Package: espnscrapeR (via r-universe)

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Type Package

Title Scrapes Or Collects NFL Data From ESPN

Version 0.8.0

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Description Main use case is to collect ESPN QBR for NFL and college
football. Alternative functions include getting NFL standings
and scraping NFL season-level stats.

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Encoding UTF-8

LazyData true

RoxygenNote 7.2.1

URL https://github.com/jthomasmock/espnscrapeR

BugReports https://github.com/jthomasmock/espnscrapeR/issues

Imports dplyr (>= 1.0), tidyr (>= 1.0), httr, rvest, tibble, xml2,
purrr, glue, jsonlite, stringr, janitor, readr, gt (>= 0.3),
scales

Suggests rmarkdown, knitr

VignetteBuilder knitr

Repository https://nflverse.r-universe.dev

RemoteUrl https://github.com/jthomasmock/espnscrapeR

RemoteRef HEAD

RemoteSha 790487f2b5cf243148ded112c5a6dc897aee7d74

Contents

---

get_538_elo   *Get ELO ratings from FiveThirtyEight*

Description

Get ELO ratings from FiveThirtyEight

Usage

```
get_538_elo(season = 2020, stat = "weekly_elo")
```

Arguments

season	character or numeric, must be 2015 or greater
stat	character, must be one of "games", "weekly_elo", "weekly_rating", "distance", "qb_adj_playoff", "qb_adj"

Value

Returns a tibble

Examples

```
# Get elo for specific season and stat
get_538_elo(season = 2020, stat = "weekly_elo")
```

---

get_538_elo_historical

Get historical ELO ratings from FiveThirtyEight

Description

Get historical ELO ratings from FiveThirtyEight

Usage

```
get_538_elo_historical(team = "pit")
```

Arguments

team   character, team abbreviated name, must be one of "ari", "atl", "bal", "buf", "car",
                "chi", "cin", "cle", "dal", "den", "det", "gb", "hou", "ind", "jax", "kc", "oak",
                "lac", "lar", "mia", "min", "ne", "no", "nyg", "nyj", "phi", "pit", "sf", "sea", "tb",
                "ten", "wsh"

Value

Returns a tibble

Examples

```
# Get historic elo for specific team
get_538_elo_historical(team = "pit")
```

---

get_athlete   *Get ESPN athlete info for NFL players*

Description

Get ESPN athlete info for NFL players

Usage

```
get_athlete(athlete_id)
```

Arguments

athlete_id   The player's unique athlete id

Value

Returns a tibble

Examples

```
# Get ALL Playoff QBR from 2016 season
get_athlete("2580")
```

---

get_college_qbr   *Get ESPN QBR for College football*

Description

Get ESPN QBR for College football

Usage

```
get_college_qbr(season = 2020, type = "season")
```

Arguments

season   Numeric or character - greater than 2004

type   character - "season" or "weekly"

Value

tibble

Examples

```
# Get college QBR from 2014 for players at season level
get_college_qbr(season = 2014, type = "season")

# Get weekly college QBR from 2019
# Note the mix of playoffs/bowls and regular season
get_college_qbr(2019, type = "weekly")
```

---

get_depth_chart   *Get ESPN NFL depth chart by year and team*

Description

Get ESPN NFL depth chart by year and team

Usage

```
get_depth_chart(season = 2020, team = 23)
```

Arguments

season   Either numeric or character

team   team_id or team_abb, can be retrieved via get_nfl_teams()

Value

Returns a tibble

Examples

```
# Get depth chart for 2017 for Pittsburgh
get_depth_chart("2016", team = "PIT")
```

---

get_espn_win_prob   *Get NFL in-game win probabilities for a specific game from ESPN*

Description

Get NFL in-game win probabilities for a specific game from ESPN

Usage

```
get_espn_win_prob(game_id)
```

Arguments

game_id   Character string - can be acquired from the website of a specific game, or from
                   espnscrapeR::get_nfl_schedule()

Value

Returns a tibble

Examples

```
# Get win prob from specific game
get_espn_win_prob(game_id = "401030956")
```

---

get_espn_wr_metrics   *Get ESPN's WR metrics from FiveThirtyEight*

Description

Get ESPN's WR metrics from FiveThirtyEight

Usage

```
get_espn_wr_metrics()
```

Value

tibble

Examples

```
raw_metrics <- espnscrapeR::get_espn_wr_metrics()

dplyr::glimpse(raw_metrics)
```

---

get_nfl_boxscore   *Get NFL boxscore for a specific game from ESPN's API*

Description

Get NFL boxscore for a specific game from ESPN's API

Usage

```
get_nfl_boxscore(game_id)
```

Arguments

game_id   character

Value

Returns a tibble

Examples

```
# Get NFL play-by-play for a specific game
get_nfl_boxscore(game_id = "300912027")
```

get_nfl_boxscore_players

Get NFL boxscore for players for a specific game from ESPN's API

Description

Get NFL boxscore for players for a specific game from ESPN's API

Usage

```
get_nfl_boxscore_players(game_id)
```

Arguments

game_id   character

Value

Returns a tibble

Examples

```
# Get NFL play-by-play for a specific game
get_nfl_boxscore_players(game_id = "300912027")
```

---

get_nfl_odds   *Get NFL odds for a specific game from ESPN's API*

Description

Get NFL odds for a specific game from ESPN's API

Usage

```
get_nfl_odds(game_id)
```

Arguments

game_id   character

Value

Returns a tibble

Examples

```
# Get odds from a specific game
get_nfl_odds(game_id = "400791550")
```

---

get_nfl_pbp   *Get NFL play-by-play for a specific game from ESPN's API*

Description

Get NFL play-by-play for a specific game from ESPN's API

Usage

```
get_nfl_pbp(game_id)
```

Arguments

game_id   character

Value

Returns a tibble

Examples

```
# Get NFL play-by-play for a specific game
get_nfl_pbp(game_id = "300912027")
```

---

get_nfl_qbr *Get ESPN QBR for NFL football*

Description

Get ESPN QBR for NFL football

Usage

```
get_nfl_qbr(season = 2020, week = NA, season_type = "Regular")
```

Arguments

season	Either numeric or character
week	Either NA to return season or week 1 to 4 for playoffs or 1 to 17 for regular
season_type	Character - either "Regular" or "Playoffs"

Value

Returns a tibble

Examples

```
# Get ALL Playoff QBR from 2016 season
get_nfl_qbr("2016", season_type = "