack\_player\_name2: **character**. .  
pass\_breakup\_player\_name: **character**. .  
interception\_player\_name: **character**. .  
yds\_int\_return: **double**. .  
fumble\_player\_name: **character**. .  
fumble\_forced\_player\_name: **character**. .

fumble\_recovered\_player\_name: **character.** .  
yds\_fumble\_return: **double.** .  
punter\_player\_name: **character.** .  
yds\_punted: **double.** .  
punt\_returner\_player\_name: **character.** .  
yds\_punt\_return: **double.** .  
yds\_punt\_gained: **double.** .  
punt\_block\_player\_name: **character.** .  
punt\_block\_return\_player\_name: **character.** .  
fg\_kicker\_player\_name: **character.** .  
yds\_fg: **double.** .  
fg\_block\_player\_name: **character.** .  
fg\_return\_player\_name: **character.** .  
kickoff\_player\_name: **character.** .  
yds\_kickoff: **double.** .  
kickoff\_returner\_player\_name: **character.** .  
yds\_kickoff\_return: **double.** .  
new\_id: **double.** .  
orig\_drive\_number: **integer.** .  
drive\_number: **integer.** .  
drive\_result\_detailed: **character.** .  
new\_drive\_pts: **double.** .  
drive\_id: **double.** .  
drive\_result: **character.** .  
drive\_start\_yards\_to\_goal: **double.** .  
drive\_end\_yards\_to\_goal: **integer.** .  
drive\_yards: **integer.** .  
drive\_scoring: **double.** .  
drive\_pts: **double.** .  
drive\_start\_period: **integer.** .  
drive\_end\_period: **integer.** .  
drive\_time\_minutes\_start: **integer.** .  
drive\_time\_seconds\_start: **integer.** .  
drive\_time\_minutes\_end: **integer.** .  
drive\_time\_seconds\_end: **integer.** .  
drive\_time\_minutes\_elapsed: **integer.** .  
drive\_time\_seconds\_elapsed: **integer.** .

drive\_numbers: **double**. .  
number\_of\_drives: **double**. .  
pts\_scored: **double**. .  
drive\_result\_detailed\_flag: **character**. .  
drive\_result2: **character**. .  
drive\_num: **double**. .  
lag\_drive\_result\_detailed: **character**. .  
lead\_drive\_result\_detailed: **character**. .  
lag\_new\_drive\_pts: **double**. .  
id\_drive: **character**. .  
rush: **double**. .  
rush\_td: **double**. .  
pass: **double**. .  
pass\_td: **double**. .  
completion: **double**. .  
pass\_attempt: **double**. .  
target: **double**. .  
sack\_vec: **double**. .  
sack: **double**. .  
int: **double**. .  
int\_td: **double**. .  
turnover\_vec: **double**. .  
turnover\_vec\_lag: **double**. .  
turnover\_indicator: **double**. .  
kickoff\_play: **double**. .  
receives\_2H\_kickoff: **double**. .  
missing\_yard\_flag: **logical**. .  
scoring\_play: **double**. .  
td\_play: **double**. .  
touchdown: **double**. .  
safety: **double**. .  
fumble\_vec: **double**. .  
kickoff\_tb: **double**. .  
kickoff\_onside: **double**. .  
kickoff\_oob: **double**. .  
kickoff\_fair\_catch: **double**. .  
kickoff\_downed: **double**. .

kickoff\_safety: **double**. .  
kick\_play: **double**. .  
punt: **double**. .  
punt\_play: **double**. .  
punt\_tb: **double**. .  
punt\_oob: **double**. .  
punt\_fair\_catch: **double**. .  
punt\_downed: **double**. .  
punt\_safety: **double**. .  
punt\_blocked: **double**. .  
penalty\_safety: **double**. .  
fg\_inds: **double**. .  
fg\_made: **logical**. .  
fg\_make\_prob: **double**. .  
home\_EPA: **double**. .  
away\_EPA: **double**. .  
home\_EPA\_rush: **double**. .  
away\_EPA\_rush: **double**. .  
home\_EPA\_pass: **double**. .  
away\_EPA\_pass: **double**. .  
total\_home\_EPA: **double**. .  
total\_away\_EPA: **double**. .  
total\_home\_EPA\_rush: **double**. .  
total\_away\_EPA\_rush: **double**. .  
total\_home\_EPA\_pass: **double**. .  
total\_away\_EPA\_pass: **double**. .  
net\_home\_EPA: **double**. .  
net\_away\_EPA: **double**. .  
net\_home\_EPA\_rush: **double**. .  
net\_away\_EPA\_rush: **double**. .  
net\_home\_EPA\_pass: **double**. .  
net\_away\_EPA\_pass: **double**. .  
success: **double**. .  
epa\_success: **double**. .  
rz\_play: **double**. .  
scoring\_opp: **double**. .  
middle\_8: **logical**. .

stuffed\_run: **double**. .  
spread: **double**. .  
formatted\_spread: **character**. .  
No\_Score\_before: **double**. .  
FG\_before: **double**. .  
Opp\_FG\_before: **double**. .  
Opp\_Safety\_before: **double**. .  
Opp\_TD\_before: **double**. .  
Safety\_before: **double**. .  
TD\_before: **double**. .  
No\_Score\_after: **double**. .  
FG\_after: **double**. .  
Opp\_FG\_after: **double**. .  
Opp\_Safety\_after: **double**. .  
Opp\_TD\_after: **double**. .  
Safety\_after: **double**. .  
TD\_after: **double**. .  
penalty\_flag: **logical**. .  
penalty\_declined: **logical**. .  
penalty\_no\_play: **logical**. .  
penalty\_offset: **logical**. .  
penalty\_text: **logical**. .  
penalty\_play\_text: **character**. .  
lead\_wp\_before2: **double**. .  
wpa\_half\_end: **double**. .  
wpa\_base: **double**. .  
wpa\_base\_nxt: **double**. .  
wpa\_change: **double**. .  
wpa\_change\_nxt: **double**. .  
wpa\_base\_ind: **double**. .  
wpa\_base\_nxt\_ind: **double**. .  
wpa\_change\_ind: **double**. .  
wpa\_change\_nxt\_ind: **double**. .  
lead\_wp\_before: **double**. .  
lead\_pos\_team2: **character**. .  
lag\_change\_of\_pos\_team2: **double**. .  
lag\_punt2: **double**. .

lag\_score\_diff: **double**. .  
lag\_offense\_play: **character**. .  
lead\_offense\_play: **character**. .  
lead\_offense\_play2: **character**. .  
lag\_pos\_score\_diff: **double**. .  
lag\_off\_timeouts: **double**. .  
lag\_def\_timeouts: **double**. .  
lag\_TimeSecsRem2: **double**. .  
lag\_TimeSecsRem: **double**. .  
lead\_TimeSecsRem: **double**. .  
lead\_TimeSecsRem2: **double**. .  
lag\_yards\_to\_goal2: **integer**. .  
lag\_yards\_to\_goal: **integer**. .  
lead\_yards\_to\_goal: **double**. .  
lead\_yards\_to\_goal2: **integer**. .  
lag\_down2: **double**. .  
lag\_down: **double**. .  
lead\_down: **double**. .  
lead\_down2: **double**. .  
lead\_distance: **double**. .  
lead\_distance2: **integer**. .  
lead\_play\_type2: **character**. .  
lead\_play\_type3: **character**. .  
lag\_ep\_before3: **double**. .  
lag\_ep\_before2: **double**. .  
lag\_ep\_before: **double**. .  
lead\_ep\_before: **double**. .  
lead\_ep\_before2: **double**. .  
lag\_ep\_after: **double**. .  
lag\_ep\_after2: **double**. .  
lag\_ep\_after3: **double**. .  
lead\_ep\_after: **double**. .  
lead\_ep\_after2: **double**. .  
play\_number: **integer**. .  
over\_under: **double**. .  
event: **double**. .  
game\_event\_number: **double**. .

game\_row\_number: **integer.** .  
half\_event: **double.** .  
half\_event\_number: **double.** .  
half\_row\_number: **integer.** .  
lag\_distance3: **integer.** .  
lag\_distance2: **integer.** .  
lag\_distance: **integer.** .  
lag\_yards\_gained3: **integer.** .  
lag\_yards\_gained2: **integer.** .  
lag\_yards\_gained: **integer.** .  
lead\_yards\_gained: **integer.** .  
lead\_yards\_gained2: **integer.** .  
lag\_play\_text3: **character.** .  
lead\_play\_text2: **character.** .  
lead\_play\_text3: **character.** .  
lag\_change\_of\_poss2: **double.** .  
lag\_change\_of\_poss3: **double.** .  
lag\_change\_of\_pos\_team3: **double.** .  
lag\_kickoff\_play2: **double.** .  
lag\_kickoff\_play3: **double.** .  
lag\_punt3: **double.** .  
lag\_scoring\_play2: **double.** .  
lag\_scoring\_play3: **double.** .  
lag\_turnover\_vec2: **double.** .  
lag\_turnover\_vec3: **double.** .  
lag\_downs\_turnover2: **double.** .  
lag\_downs\_turnover3: **double.** .  
drive\_event: **double.** .  
lag\_first\_by\_penalty3: **double.** .  
lag\_first\_by\_yards3: **double.** .



**Description**

College football plays data

cfbd\_plays(): CFBD's college football play-by-play.

cfbd\_play\_stats\_player(): Gets player info associated by play.

cfbd\_play\_stats\_types(): Gets CFBD play stat types.

cfbd\_play\_types(): Gets CFBD play types.

**Pull first 3 weeks of 2020 season using cfbd\_plays():**

```

year_vector <- 2020
week_vector <- 1:3
weekly_year_df <- expand.grid(year = year_vector, week = week_vector)
tictoc::tic()
year_split <- split(weekly_year_df, weekly_year_df$year)
for (i in 1:length(year_split)) {
 i <- 1
 future::plan("multisession")
 progressr::with_progress({
 year_split[[i]] <- year_split[[i]] %>%
 dplyr::mutate(
 pbp = purrr::map2(
 .x = year,
 .y = week,
 cfbd_plays,
 season_type = "both"
)
)
 Sys.sleep(1)
 })
}

tictoc::toc()
year_split <- lapply(year_split, function(x) {
 x %>% tidyr::unnest(pbp, names_repair = "minimal")
})

all_years <- dplyr::bind_rows(year_split)
glimpse(all_years)

```

**Gets player info associated by play:**

```
cfbd_play_stats_player(game_id = 401110722)
```

**Gets CFBD play stat types:**

```
cfbd_play_stats_types()
```

**Gets CFBD play types:**

```
cfbd_play_types()
```

---

 cfbd\_players

---

**CFBD Players Endpoint Overview**


---

**Description**

cfbd\_player\_info(): Player information search.

cfbd\_player\_returning(): Player returning production.

cfbd\_player\_usage(): Player usage.

**Player information lookup:**

```
cfbd_player_info(search_term = "James", position = "DB", team = "Florida State", year = 2017)
```

```
cfbd_player_info(search_term = "Lawrence", team = "Clemson")
```

**Get player returning production:**

```
cfbd_player_returning(year = 2019, team = "Florida State")
```

**Get player usage metrics:**

```
cfbd_player_usage(year = 2019, position = "WR", team = "Florida State")
```

---

 cfbd\_player\_info

---

**Player information lookup**


---

**Description****Player information lookup****Usage**

```
cfbd_player_info(search_term, position = NULL, team = NULL, year = NULL)
```

**Arguments**

|             |                                                                                                                                                                                                                                                                                                      |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| search_term | ( <i>String</i> required): Search term for the player you are trying to look up                                                                                                                                                                                                                      |
| position    | ( <i>string</i> optional): Position of the player you are searching for.<br>Position Group - options include: <ul style="list-style-type: none"> <li>• Offense: QB, RB, FB, TE, OL, G, OT, C, WR</li> <li>• Defense: DB, CB, S, LB, DE, DT, NT, DL</li> <li>• Special Teams: K, P, LS, PK</li> </ul> |
| team        | ( <i>String</i> optional): Team - Select a valid team, D1 football                                                                                                                                                                                                                                   |
| year        | ( <i>Integer</i> optional): Year, 4 digit format (YYYY).<br>If left NULL, API default will only provide results for most recent year of final rosters: 2020                                                                                                                                          |

**Value**

`cfbd_player_info()` - A data frame with 12 variables:

**athlete\_id:character.** Unique player identifier athlete\_id.

**team:character.** Team of the player.

**name:character.** Player name.

**first\_name:character.** Player first name.

**last\_name:character.** Player last name.

**weight:integer.** Player weight.

**height:integer.** Player height.

**jersey:integer.** Player jersey number.

**position:character.** Player position.

**home\_town:character.** Player home town.

**team\_color:character.** Player team color.

**team\_color\_secondary:character.** Player team secondary color.

**Examples**

```
cfbd_player_info(search_term = "James", position = "DB", team = "Florida State", year = 2017)
```

```
cfbd_player_info(search_term = "Lawrence", team = "Clemson")
```

---

 cfbd\_player\_returning **Get player returning production**


---

**Description****Get player returning production****Usage**

```
cfbd_player_returning(year = 2019, team = NULL, conference = NULL)
```

**Arguments**

|            |                                                                                                                                                                                                                               |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| year       | ( <i>Integer</i> required, default 2019): Year, 4 digit format (YYYY).                                                                                                                                                        |
| team       | ( <i>String</i> optional): Team - Select a valid team, D1 football                                                                                                                                                            |
| conference | ( <i>String</i> optional): Conference abbreviation - Select a valid FBS conference<br>Conference abbreviations P5: ACC, B12, B1G, SEC, PAC<br>Conference abbreviations G5 and FBS Independents: CUSA, MAC, MWC, Ind, SBC, AAC |

**Value**

`cfbd_player_returning()` - A data frame with 15 variables:

season:**integer**. Returning player season.

team:**character**. Team name.

conference:**character**. Conference of team.

total\_ppa:**double**. Total predicted points added returning.

total\_passing\_ppa:**double**. Total passing predicted points added returning.

total\_receiving\_ppa:**double**. Total receiving predicted points added returning.

total\_rushing\_ppa:**double**. Total rushing predicted points added returning.

percent\_ppa:**double**. Percentage of prior year's predicted points added returning.

percent\_passing\_ppa:**double**. Percentage of prior year's passing predicted points added returning.

percent\_receiving\_ppa:**double**. Percentage of prior year's receiving predicted points added returning.

percent\_rushing\_ppa:**double**. Percentage of prior year's rushing predicted points added returning.

usage:**double**. .

passing\_usage:**double**. .

receiving\_usage:**double**. .

rushing\_usage:**double**. .

**Examples**

```
cfbd_player_returning(year = 2019, team = "Florida State")
```

---

**cfbd\_player\_usage      Get player usage metrics**


---

**Description****Get player usage metrics****Usage**

```
cfbd_player_usage(
 year = 2019,
 team = NULL,
 conference = NULL,
 position = NULL,
 athlete_id = NULL,
 excl_garbage_time = FALSE
)
```

**Arguments**

|                   |                                                                                                                                                                                                                                                                                                      |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| year              | ( <i>Integer</i> required, default 2019): Year, 4 digit format (YYYY).                                                                                                                                                                                                                               |
| team              | ( <i>String</i> optional): Team - Select a valid team, D1 football                                                                                                                                                                                                                                   |
| conference        | ( <i>String</i> optional): Conference abbreviation - Select a valid FBS conference<br>Conference abbreviations P5: ACC, B12, B1G, SEC, PAC<br>Conference abbreviations G5 and FBS Independents: CUSA, MAC, MWC, Ind, SBC, AAC                                                                        |
| position          | ( <i>string</i> optional): Position of the player you are searching for.<br>Position Group - options include: <ul style="list-style-type: none"> <li>• Offense: QB, RB, FB, TE, OL, G, OT, C, WR</li> <li>• Defense: DB, CB, S, LB, DE, DT, NT, DL</li> <li>• Special Teams: K, P, LS, PK</li> </ul> |
| athlete_id        | ( <i>Integer</i> optional): Athlete ID filter for querying a single athlete<br>Can be found using the <a href="#">cfbd_player_info()</a> function.                                                                                                                                                   |
| excl_garbage_time | ( <i>Logical</i> default FALSE): Select whether to exclude Garbage Time (TRUE/FALSE)                                                                                                                                                                                                                 |

**Value**

`cfbd_player_usage()` - A data frame with 14 variables:

`season`: **integer**. Player usage season.

`athlete_id`: **character**. Referencing athlete id.

`name`: **character**. Athlete name.

`position`: **character**. Athlete position.

`team`: **character**. Team name.

`conference`: **character**. Conference of team.

`usg_overall`: **double**. Player usage of overall offense.

`usg_pass`: **double**. Player passing usage percentage.

`usg_rush`: **double**. Player rushing usage percentage.

`usg_1st_down`: **double**. Player first down usage percentage.

`usg_2nd_down`: **double**. Player second down usage percentage.

`usg_3rd_down`: **double**. Player third down usage percentage.

`usg_standard_downs`: **double**. Player standard down usage percentage.

`usg_passing_downs`: **double**. Player passing down usage percentage.

**Examples**

```
cfbd_player_usage(year = 2019, position = "WR", team = "Florida State")
```

---

cfbd\_plays

**Get college football play-by-play data.**

---

**Description**

**Get college football play-by-play data.**

**Usage**

```
cfbd_plays(
 year = 2020,
 season_type = "regular",
 week = 1,
 team = NULL,
 offense = NULL,
 defense = NULL,
 conference = NULL,
 offense_conference = NULL,
 defense_conference = NULL,
 play_type = NULL
)
```

**Arguments**

|                    |                                                                                                                                 |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------|
| year               | Select year, (example: 2018)                                                                                                    |
| season_type        | Select Season Type (regular, postseason, both)                                                                                  |
| week               | Select week, this is optional (also numeric)                                                                                    |
| team               | Select team name (example: Texas, Texas A&M, Clemson)                                                                           |
| offense            | Select offense name (example: Texas, Texas A&M, Clemson)                                                                        |
| defense            | Select defense name (example: Texas, Texas A&M, Clemson)                                                                        |
| conference         | Select conference name (example: ACC, B1G, B12, SEC, PAC, MAC, MWC, CUSA, Ind, SBC, AAC, Western, MVIAA, SWC, PCC, Big 6, etc.) |
| offense_conference | Select conference name (example: ACC, B1G, B12, SEC, PAC, MAC, MWC, CUSA, Ind, SBC, AAC, Western, MVIAA, SWC, PCC, Big 6, etc.) |
| defense_conference | Select conference name (example: ACC, B1G, B12, SEC, PAC, MAC, MWC, CUSA, Ind, SBC, AAC, Western, MVIAA, SWC, PCC, Big 6, etc.) |
| play_type          | Select play type (example: see the <a href="#">cfbd_play_type_df</a> )                                                          |

**Value**

`cfbd_plays()` - A data frame with 29 columns:

`play_id`: **character**. Referencing play id.

`offense`: **character**. Offense on the field.

`offense_conference`: **character**. Conference of the offense on the field.

`defense`: **character**. Defense on the field.

`defense_conference`: **character**. Conference of the defense on the field.

`home`: **character**. Home team.

`away`: **character**. Away team.

`offense_score`: **integer**. Offense's post-play score.

`defense_score`: **integer**. Defense's post-play score.

`game_id`: **integer**. Referencing game id.

`drive_id`: **character**. Referencing drive id.

`drive_number`: **integer**. Drive number in the game.

`play_number`: **integer**. Play number in the game.

`period`: **integer**. Game period (quarter).

`offense_timeouts`: **integer**. Timeouts for the offense at the end of the play.

`defense_timeouts`: **integer**. Timeouts for the defense at the end of the play.

`yard_line`: **integer**. Yard line (~0-50) of the play.

yards\_to\_goal: **integer**. Yards to the goal line (~0-100).

down: **integer**. Down of the play.

distance: **integer**. Distance to the sticks, i.e. 1st down or goal-line in goal-to-go situations.

scoring: **logical**. Scoring play flag.

yards\_gained: **integer**. Yards net gained by the offense on the play.

play\_type: **character**. Categorical label of the type of the play.

play\_text: **character**. A text description of the play.

ppa: **character**. Predicted Points Added (calculated by CFBD).

clock.minutes: **integer**. Minutes left on the clock.

clock.seconds: **integer**. Seconds left on the clock.

### Examples

```
Not run:
year_vector <- 2020
week_vector <- 1:3
weekly_year_df <- expand.grid(year = year_vector, week = week_vector)
tictoc::tic()
year_split <- split(weekly_year_df, weekly_year_df$year)
for (i in 1:length(year_split)) {
 i <- 1
 future::plan("multisession")
 progressr::with_progress({
 year_split[[i]] <- year_split[[i]] %>%
 dplyr::mutate(
 pbp = purrr::map2(
 .x = year,
 .y = week,
 cfbd_plays,
 season_type = "both"
)
)
 })
}

tictoc::toc()
year_split <- lapply(year_split, function(x) {
 x %>% tidyr::unnest(pbp, names_repair = "minimal")
})

all_years <- dplyr::bind_rows(year_split)
glimpse(all_years)

End(Not run)
```



---

 cfbd\_play\_stats\_player

**Gets player info associated by play**


---

**Description**
**Gets player info associated by play**
**Usage**

```
cfbd_play_stats_player(
 year = NULL,
 week = NULL,
 team = NULL,
 game_id = NULL,
 athlete_id = NULL,
 stat_type_id = NULL,
 season_type = "regular"
)
```

**Arguments**

|              |                                                                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| year         | ( <i>Integer</i> optional): Year, 4 digit format (YYYY)                                                                                                 |
| week         | ( <i>Integer</i> optional): Week - values from 1-15, 1-14 for seasons pre-playoff, i.e. 2013 or earlier                                                 |
| team         | ( <i>String</i> optional): D-I Team                                                                                                                     |
| game_id      | ( <i>Integer</i> optional): Game ID filter for querying a single game Can be found using the <a href="#">cfbd_game_info()</a> function                  |
| athlete_id   | ( <i>Integer</i> optional): Athlete ID filter for querying a single athlete Can be found using the <a href="#">cfbd_player_info()</a> function.         |
| stat_type_id | ( <i>Integer</i> optional): Stat Type ID filter for querying a single stat type Can be found using the <a href="#">cfbd_play_stats_types()</a> function |
| season_type  | ( <i>String</i> default regular): Select Season Type: regular, postseason, or both                                                                      |

**Value**

[cfbd\\_play\\_stats\\_player\(\)](#) - A data frame with 54 variables:

play\_id: **character**. Referencing play id.

game\_id: **integer**. Referencing game id.

season: **integer**. Season of the play.

week: **integer**. Week of the play.

opponent: **character**. Opponent of the offense on the play.

team\_score: **integer**. Offense team score.

opponent\_score: **integer**. Defense team score.

drive\_id: **character**. Referencing drive id.

period: **integer**. Game period (quarter) of the play.

yards\_to\_goal: **integer**. Yards to the goal line (~0-100).

down: **integer**. Down of the play.

distance: **integer**. Distance to the sticks, i.e. 1st down or goal-line in goal-to-go situations.

reception\_player\_id: **character**. Pass receiver player reference id.

reception\_player: **character**. Pass receiver player name.

reception\_yds: **integer**. Reception yards.

completion\_player\_id: **character**. Passing player reference id.

completion\_player: **character**. Passing player name.

completion\_yds: **integer**. Passing yards.

rush\_player\_id: **character**. Rushing player reference id.

rush\_player: **character**. Rushing player name.

rush\_yds: **integer**. Rushing yards.

interception\_player\_id: **character**. Intercepting player reference id.

interception\_player: **character**. Intercepting player name.

interception\_stat: **integer**. Intercepting stat.

interception\_thrown\_player\_id: **character**. Interception passing player reference id.

interception\_thrown\_player: **character**. Interception passing player name.

interception\_thrown\_stat: **integer**. Interception thrown stat.

touchdown\_player\_id: **character**. Touchdown scoring player reference id.

touchdown\_player: **character**. Touchdown scoring player name.

touchdown\_stat: **integer**. Touchdown scoring stat.

incompletion\_player\_id: **character**. Incomplete receiver player reference id.

incompletion\_player: **character**. Incomplete receiver player name.

incompletion\_stat: **integer**. Incomplete stat.

target\_player\_id: **character**. Targeted receiver player reference id.

target\_player: **character**. Targeted receiver player name.

target\_stat: **integer**. Target stat.

fumble\_recovered\_player\_id: **logical**. Fumble recovering player reference id.

fumble\_recovered\_player: **logical**. Fumble recovering player name.

fumble\_recovered\_stat: **logical**. Fumble recovered stat.

fumble\_forced\_player\_id: **logical**. Fumble forcing player reference id.

fumble\_forced\_player: **logical**. Fumble forcing player name.

fumble\_forced\_stat: **logical**. Fumble forced stat.

fumble\_player\_id: **logical**. Fumbling player reference id.

fumble\_player: **logical**. Fumbling player name.  
fumble\_stat: **logical**. Fumble stat.  
sack\_player\_id: **character**. Sacking player(s) reference id.  
sack\_player: **character**. Sacking player(s) name.  
sack\_stat: **integer**. Sack stat.  
sack\_taken\_player\_id: **character**. Sack taking player reference id.  
sack\_taken\_player: **character**. Sack taking player name.  
sack\_taken\_stat: **integer**. Sack taken stat.  
pass\_breakup\_player\_id: **logical**. Pass breakup player reference id.  
pass\_breakup\_player: **logical**. Pass breakup player name.  
pass\_breakup\_stat: **logical**. Pass breakup (PBU) stat.

### Examples

```
cfbd_play_stats_player(game_id = 401110722)
```

---

cfbd\_play\_stats\_types **Get college football mapping for play stats types**

---

### Description

**Get college football mapping for play stats types**

### Usage

```
cfbd_play_stats_types()
```

### Value

`cfbd_play_stats_types()` - A data frame with 22 rows and 2 variables:

play\_stat\_type\_id: **integer** Referencing play stat type ID.

name: **character** Type of play stats.

### Examples

```
cfbd_play_stats_types()
```

---

|                 |                                                    |
|-----------------|----------------------------------------------------|
| cfbd_play_types | <b>Get college football mapping for play types</b> |
|-----------------|----------------------------------------------------|

---

**Description**

**Get college football mapping for play types**

**Usage**

```
cfbd_play_types()
```

**Value**

`cfbd_play_types()` - A data frame with 48 rows and 3 variables:

`play_type_id`: **integer** Referencing play type id.

`text`: **character** play type description.

`abbreviation`: **character** play type abbreviation used for function call

---

|               |                                                |
|---------------|------------------------------------------------|
| cfbd_rankings | <b>Get historical Coaches and AP poll data</b> |
|---------------|------------------------------------------------|

---

**Description**

**Get historical Coaches and AP poll data**

**Usage**

```
cfbd_rankings(year, week = NULL, season_type = "regular")
```

**Arguments**

`year` (*Integer* required): Year, 4 digit format (YYYY)

`week` (*Integer* optional): Week, values from 1-15, 1-14 for seasons pre-playoff (i.e. 2013 or earlier)

`season_type` (*String* default regular): Season type - regular or postseason

**Value**

`cfbd_rankings()` - A data frame with 9 variables:

- `season`: **integer**. Rankings season.
- `season_type`: **character**. Season type of rankings.
- `week`: **integer**. Week of rankings.
- `poll`: **character**. Name of the poll.
- `rank`: **integer**. Rank in the poll.
- `school`: **character**. Team name.
- `conference`: **character**. Conference of the team.
- `first_place_votes`: **integer**. Number of first place votes.
- `points`: **integer**. Total poll points.

**Examples**

```
cfbd_rankings(year = 2019, week = 12)

cfbd_rankings(year = 2018, week = 14)

cfbd_rankings(year = 2013, season_type = "postseason")
```

---

cfbd\_ratings

CFBD Ratings and Rankings Endpoints Overview

---

**Description**

`cfbd_rankings()`: Gets Historical CFB poll rankings at a specific week.  
`cfbd_ratings_sp()`: Get SP historical rating data.  
`cfbd_ratings_sp_conference()`: Get SP conference-level historical rating data.  
`cfbd_ratings_srs()`: Get SRS historical rating data.

**Get historical Coaches and AP poll data:**

```
cfbd_rankings(year = 2019, week = 12)

cfbd_rankings(year = 2018, week = 14)

cfbd_rankings(year = 2013, season_type = "postseason")
```

**Get SP historical rating data:**

At least one of **year** or **team** must be specified for the function to run

```
cfbd_ratings_sp(year = 2018)
```

```
cfbd_ratings_sp(team = "Texas A&M")
```

```
cfbd_ratings_sp(year = 2019, team = "Texas")
```

**Get conference level SP historical rating data:**

```
cfbd_ratings_sp_conference(year = 2019)
```

```
cfbd_ratings_sp_conference(year = 2012, conference = "SEC")
```

```
cfbd_ratings_sp_conference(year = 2016, conference = "ACC")
```

**Get SRS historical rating data:**

At least one of **year** or **team** must be specified for the function to run

```
cfbd_ratings_srs(year = 2019, team = "Texas")
```

```
cfbd_ratings_srs(year = 2018, conference = "SEC")
```

**Get Elo historical rating data:**

Acquire the CFBD calculated elo ratings data by **team**, **year**, **week**, and **conference**

```
cfbd_ratings_elo(year = 2019, team = "Texas")
```

```
cfbd_ratings_elo(year = 2018, conference = "SEC")
```

---

|                  |                                       |
|------------------|---------------------------------------|
| cfbd_ratings_elo | <b>Get Elo historical rating data</b> |
|------------------|---------------------------------------|

---

**Description**

Acquire the CFBD calculated elo ratings data by team, year, week, and conference

**Usage**

```
cfbd_ratings_elo(year = NULL, week = NULL, team = NULL, conference = NULL)
```

**Arguments**

|            |                                                                                                                                                                                                                               |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| year       | ( <i>Integer</i> optional): Year, 4 digit format (YYYY)                                                                                                                                                                       |
| week       | ( <i>Integer</i> optional): Maximum Week of ratings.                                                                                                                                                                          |
| team       | ( <i>String</i> optional): D-I Team                                                                                                                                                                                           |
| conference | ( <i>String</i> optional): Conference abbreviation - SRS information by conference<br>Conference abbreviations P5: ACC, B12, B1G, SEC, PAC<br>Conference abbreviations G5 and FBS Independents: CUSA, MAC, MWC, Ind, SBC, AAC |

**Value**

`cfbd_ratings_elo()` - A data frame with 6 variables:

**year: integer.** Season of the SRS rating.

**team: character.** Team name.

**conference: character.** Conference of the team.

**division: logical.** Division in the conference for the team.

**rating: double.** Simple Rating System (SRS) rating.

**ranking: integer.** Simple Rating System ranking within the group returned.

**Examples**

```
cfbd_ratings_elo(year = 2019, team = "Texas")
```

```
cfbd_ratings_elo(year = 2018, conference = "SEC")
```

---

cfbd\_ratings\_sp

**Get SP historical rating data**

---

**Description**

At least one of **year** or **team** must be specified for the function to run

**Usage**

```
cfbd_ratings_sp(year = NULL, team = NULL)
```

**Arguments**

**year** (*Integer optional*): Year, 4 digit format (YYYY)

**team** (*String optional*): D-I Team

**Value**

`cfbd_ratings_sp()` - A data frame with 26 variables:

**year: integer.** Season of the ratings.

**team: character.** Team name.

**conference: character.** Conference of the team.

**rating: double.** SP+ rating.

**ranking: integer.** Ranking in the SP+ ratings.

**second\_order\_wins: logical.** Total second-order wins - Not available for recent seasons.

**sos: logical.** Strength of schedule - Not available for recent seasons.

**offense\_ranking: integer.** Overall offense ranking.

**offense\_rating: double.** Overall offense rating.

**offense\_success: logical.** Offense success rating - Not available for recent seasons.

**offense\_explosiveness: logical.** Offense explosiveness rating - Not available for recent seasons.

**offense\_rushing: logical.** Offense rushing rating - Not available for recent seasons.

**offense\_passing: logical.** Offense passing rating - Not available for recent seasons.

**offense\_standard\_downs: logical.** Offense standard downs rating - Not available for recent seasons.

**offense\_passing\_downs: logical.** Offensive passing downs rating - Not available for recent seasons.

**offense\_run\_rate: logical.** Offense rushing rate - Not available for recent seasons.

**offense\_pace: logical.** Offense pace factor - Not available for recent seasons.

**defense\_ranking: integer.** Overall defense ranking.

**defense\_rating: double.** Overall defense rating.

**defense\_success: logical.** Defense success rating - Not available for recent seasons.

**defense\_explosiveness: logical.** Defense explosiveness rating - Not available for recent seasons.

**defense\_rushing: logical.** Defense rushing rating - Not available for recent seasons.

**defense\_passing: logical.** Defense passing rating - Not available for recent seasons.

**defense\_standard\_downs: logical.** Defense standard downs rating - Not available for recent seasons.

**defense\_passing\_downs: logical.** Defensive passing downs rating - Not available for recent seasons.

**defense\_havoc\_total: logical.** Total defensive havoc rate - Not available for recent seasons.

**defense\_havoc\_front\_seven: logical.** Defense havoc rate from front 7 players - Not available for recent seasons.

**defense\_havoc\_db: logical.** Defense havoc rate from defensive backs - Not available for recent seasons.

**special\_teams\_rating: double.** Special teams rating.

## Examples

```
cfbd_ratings_sp(year = 2018)
cfbd_ratings_sp(team = "Texas A&M")
cfbd_ratings_sp(year = 2019, team = "Texas")
```



---

 cfbd\_ratings\_sp\_conference

### Get conference level SP historical rating data

---

#### Description

##### Get conference level SP historical rating data

#### Usage

```
cfbd_ratings_sp_conference(year = NULL, conference = NULL)
```

#### Arguments

|            |                                                                                                                                                                                                                                |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| year       | ( <i>Integer</i> optional): Year, 4 digit format (YYYY)                                                                                                                                                                        |
| conference | ( <i>String</i> optional): Conference abbreviation - S&P+ information by conference<br>Conference abbreviations P5: ACC, B12, B1G, SEC, PAC<br>Conference abbreviations G5 and FBS Independents: CUSA, MAC, MWC, Ind, SBC, AAC |

#### Value

`cfbd_ratings_sp_conference()` - A data frame with 25 variables:

year: **integer**. Season of the conference rating.

conference: **character**. Conference name.

rating: **double**. Conference SP+ rating.

second\_order\_wins: **logical**. Second-order wins for the conference - Not available for recent seasons.

sos: **logical**. Strength of schedule for the conference - Not available for recent seasons..

offense\_rating: **double**. Overall offense rating for the conference.

offense\_success: **logical**. Offense success rating for the conference - Not available for recent seasons.

offense\_explosiveness: **logical**. Offense explosiveness rating for the conference - Not available for recent seasons.

offense\_rushing: **logical**. Offense rushing rating for the conference - Not available for recent seasons.

offense\_passing: **logical**. Offense passing rating for the conference - Not available for recent seasons.

offense\_standard\_downs: **logical**. Offense standard downs rating for the conference - Not available for recent seasons.

offense\_passing\_downs: **logical**. Offensive passing downs rating for the conference - Not available for recent seasons.

**offense\_run\_rate: logical.** Offense rushing rate for the conference - Not available for recent seasons.  
**offense\_pace: logical.** Offense pace factor for the conference - Not available for recent seasons.  
**defense\_ranking: integer.** Overall defense ranking for the conference.  
**defense\_rating: double.** Overall defense rating for the conference.  
**defense\_success: logical.** Defense success rating for the conference - Not available for recent seasons.  
**defense\_explosiveness: logical.** Defense explosiveness rating for the conference - Not available for recent seasons.  
**defense\_rushing: logical.** Defense rushing rating for the conference - Not available for recent seasons.  
**defense\_passing: logical.** Defense passing rating for the conference - Not available for recent seasons.  
**defense\_standard\_downs: logical.** Defense standard downs rating for the conference - Not available for recent seasons.  
**defense\_passing\_downs: logical.** Defensive passing downs rating for the conference - Not available for recent seasons.  
**defense\_havoc\_total: logical.** Total defensive havoc rate for the conference - Not available for recent seasons.  
**defense\_havoc\_front\_seven: logical.** Defense havoc rate from front 7 players for the conference - Not available for recent seasons.  
**defense\_havoc\_db: logical.** Defense havoc rate from defensive backs for the conference - Not available for recent seasons.  
**special\_teams\_rating: double.** Special teams rating for the conference.

### Examples

```

cfbd_ratings_sp_conference(year = 2019)

cfbd_ratings_sp_conference(year = 2012, conference = "SEC")

cfbd_ratings_sp_conference(year = 2016, conference = "ACC")

```

---

cfbd\_ratings\_srs

**Get SRS historical rating data**

---

### Description

At least one of **year** or **team** must be specified for the function to run

**Usage**

```
cfbd_ratings_srs(year = NULL, team = NULL, conference = NULL)
```

**Arguments**

year            (*Integer optional*): Year, 4 digit format (YYYY)  
 team           (*String optional*): D-I Team  
 conference     (*String optional*): Conference abbreviation - SRS information by conference  
                 Conference abbreviations P5: ACC, B12, B1G, SEC, PAC  
                 Conference abbreviations G5 and FBS Independents: CUSA, MAC, MWC, Ind,  
                 SBC, AAC

**Value**

`cfbd_ratings_srs()` - A data frame with 6 variables:

year: **integer**. Season of the SRS rating.

team: **character**. Team name.

conference: **character**. Conference of the team.

division: **logical**. Division in the conference for the team.

rating: **double**. Simple Rating System (SRS) rating.

ranking: **integer**. Simple Rating System ranking within the group returned.

**Examples**

```
cfbd_ratings_srs(year = 2019, team = "Texas")
```

```
cfbd_ratings_srs(year = 2018, conference = "SEC")
```

**Description**

`cfbd_recruiting_player()`: Get college football player recruiting information for a single year with filters available for team, recruit type, state and position.

`cfbd_recruiting_position()`: Get college football position group recruiting information .

`cfbd_recruiting_team()`: Get college football recruiting team rankings information.

**Get player recruiting rankings:**

Get college football player recruiting information for a single year with filters available for team, recruit type, state and position.

```
cfbd_recruiting_player(2018, team = "Texas")
cfbd_recruiting_player(2016, recruit_type = "JUCO")
cfbd_recruiting_player(2020, recruit_type = "HighSchool", position = "OT", state = "FL")
```

**Get college football position group recruiting information.:**

```
cfbd_recruiting_position(2018, team = "Texas")
cfbd_recruiting_position(2016, 2020, team = "Virginia")
cfbd_recruiting_position(2015, 2020, conference = "SEC")
```

**Get college football recruiting team rankings information.:**

```
cfbd_recruiting_team(2018, team = "Texas")
cfbd_recruiting_team(2016, team = "Virginia")
cfbd_recruiting_team(2016, team = "Texas A&M")
cfbd_recruiting_team(2011)
```

## Details

Gets CFB team recruiting ranks with filters available for year and team. At least one of **year** or **team** must be specified for the function to run

If you would like CFB recruiting information for players, please see the [cfbd\\_recruiting\\_player\(\)](#) function

If you would like to get CFB recruiting information based on position groups during a time period for all FBS teams, please see the [cfbd\\_recruiting\\_position\(\)](#) function.

[cfbd\\_recruiting\\_player\(\)](#) - At least one of **year** or **team** must be specified for the function to run

[cfbd\\_recruiting\\_position\(\)](#) - If only `start_year` is provided, function will get CFB recruiting information based on position groups during that year for all FBS teams.

---

cfbd\_recruiting\_player

**Get player recruiting rankings**

---

## Description

**Get player recruiting rankings**

**Usage**

```
cfbd_recruiting_player(
 year = NULL,
 team = NULL,
 recruit_type = "HighSchool",
 state = NULL,
 position = NULL
)
```

**Arguments**

|              |                                                                                                                                                                                                                                                                                      |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| year         | ( <i>Integer</i> optional): Year, 4 digit format (YYYY) - Minimum: 2000, Maximum: 2020 currently                                                                                                                                                                                     |
| team         | ( <i>String</i> optional): D-I Team                                                                                                                                                                                                                                                  |
| recruit_type | ( <i>String</i> optional): default API return is 'HighSchool', other options include 'JUCO' or 'PrepSchool' - For position group information                                                                                                                                         |
| state        | ( <i>String</i> optional): Two letter State abbreviation                                                                                                                                                                                                                             |
| position     | ( <i>String</i> optional): Position Group - options include: <ul style="list-style-type: none"> <li>• Offense: 'PRO', 'DUAL', 'RB', 'FB', 'TE', 'OT', 'OG', 'OC', 'WR'</li> <li>• Defense: 'CB', 'S', 'OLB', 'ILB', 'WDE', 'SDE', 'DT'</li> <li>• Special Teams: 'K', 'P'</li> </ul> |

**Value**

`cfbd_recruiting_player()` - A data frame with 14 variables:

**id: integer.** Referencing id - 247Sports.

**athlete\_id** Athlete referencing id.

**recruit\_type: character.** High School, Prep School, or Junior College.

**year: integer.** Recruit class year.

**ranking: integer.** Recruit Ranking.

**name: character.** Recruit Name.

**school: character.** School recruit attended.

**committed\_to: character.** School the recruit is committed to.

**position: character.** Recruit position.

**height: double.** Recruit height.

**weight: integer.** Recruit weight.

**stars: integer.** Recruit stars.

**rating: double.** 247 composite rating.

**city: character.** Hometown of the recruit.

state\_province: **character.** Hometown state of the recruit.  
 country: **character.** Hometown country of the recruit.  
 hometown\_info\_latitude: **character.** Hometown latitude.  
 hometown\_info\_longitude: **character.** Hometown longitude.  
 hometown\_info\_fips\_code: **character.** Hometown FIPS code.

### Examples

```
cfbd_recruiting_player(2018, team = "Texas")
cfbd_recruiting_player(2016, recruit_type = "JUCO")
cfbd_recruiting_player(2020, recruit_type = "HighSchool", position = "OT", state = "FL")
```

---

cfbd\_recruiting\_position

**Get college football position group recruiting information.**

---

### Description

**Get college football position group recruiting information.**

### Usage

```
cfbd_recruiting_position(
 start_year = NULL,
 end_year = NULL,
 team = NULL,
 conference = NULL
)
```

### Arguments

|            |                                                                                                                                                                                                                              |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| start_year | <i>(Integer optional):</i> Start Year, 4 digit format (YYYY). <i>Note: 2000 is the minimum value</i>                                                                                                                         |
| end_year   | <i>(Integer optional):</i> End Year, 4 digit format (YYYY). <i>Note: 2020 is the maximum value currently</i>                                                                                                                 |
| team       | <i>(String optional):</i> Team - Select a valid team, D-I football                                                                                                                                                           |
| conference | <i>(String optional):</i> Conference abbreviation - Select a valid FBS conference<br>Conference abbreviations P5: ACC, B12, B1G, SEC, PAC<br>Conference abbreviations G5 and FBS Independents: CUSA, MAC, MWC, Ind, SBC, AAC |

**Value**

`cfbd_recruiting_position()` - A data frame with 7 variables:

**team: character.** Recruiting team.

**conference: character.** Recruiting team conference.

**position\_group: character.** Position group of the recruits.

**avg\_rating: double.** Average rating of the recruits in the position group.

**total\_rating: double.** Sum of the ratings of the recruits in the position group.

**commits: integer.** Number of commits in the position group.

**avg\_stars: double.** Average stars of the recruits in the position group.

**Examples**

```
cfbd_recruiting_position(2018, team = "Texas")
```

```
cfbd_recruiting_position(2016, 2020, team = "Virginia")
```

```
cfbd_recruiting_position(2015, 2020, conference = "SEC")
```

---

`cfbd_recruiting_team` **Get college football recruiting team rankings information.**

---

**Description**

**Get college football recruiting team rankings information.**

**Usage**

```
cfbd_recruiting_team(year = NULL, team = NULL)
```

**Arguments**

**year** *(Integer optional):* Recruiting Class Year, 4 digit format (YYYY). *Note: 2000 is the minimum value*

**team** *(String optional):* Team - Select a valid team, D1 football

**Value**

`cfbd_recruiting_team()` - A data frame with 4 variables:

**year: integer.** Recruiting class year.

**rank: integer.** Team Recruiting rank.

**team: character.** Recruiting Team.

**points: character.** Team talent points.

**Examples**

```
cfbd_recruiting_team(2018, team = "Texas")
cfbd_recruiting_team(2016, team = "Virginia")
cfbd_recruiting_team(2016, team = "Texas A&M")
cfbd_recruiting_team(2011)
```

cfbd\_stats

**CFBD Stats Endpoint Overview****Description**

cfbd\_stats\_categories(): Get college football mapping for stats categories.

cfbd\_stats\_season\_team(): Get season statistics by team.

cfbd\_stats\_season\_advanced(): Get season advanced statistics by team.

cfbd\_stats\_game\_advanced(): Get game advanced stats.

cfbd\_stats\_season\_player(): Get season statistics by player.

**Get game advanced stats:**

```
cfbd_stats_game_advanced(year = 2018, week = 12, team = "Texas A&M")
```

```
cfbd_stats_game_advanced(2019, team = "LSU")
```

```
cfbd_stats_game_advanced(2013, team = "Florida State")
```

**Get season advanced statistics by team:**

```
cfbd_stats_season_advanced(2019, team = "LSU")
```

**Get season statistics by player:**

```
cfbd_stats_season_player(year = 2018, conference = "B12", start_week = 1, end_week = 7)
```

```
cfbd_stats_season_player(2019, team = "LSU", category = "passing")
```

```
cfbd_stats_season_player(2013, team = "Florida State", category = "passing")
```

**Get season statistics by team:**

```
cfbd_stats_season_team(year = 2018, conference = "B12", start_week = 1, end_week = 8)
```

```
cfbd_stats_season_team(2019, team = "LSU")
```

```
cfbd_stats_season_team(2013, team = "Florida State")
```



**Get stats categories:**

This function identifies all Stats Categories identified in the regular stats endpoint.

```
cfbd_stats_categories()
```

---

cfbd\_stats\_categories **Get stats categories**

---

**Description**

This function identifies all Stats Categories identified in the regular stats endpoint.

**Usage**

```
cfbd_stats_categories()
```

**Value**

`cfbd_stats_categories()` A data frame with 38 values:

**name** Statistics Categories ...

**Examples**

```
cfbd_stats_categories()
```

---

cfbd\_stats\_game\_advanced

**Get game advanced stats**

---

**Description**

**Get game advanced stats**

**Usage**

```
cfbd_stats_game_advanced(
 year,
 week = NULL,
 team = NULL,
 opponent = NULL,
 excl_garbage_time = FALSE,
 season_type = "both"
)
```

**Arguments**

|                   |                                                                                                          |
|-------------------|----------------------------------------------------------------------------------------------------------|
| year              | ( <i>Integer</i> required): Year, 4 digit format(YYYY)                                                   |
| week              | ( <i>Integer</i> optional): Week - values from 1-15, 1-14 for seasons pre-playoff (i.e. 2013 or earlier) |
| team              | ( <i>String</i> optional): D-I Team                                                                      |
| opponent          | ( <i>String</i> optional): Opponent D-I Team                                                             |
| excl_garbage_time | ( <i>Logical</i> default FALSE): Select whether to exclude Garbage Time (TRUE/FALSE)                     |
| season_type       | ( <i>String</i> default both): Select Season Type: regular, postseason, or both.                         |

**Value**

`cfbd_stats_game_advanced()` - A data frame with 60 variables:

`game_id`: **integer**. Referencing game id.

`week`: **integer**. Game week of the season.

`team`: **character**. Team name.

`opponent`: **character**. Opponent team name.

`off_plays`: **integer**. Offense plays in the game.

`off_drives`: **integer**. Offense drives in the game.

`off_ppa`: **double**. Offense predicted points added (PPA).

`off_total_ppa`: **double**. Offense total predicted points added (PPA).

`off_success_rate`: **double**. Offense success rate.

`off_explosiveness`: **double**. Offense explosiveness rate.

`off_power_success`: **double**. Offense power success rate.

`off_stuff_rate`: **double**. Opponent stuff rate.

`off_line_yds`: **double**. Offensive line yards.

`off_line_yds_total`: **integer**. Offensive line yards total.

`off_second_lvl_yds`: **double**. Offense second-level yards.

`off_second_lvl_yds_total`: **integer**. Offense second-level yards total.

`off_open_field_yds`: **integer**. Offense open field yards.

`off_open_field_yds_total`: **integer**. Offense open field yards total.

`off_standard_downs_ppa`: **double**. Offense standard downs predicted points added (PPA).

`off_standard_downs_success_rate`: **double**. Offense standard downs success rate.

`off_standard_downs_explosiveness`: **double**. Offense standard downs explosiveness rate.

`off_passing_downs_ppa`: **double**. Offense passing downs predicted points added (PPA).

`off_passing_downs_success_rate`: **double**. Offense passing downs success rate.

`off_passing_downs_explosiveness`: **double**. Offense passing downs explosiveness rate.

`off_rushing_plays_ppa`: **double**. Offense rushing plays predicted points added (PPA).

off\_rushing\_plays\_total\_ppa: **double**. Offense rushing plays total predicted points added (PPA).  
off\_rushing\_plays\_success\_rate: **double**. Offense rushing plays success rate.  
off\_rushing\_plays\_explosiveness: **double**. Offense rushing plays explosiveness rate.  
off\_passing\_plays\_ppa: **double**. Offense passing plays predicted points added (PPA).  
off\_passing\_plays\_total\_ppa: **double**. Offense passing plays total predicted points added (PPA).  
off\_passing\_plays\_success\_rate: **double**. Offense passing plays success rate.  
off\_passing\_plays\_explosiveness: **double**. Offense passing plays explosiveness rate.  
def\_plays: **integer**. Defense plays in the game.  
def\_drives: **integer**. Defense drives in the game.  
def\_ppa: **double**. Defense predicted points added (PPA).  
def\_total\_ppa: **double**. Defense total predicted points added (PPA).  
def\_success\_rate: **double**. Defense success rate.  
def\_explosiveness: **double**. Defense explosiveness rate.  
def\_power\_success: **double**. Defense power success rate.  
def\_stuff\_rate: **double**. Opponent stuff rate.  
def\_line\_yds: **double**. Offensive line yards.  
def\_line\_yds\_total: **integer**. Offensive line yards total.  
def\_second\_lvl\_yds: **double**. Defense second-level yards.  
def\_second\_lvl\_yds\_total: **integer**. Defense second-level yards total.  
def\_open\_field\_yds: **integer**. Defense open field yards.  
def\_open\_field\_yds\_total: **integer**. Defense open field yards total.  
def\_standard\_downs\_ppa: **double**. Defense standard downs predicted points added (PPA).  
def\_standard\_downs\_success\_rate: **double**. Defense standard downs success rate.  
def\_standard\_downs\_explosiveness: **double**. Defense standard downs explosiveness rate.  
def\_passing\_downs\_ppa: **double**. Defense passing downs predicted points added (PPA).  
def\_passing\_downs\_success\_rate: **double**. Defense passing downs success rate.  
def\_passing\_downs\_explosiveness: **double**. Defense passing downs explosiveness rate.  
def\_rushing\_plays\_ppa: **double**. Defense rushing plays predicted points added (PPA).  
def\_rushing\_plays\_total\_ppa: **double**. Defense rushing plays total predicted points added (PPA).  
def\_rushing\_plays\_success\_rate: **double**. Defense rushing plays success rate.  
def\_rushing\_plays\_explosiveness: **double**. Defense rushing plays explosiveness rate.  
def\_passing\_plays\_ppa: **double**. Defense passing plays predicted points added (PPA).  
def\_passing\_plays\_total\_ppa: **double**. Defense passing plays total predicted points added (PPA).  
def\_passing\_plays\_success\_rate: **double**. Defense passing plays success rate.  
def\_passing\_plays\_explosiveness: **double**. Defense passing plays explosiveness rate.

**Examples**

```
cfbd_stats_game_advanced(year = 2018, week = 12, team = "Texas A&M")
```

```
cfbd_stats_game_advanced(2019, team = "LSU")
```

```
cfbd_stats_game_advanced(2013, team = "Florida State")
```

---

```
cfbd_stats_season_advanced
```

**Get season advanced statistics by team**

---

**Description****Get season advanced statistics by team****Usage**

```
cfbd_stats_season_advanced(
 year,
 team = NULL,
 excl_garbage_time = FALSE,
 start_week = NULL,
 end_week = NULL
)
```

**Arguments**

|                   |                                                                                                                        |
|-------------------|------------------------------------------------------------------------------------------------------------------------|
| year              | ( <i>Integer</i> required): Year, 4 digit format (YYYY)                                                                |
| team              | ( <i>String</i> optional): D-I Team                                                                                    |
| excl_garbage_time | ( <i>Logical</i> default FALSE): Select whether to exclude Garbage Time (TRUE/FALSE)                                   |
| start_week        | ( <i>Integer</i> optional): Starting Week - values range from 1-15, 1-14 for seasons pre-playoff, i.e. 2013 or earlier |
| end_week          | ( <i>Integer</i> optional): Ending Week - values range from 1-15, 1-14 for seasons pre-playoff, i.e. 2013 or earlier   |

**Value**

`cfbd_stats_season_advanced()` - A data frame with 81 variables:

season: **integer**. Season of the statistics.

team: **character**. Team name.

conference: **character**. Conference of the team.

off\_plays: **integer**. Offense plays in the game.

off\_drives: **integer**. Offense drives in the game.

off\_ppa: **double**. Offense predicted points added (PPA).

off\_total\_ppa: **double**. Offense total predicted points added (PPA).

off\_success\_rate: **double**. Offense success rate.

off\_explosiveness: **double**. Offense explosiveness rate.

off\_power\_success: **double**. Offense power success rate.

off\_stuff\_rate: **double**. Offense rushing stuff rate.

off\_line\_yds: **double**. Offensive line yards.

off\_line\_yds\_total: **integer**. Offensive line yards total.

off\_second\_lvl\_yds: **double**. Offense second-level yards.

off\_second\_lvl\_yds\_total: **integer**. Offense second-level yards total.

off\_open\_field\_yds: **integer**. Offense open field yards.

off\_open\_field\_yds\_total: **integer**. Offense open field yards total.

off\_total\_opportunities: **integer**. Offense opportunities.

off\_pts\_per\_opp: **double**. Offense points per scoring opportunity.

off\_field\_pos\_avg\_start: **double**. Offense starting average field position.

off\_field\_pos\_avg\_predicted\_points: **double**. Offense starting average field position predicted points (PP).

off\_havoc\_total: **double**. Offense havoc rate total.

off\_havoc\_front\_seven: **double**. Offense front-7 havoc rate.

off\_havoc\_db: **double**. Offense defensive back havoc rate.

off\_standard\_downs\_rate: **double**. Offense standard downs rate.

off\_standard\_downs\_ppa: **double**. Offense standard downs predicted points added (PPA).

off\_standard\_downs\_success\_rate: **double**. Offense standard downs success rate.

off\_standard\_downs\_explosiveness: **double**. Offense standard downs explosiveness rate.

off\_passing\_downs\_rate: **double**. Offense passing downs rate.

off\_passing\_downs\_ppa: **double**. Offense passing downs predicted points added (PPA).

off\_passing\_downs\_success\_rate: **double**. Offense passing downs success rate.

off\_passing\_downs\_explosiveness: **double**. Offense passing downs explosiveness rate.

off\_rushing\_plays\_rate: **double**. Offense rushing plays rate.

off\_rushing\_plays\_ppa: **double**. Offense rushing plays predicted points added (PPA).

off\_rushing\_plays\_total\_ppa: **double**. Offense rushing plays total predicted points added (PPA).

off\_rushing\_plays\_success\_rate: **double**. Offense rushing plays success rate.

off\_rushing\_plays\_explosiveness: **double**. Offense rushing plays explosiveness rate.

off\_passing\_plays\_rate: **double**. Offense passing plays rate.

off\_passing\_plays\_ppa: **double**. Offense passing plays predicted points added (PPA).

off\_passing\_plays\_total\_ppa: **double**. Offense passing plays total predicted points added (PPA).

off\_passing\_plays\_success\_rate: **double**. Offense passing plays success rate.  
off\_passing\_plays\_explosiveness: **double**. Offense passing plays explosiveness rate.  
def\_plays: **integer**. Defense plays in the game.  
def\_drives: **integer**. Defense drives in the game.  
def\_ppa: **double**. Defense predicted points added (PPA).  
def\_total\_ppa: **double**. Defense total predicted points added (PPA).  
def\_success\_rate: **double**. Defense success rate.  
def\_explosiveness: **double**. Defense explosiveness rate.  
def\_power\_success: **double**. Defense power success rate.  
def\_stuff\_rate: **double**. Defense rushing stuff rate.  
def\_line\_yds: **double**. Defense Offensive line yards allowed.  
def\_line\_yds\_total: **integer**. Defense Offensive line yards total allowed.  
def\_second\_lvl\_yds: **double**. Defense second-level yards.  
def\_second\_lvl\_yds\_total: **integer**. Defense second-level yards total.  
def\_open\_field\_yds: **integer**. Defense open field yards.  
def\_open\_field\_yds\_total: **integer**. Defense open field yards total.  
def\_total\_opportunities: **integer**. Defense opportunities.  
def\_pts\_per\_opp: **double**. Defense points per scoring opportunity.  
def\_field\_pos\_avg\_start: **double**. Defense starting average field position.  
def\_field\_pos\_avg\_predicted\_points: **double**. Defense starting average field position predicted points (PP).  
def\_havoc\_total: **double**. Defense havoc rate total.  
def\_havoc\_front\_seven: **double**. Defense front-7 havoc rate.  
def\_havoc\_db: **double**. Defense defensive back havoc rate.  
def\_standard\_downs\_rate: **double**. Defense standard downs rate.  
def\_standard\_downs\_ppa: **double**. Defense standard downs predicted points added (PPA).  
def\_standard\_downs\_success\_rate: **double**. Defense standard downs success rate.  
def\_standard\_downs\_explosiveness: **double**. Defense standard downs explosiveness rate.  
def\_passing\_downs\_rate: **double**. Defense passing downs rate.  
def\_passing\_downs\_ppa: **double**. Defense passing downs predicted points added (PPA).  
def\_passing\_downs\_success\_rate: **double**. Defense passing downs success rate.  
def\_passing\_downs\_explosiveness: **double**. Defense passing downs explosiveness rate.  
def\_rushing\_plays\_rate: **double**. Defense rushing plays rate.  
def\_rushing\_plays\_ppa: **double**. Defense rushing plays predicted points added (PPA).  
def\_rushing\_plays\_total\_ppa: **double**. Defense rushing plays total predicted points added (PPA).  
def\_rushing\_plays\_success\_rate: **double**. Defense rushing plays success rate.  
def\_rushing\_plays\_explosiveness: **double**. Defense rushing plays explosiveness rate.  
def\_passing\_plays\_rate: **double**. Defense passing plays rate.  
def\_passing\_plays\_ppa: **double**. Defense passing plays predicted points added (PPA).  
def\_passing\_plays\_total\_ppa: **double**. Defense passing plays total predicted points added (PPA).  
def\_passing\_plays\_success\_rate: **double**. Defense passing plays success rate.  
def\_passing\_plays\_explosiveness: **double**. Defense passing plays explosiveness rate.

**Examples**

```
cfbd_stats_season_advanced(2019, team = "LSU")
```

---

```
cfbd_stats_season_player
```

**Get season statistics by player****Description****Get season statistics by player****Usage**

```
cfbd_stats_season_player(
 year,
 season_type = "regular",
 team = NULL,
 conference = NULL,
 start_week = NULL,
 end_week = NULL,
 category = NULL
)
```

**Arguments**

|             |                                                                                                                                                                                                                               |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| year        | ( <i>Integer</i> required): Year, 4 digit format (YYYY)                                                                                                                                                                       |
| season_type | ( <i>String</i> default: regular): Select Season Type - regular, postseason, or both                                                                                                                                          |
| team        | ( <i>String</i> optional): D-I Team                                                                                                                                                                                           |
| conference  | ( <i>String</i> optional): Conference abbreviation - Select a valid FBS conference<br>Conference abbreviations P5: ACC, B12, B1G, SEC, PAC<br>Conference abbreviations G5 and FBS Independents: CUSA, MAC, MWC, Ind, SBC, AAC |
| start_week  | ( <i>Integer</i> optional): Starting Week - values range from 1-15, 1-14 for seasons pre-playoff, i.e. 2013 or earlier                                                                                                        |
| end_week    | ( <i>Integer</i> optional): Ending Week - values range from 1-15, 1-14 for seasons pre-playoff, i.e. 2013 or earlier                                                                                                          |
| category    | ( <i>String</i> optional): Category filter (e.g defensive)<br>Offense: passing, receiving, rushing<br>Defense: defensive, fumbles, interceptions<br>Special Teams: punting, puntReturns, kicking, kickReturns                 |

**Value**

`cfbd_stats_season_player()` - A data frame with 59 variables:

**team: character.** Team name.

**conference: character.** Conference of the team.

**athlete\_id: character.** Athlete referencing id.

**player: character.** Player name.

**category: character.** Statistic category.

**passing\_completions: double.** Passing completions.

**passing\_att: double.** Passing attempts.

**passing\_pct: double.** Passing completion percentage.

**passing\_yds: double.** Passing yardage.

**passing\_td: double.** Passing touchdowns.

**passing\_int: double.** Passing interceptions.

**passing\_ypa: double.** Passing yards per attempt.

**rushing\_car: double.** Rushing yards per carry.

**rushing\_yds: double.** Rushing yards total.

**rushing\_td: double.** Rushing touchdowns.

**rushing\_ypc: double.** Rushing yards per carry.

**rushing\_long: double.** Rushing longest yardage attempt.

**receiving\_rec: double.** Receiving - pass receptions.

**receiving\_yds: double.** Receiving - pass reception yards.

**receiving\_td: double.** Receiving - passing reception touchdowns.

**receiving\_ypr: double.** Receiving - passing yards per reception.

**receiving\_long: double.** Receiving - longest pass reception yardage.

**fumbles\_fum: double.** Fumbles.

**fumbles\_rec: double.** Fumbles recovered.

**fumbles\_lost: double.** Fumbles lost.

**defensive\_solo: double.** Defensive solo tackles.

**defensive\_tot: double.** Defensive total tackles.

**defensive\_tfl: double.** Defensive tackles for loss.

**defensive\_sacks: double.** Defensive sacks.

**defensive\_qb\_hur: double.** Defensive quarterback hurries.

**interceptions\_int: double.** Interceptions total.

**interceptions\_yds: double.** Interception return yards.

**interceptions\_avg: double.** Interception return yards average.

**interceptions\_td: double.** Interception return touchdowns.

**defensive\_pd: double.** Defense - passes defensed.



defensive\_td: **double**. Defense - defensive touchdowns.  
kicking\_fgm: **double**. Kicking - field goals made.  
kicking\_fga: **double**. Kicking - field goals attempted.  
kicking\_pct: **double**. Kicking - field goal percentage.  
kicking\_xpa: **double**. Kicking - extra points attempted.  
kicking\_xpm: **double**. Kicking - extra points made.  
kicking\_pts: **double**. Kicking - total points.  
kicking\_long: **double**. Kicking - longest successful field goal attempt.  
kick\_returns\_no: **double**. Kick Returns - number of kick returns.  
kick\_returns\_yds: **double**. Kick Returns - kick return yards.  
kick\_returns\_avg: **double**. Kick Returns - kick return average yards per return.  
kick\_returns\_td: **double**. Kick Returns - kick return touchdowns.  
kick\_returns\_long: **double**. Kick Returns - longest kick return yardage.  
punting\_no: **double**. Punting - number of punts.  
punting\_yds: **double**. Punting - punting yardage.  
punting\_ypp: **double**. Punting - yards per punt.  
punting\_long: **double**. Punting - longest punt yardage.  
punting\_in\_20: **double**. Punting - punt downed inside the 20 yard line.  
punting\_tb: **double**. Punting - punt caused a touchback.  
punt\_returns\_no: **double**. Punt Returns - number of punt returns.  
punt\_returns\_yds: **double**. Punt Returns - punt return yardage total.  
punt\_returns\_avg: **double**. Punt Returns - punt return average yards per return.  
punt\_returns\_td: **double**. Punt Returns - punt return touchdowns.  
punt\_returns\_long: **double**. Punt Returns - longest punt return yardage.

## Examples

```
cfbd_stats_season_player(year = 2018, conference = "B12", start_week = 1, end_week = 7)
```

```
cfbd_stats_season_player(2019, team = "LSU", category = "passing")
```

```
cfbd_stats_season_player(2013, team = "Florida State", category = "passing")
```

---

 cfbd\_stats\_season\_team

### Get season statistics by team

---

#### Description

##### Get season statistics by team

#### Usage

```
cfbd_stats_season_team(
 year,
 season_type = "regular",
 team = NULL,
 conference = NULL,
 start_week = NULL,
 end_week = NULL,
 verbose = FALSE
)
```

#### Arguments

|             |                                                                                                                                                                                                                               |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| year        | ( <i>Integer</i> required): Year, 4 digit format (YYYY)                                                                                                                                                                       |
| season_type | ( <i>String</i> default: regular): Select Season Type - regular, postseason, or both                                                                                                                                          |
| team        | ( <i>String</i> optional): D-I Team                                                                                                                                                                                           |
| conference  | ( <i>String</i> optional): Conference abbreviation - Select a valid FBS conference<br>Conference abbreviations P5: ACC, B12, B1G, SEC, PAC<br>Conference abbreviations G5 and FBS Independents: CUSA, MAC, MWC, Ind, SBC, AAC |
| start_week  | ( <i>Integer</i> optional): Starting Week - values range from 1-15, 1-14 for seasons pre-playoff, i.e. 2013 or earlier                                                                                                        |
| end_week    | ( <i>Integer</i> optional): Ending Week - values range from 1-15, 1-14 for seasons pre-playoff, i.e. 2013 or earlier                                                                                                          |
| verbose     | Logical parameter (TRUE/FALSE, default: FALSE) to return warnings and messages from function                                                                                                                                  |

#### Value

`cfbd_stats_season_team()` - A data frame with 32 variables:

season: **integer** Season for stats.

team: **character**. Team name.

conference: **character**. Conference of team.

games: **integer**. Number of games.

time\_of\_poss\_total: **integer**. Time of possession total.  
pass\_comps: **integer**. Total number of pass completions.  
pass\_atts: **integer**. Total number of pass attempts.  
net\_pass\_yds: **integer**. Net passing yards.  
pass\_TDs: **integer**. Passing touchdowns.  
interceptions: **integer**. Passing interceptions.  
rush\_atts: **integer**. Rushing attempts.  
rush\_yds: **integer**. Rushing yards.  
rush\_TDs: **integer**. Rushing touchdowns.  
total\_yds: **integer**. Rushing total yards.  
fumbles\_lost: **integer**. Fumbles lost.  
turnovers: **integer**. Turnovers total.  
first\_downs: **integer**. Number of first downs.  
third\_downs: **integer**. Number of third downs.  
third\_down\_convs: **integer**. Number of third down conversions.  
fourth\_down\_convs: **integer**. Fourth down conversions.  
fourth\_downs: **integer**. Fourth downs.  
penalties: **integer**. Total number of penalties.  
penalty\_yds: **integer**. Penalty yards total.  
kick\_returns: **integer**. Number of kick returns.  
kick\_return\_yds: **integer**. Total kick return yards.  
kick\_return\_TDs: **integer**. Total kick return touchdowns.  
punt\_returns: **integer**. Number of punt returns.  
punt\_return\_yds: **integer**. Punt return total yards.  
punt\_return\_TDs: **integer**. Punt return total touchdowns.  
passes\_intercepted: **integer**. Passes intercepted.  
passes\_intercepted\_yds: **integer**. Pass interception return yards.  
passes\_intercepted\_TDs: **integer**. Pass interception return touchdowns.

### Examples

```
cfbd_stats_season_team(year = 2018, conference = "B12", start_week = 1, end_week = 8)
```

```
cfbd_stats_season_team(2019, team = "LSU")
```

```
cfbd_stats_season_team(2013, team = "Florida State")
```

cfbd\_teams

**CFBD Teams Endpoint Overview****Description**

cfbd\_team\_info(): Team Info Lookup.

cfbd\_team\_roster(): Get a team's full roster by year.

cfbd\_team\_talent(): Get composite team talent rankings for all teams in a given year.

cfbd\_team\_matchup\_records(): Get matchup history records between two teams.

cfbd\_team\_matchup(): Get matchup history between two teams.

**Team info lookup:**

Lists all teams in conference or all D-I teams if conference is left NULL. Currently, support is only provided for D-I

```
cfbd_team_info(conference = "SEC")
```

```
cfbd_team_info(conference = "Ind")
```

```
cfbd_team_info(year = 2019)
```

**Get team rosters:****It is now possible to access yearly rosters:**

```
cfbd_team_roster(year = 2020)
```

*Get a teams full roster by year. If team is not selected, API returns rosters for every team from the selected year.:*

```
cfbd_team_roster(year = 2013, team = "Florida State")
```

*Get composite team talent rankings:*

Extracts team talent composite for all teams in a given year as sourced from 247 rankings

```
cfbd_team_talent()
```

```
cfbd_team_talent(year = 2018)
```

**Get matchup history between two teams.:**

```
cfbd_team_matchup("Texas A&M", "TCU")
```

```
cfbd_team_matchup("Texas A&M", "TCU", min_year = 1975)
```

```
cfbd_team_matchup("Florida State", "Florida", min_year = 1975)
```

**Get matchup history records between two teams.:**

```
cfbd_team_matchup_records("Texas", "Oklahoma")
```

```
cfbd_team_matchup_records("Texas A&M", "TCU", min_year = 1975)
```

---

|                |                         |
|----------------|-------------------------|
| cfbd_team_info | <b>Team info lookup</b> |
|----------------|-------------------------|

---

**Description****Team info lookup****Usage**

```
cfbd_team_info(conference = NULL, only_fbs = TRUE, year = NULL)
```

**Arguments**

- |            |                                                                                                                                                                                                                                   |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| conference | ( <i>String</i> optional): Conference abbreviation - Select a valid FBS conference<br>Conference abbreviations P5: ACC, B12, B1G, SEC, PAC,<br>Conference abbreviations G5 and FBS Independents: CUSA, MAC, MWC, Ind,<br>SBC, AAC |
| only_fbs   | ( <i>Logical</i> default TRUE): Filter for only returning FBS teams for a given year.<br>If year is left blank while only_fbs is TRUE, then will return values for most<br>current year                                           |
| year       | ( <i>Integer</i> optional): Year, 4 digit format (YYYY). Filter for getting a list of major<br>division team for a given year                                                                                                     |

**Value**

`cfbd_team_info()` - A data frame with 12 variables:

`team_id`: **integer**. Referencing team id.

`school`: **character**. Team name.

`mascot`: **character**. Team mascot.

`abbreviation`: **character**. Team abbreviations.

`alt_name1`: **character**. Team alternate name 1 (as it appears in `play_text`).

`alt_name2`: **character**. Team alternate name 2 (as it appears in `play_text`).

`alt_name3`: **character**. Team alternate name 3 (as it appears in `play_text`).

`conference`: **character**. Conference of team.

`division`: **character**. Division of team within the conference.

`color`: **character**. Team color (primary).

`alt_color`: **character**. Team color (alternate).

`logos`: **character**. Team logos.

`venue_id`: **character**. Referencing venue id.

`venue_name`: **character**. Stadium name.

**city: character.** Team/venue city.  
**state: character.** Team/venue state.  
**zip: character.** Team/venue zip code (someone double check Miami (FL) on if they're in the same zip code).  
**country\_code: character.** Team/venue country code.  
**timezone: character.** Team/venue timezone.  
**latitude: character.** Venue latitude.  
**longitude: character.** Venue longitude.  
**elevation: character.** Venue elevation.  
**capacity: character.** Venue capacity.  
**year\_constructed: character.** Year the venue was constructed.  
**grass: character.** TRUE/FALSE response on whether the field is grass or not (oh, and there are so many others).  
**dome: character.** TRUE/FALSE flag for if the venue is a domed stadium.

### Examples

```

cfbd_team_info(conference = "SEC")

cfbd_team_info(conference = "Ind")

cfbd_team_info(year = 2019)

```

---

|                   |                                               |
|-------------------|-----------------------------------------------|
| cfbd_team_matchup | <b>Get matchup history between two teams.</b> |
|-------------------|-----------------------------------------------|

---

### Description

**Get matchup history between two teams.**

### Usage

```
cfbd_team_matchup(team1, team2, min_year = NULL, max_year = NULL)
```

### Arguments

|          |                                                                          |
|----------|--------------------------------------------------------------------------|
| team1    | ( <i>String</i> required): D-I Team 1                                    |
| team2    | ( <i>String</i> required): D-I Team 2                                    |
| min_year | ( <i>Integer</i> optional): Minimum of year range, 4 digit format (YYYY) |
| max_year | ( <i>Integer</i> optional): Maximum of year range, 4 digit format (YYYY) |

**Value**

`cfbd_team_matchup` - A data frame with 11 variables:

`season`: **integer**. Season the game took place.

`week`: **integer**. Game week of the season.

`season_type`: **character**. Season type of the game.

`date`: **character**. Game date.

`neutral_site`: **logical**. TRUE/FALSE flag for if the game took place at a neutral site.

`venue`: **character**. Stadium name.

`home_team`: **character**. Home team of the game.

`home_score`: **integer**. Home score in the game.

`away_team`: **character**. Away team of the game.

`away_score`: **integer**. Away score in the game.

`winner`: **character**. Winner of the matchup.

**Examples**

```
cfbd_team_matchup("Texas", "Oklahoma")
```

```
cfbd_team_matchup("Texas A&M", "TCU")
```

```
cfbd_team_matchup("Texas A&M", "TCU", min_year = 1975)
```

```
cfbd_team_matchup("Florida State", "Florida", min_year = 1975)
```

---

```
cfbd_team_matchup_records
```

**Get matchup history records between two teams.**

---

**Description**

**Get matchup history records between two teams.**

**Usage**

```
cfbd_team_matchup_records(team1, team2, min_year = NULL, max_year = NULL)
```

**Arguments**

`team1` (*String* required): D-I Team 1

`team2` (*String* required): D-I Team 2

`min_year` (*Integer* optional): Minimum of year range, 4 digit format (YYYY)

`max_year` (*Integer* optional): Maximum of year range, 4 digit format (YYYY)

**Value**

`cfbd_team_matchup_records()` - A data frame with 7 variables:

`start_year`: **character**. Span starting year.

`end_year`: **character**. Span ending year.

`team1`: **character**. First team selected in query.

`team1_wins`: **character**. First team wins in series against team2.

`team2`: **character**. Second team selected in query.

`team2_wins`: **character**. Second team wins in series against team1.

`ties`: **character**. Number of ties in the series.

**Examples**

```
cfbd_team_matchup_records("Texas", "Oklahoma")
```

```
cfbd_team_matchup_records("Texas A&M", "TCU", min_year = 1975)
```

---

cfbd\_team\_roster

**Get team rosters**

---

**Description**

Get a teams full roster by year. If team is not selected, API returns rosters for every team from the selected year.

**Usage**

```
cfbd_team_roster(year, team = NULL)
```

**Arguments**

`year` (*Integer* required): Year, 4 digit format (YYYY)

`team` (*String* optional): Team, select a valid team in D-I football

**Value**

`cfbd_team_roster()` - A data frame with 12 variables:

`athlete_id`: **character**. Referencing athlete id.

`first_name`: **character**. Athlete first name.

`last_name`: **character**. Athlete last name.

`team`: **character**. Team name.



**weight: integer.** Athlete weight.  
**height: integer.** Athlete height.  
**jersey: integer.** Athlete jersey number.  
**year: integer.** Athlete year.  
**position: character.** Athlete position.  
**home\_city: character.** Hometown of the athlete.  
**home\_state: character.** Hometown state of the athlete.  
**home\_country: character.** Hometown country of the athlete.  
**home\_latitude: numeric.** Hometown latitude.  
**home\_longitude: number.** Hometown longitude.  
**home\_county\_fips: integer.** Hometown FIPS code.  
**headshot\_url: character** Player ESPN headshot url.

### Examples

```
cfbd_team_roster(year = 2013, team = "Florida State")
```

---

cfbd\_team\_talent

**Get composite team talent rankings for all teams in a given year**

---

### Description

Extracts team talent composite as sourced from 247 rankings

### Usage

```
cfbd_team_talent(year = NULL)
```

### Arguments

**year** *(Integer optional):* Year 4 digit format (YYYY)

### Value

`cfbd_team_talent()` - A data frame with 3 variables:

**year: integer.** Season for the talent rating.  
**school: character.** Team name.  
**talent: double.** Overall roster talent points (as determined by 247Sports).

**Examples**

```
cfbd_team_talent()
cfbd_team_talent(year = 2018)
```

cfbd\_venues

**CFBD Venues Endpoint Overview****Description**

Pulls all college football venues and data on capacity, grass, city/state, location, elevation, dome, timezone and construction year.

**Usage**

```
cfbd_venues()
```

**Details**

CFB Venue Information

```
cfbd_venues()
```

**Value**

A data frame with 337 rows and 13 variables:

**venue\_id:integer.** Referencing venue ID.

**name:character.** Venue name.

**capacity:integer.** Stadium capacity.

**grass:logical.** TRUE/FALSE response on whether the field is grass or not (oh, and there are so many others).

**city:character.** Venue city.

**state:character.** Venue state.

**zip:character.** Venue zip.

**country\_code:character.** Venue country code.

**location:list.** Venue location.

**elevation:character.** Venue elevation.

**year\_constructed:integer.** Year in which the venue was constructed.

**dome:logical.** TRUE/FALSE response to whether the venue has a dome or not.

**timezone:character.** Time zone in which the venue resides (i.e. Eastern Time -> "America/New York").

**Examples**

```
cfbd_venues()
```

---

data

**Data in the package for reference**

---

**Description**

**Data in the package for reference**

**College Football Mapping for Play Types**

**College Football Conferences**

**Usage**

```
cfbd_play_type_df
```

```
cfbd_conf_types_df
```

**Format**

A data frame with 45 rows and 3 variables:

**id** Referencing play id

**text** play type description

**abbreviation** play type abbreviation used for function call ...

A data frame with 11 rows and 4 variables:

**id** Referencing conference id

**name** Conference name

**short\_name** Short name for Conference

**abbreviation** Conference abbreviation ...

---

`espn_cfb_pbp`*Get ESPN college football PBP data*

---

**Description**

Get ESPN college football PBP data

**Usage**

```
espn_cfb_pbp(game_id)
```

**Arguments**

`game_id`      Game ID

**Author(s)**

Saiem Gilani

**Examples**

```
espn_cfb_pbp(game_id = 401282614)
```

---

`espn_cfb_scoreboard`**ESPN Scoreboard**

---

**Description****ESPN Scoreboard**

Get live scoreboard data from ESPN

**Usage**

```
espn_cfb_scoreboard(date = NULL)
```

**Arguments**

`date`      (*Integer* required - YYYYMMDD): Date to pull

**Value**

```
espn_cfb_scoreboard\(\)
```

## Examples

```
espn_cfb_scoreboard()
```

---

espn\_metrics

**ESPN Metrics**

---

## Description

### ESPN Metrics

Get win probability chart data from ESPN Graciously contributed by MrCaseB:

## Usage

```
espn_metrics_wp(game_id)
```

## Arguments

`game_id` (*Integer* required): Game ID filter for querying a single game  
Can be found using the [cfbd\\_game\\_info\(\)](#) function

## Value

[espn\\_metrics\\_wp\(\)](#) - A data frame with 5 variables:

`game_id`: **character**. Referencing game ID (should be same as `game_id` from other functions).

`play_id`: **character**. Referencing play ID.

`seconds_left`: **integer**. Seconds left in the game.

`home_win_percentage`: **double**. The probability of the home team winning the game.

`away_win_percentage`: **double**. The probability of the away team winning the game (calculated as  $1 - \text{home\_win\_percentage} - \text{tie\_percentage}$ ).

`tie_percentage`: **double**. The probability of the game ending the final period in a tie.

## Examples

```
espn_metrics_wp(game_id = 401114164)
```

---

 espn\_ratings

**ESPN FPI Ratings**


---

**Description**

Get FPI historical rating data (most recent of each year)

**Usage**

```
espn_ratings_fpi(year = 2019)
```

**Arguments**

year                    Year

**Details**

Adapted from sabinanalytic's fork of the cfbfastR repo

**Value**

A data frame with 20 variables:

year: **double**. Season of the Football Power Index (FPI) Rating.

team\_id: **character**. Unique ESPN team ID - team\_id.

name: **character**. Team Name.

abbr: **character**. Team abbreviation.

fpi: **character**. Football Power Index (FPI) Rating.

fpi\_rk: **character**. Football Power Index (FPI) Rank.

trend: **character**. Football Power Index (FPI) ranking trend.

proj\_w: **character**. Projected Win total for the season.

proj\_l: **character**. Projected Loss total for the season.

win\_out: **double**. Probability the team wins out.

win\_6: **double**. Probability the team wins at least six games.

win\_div: **double**. Probability the team wins at their division.

playoff: **double**. Probability the team reaches the playoff.

nc\_game: **double**. Probability the team reaches the national championship game.

nc\_win: **double**. Probability the team wins the national championship game.

win\_conf: **double**. Probability the team wins their conference game.

w: **character**. Wins on the season.

l: **character**. Losses on the season.

t: **character**. Ties on the season.

---

|              |                                   |
|--------------|-----------------------------------|
| load_cfb_pbp | <b>Load cfbfastR play-by-play</b> |
|--------------|-----------------------------------|

---

**Description**

helper that loads multiple seasons from the data repo either into memory or writes it into a db using some forwarded arguments in the dots

**Usage**

```
load_cfb_pbp(seasons, ..., qs = FALSE)
```

**Arguments**

|         |                                                                                                                                            |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------|
| seasons | A vector of 4-digit years associated with given College Football seasons.                                                                  |
| ...     | Additional arguments passed to an underlying function that writes the season data into a database (used by <code>update_cfb_db()</code> ). |
| qs      | Whether to use the function <code>qs::qdeserialize()</code> for more efficient loading.                                                    |

---

|                |                                  |
|----------------|----------------------------------|
| register_cfbdb | <b>CFBD API Key Registration</b> |
|----------------|----------------------------------|

---

**Description**

Save your API Key as a system environment variable CFBD\_API\_KEY

**Usage**

```
cfbd_key()

has_cfbdb_key()
```

**Details**

To get access to an API key, follow the instructions at <https://collegefootballdata.com/key>

**Using the key:**

You can save the key for consistent usage by adding `CFBD_API_KEY=XXXX-YOUR-API-KEY-HERE-XXXXX` to your `.Renviron` file (easily accessed via `usethis::edit_r_environ()`).

Run `usethis::edit_r_environ()`, a new script will pop open named `.Renviron`, **THEN** paste the following in the new script that pops up (without quotations)

```
CFBD_API_KEY = XXXX-YOUR-API-KEY-HERE-XXXXX
```

Save the script and restart your RStudio session, by clicking `Session` (in between `Plots` and `Build`) and click `Restart R`

(there also exists the shortcut `Ctrl + Shift + F10` to restart your session).

If set correctly, from then on you should be able to use any of the `cfbd_` functions without any other changes.

#### **For less consistent usage:**

At the beginning of every session or within an R environment, save your API key as the environment variable `CFBD_API_KEY` (**with** quotations) using a command like the following.

```
Sys.setenv(CFBD_API_KEY = "XXXX-YOUR-API-KEY-HERE-XXXXX")
```

---

update\_cfb\_db

**Update or create a cfbfastR play-by-play database**

---

### **Description**

`update_cfb_db()` updates or creates a database with `cfbfastR` play by play data of all completed games since 2014.

### **Usage**

```
update_cfb_db(
 dbdir = getOption("cfbfastR.dbdirectory", default = "."),
 dbname = "cfb_pbp_db",
 tblname = "cfbfastR_pbp",
 force_rebuild = FALSE,
 db_connection = NULL
)
```

### **Arguments**

|                            |                                                                                                                                                                    |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>dbdir</code>         | Directory in which the database is or shall be located. Can also be set globally with <code>options(cfbfastR.dbdirectory)</code> .                                 |
| <code>dbname</code>        | File name of an existing or desired SQLite database within <code>dbdir</code>                                                                                      |
| <code>tblname</code>       | The name of the play by play data table within the database                                                                                                        |
| <code>force_rebuild</code> | Hybrid parameter (logical or numeric) to rebuild parts of or the complete play by play data table within the database (please see details for further information) |
| <code>db_connection</code> | A <code>DBIConnection</code> object, as returned by <code>DBI::dbConnect()</code> (please see details for further information)                                     |



**Details**

This function creates and updates a data table with the name `tblname` within a SQLite database (other drivers via `db_connection`) located in `dbdir` and named `dbname`. The data table combines all play by play data for every available game back to the 2014 season and adds the most recent completed games as soon as they are available for `cfbfastR`.

The argument `force_rebuild` is of hybrid type. It can rebuild the play by play data table either for the whole `cfbfastR` era (with `force_rebuild = TRUE`) or just for specified seasons (e.g. `force_rebuild = c(2019, 2020)`). Please note the following behavior:

- `force_rebuild = TRUE`: The data table with the name `tblname` will be removed completely and rebuilt from scratch. This is helpful when new columns are added during the Off-Season.
- `force_rebuild = c(2019, 2020)`: The data table with the name `tblname` will be preserved and only rows from the 2019 and 2020 seasons will be deleted and re-added. This is intended to be used for ongoing seasons because ESPN's data provider can make changes to the underlying data during the week.

The parameter `db_connection` is intended for advanced users who want to use other DBI drivers, such as MariaDB, Postgres or `odbc`. Please note that the arguments `dbdir` and `dbname` are dropped in case a `db_connection` is provided but the argument `tblname` will still be used to write the data table into the database.

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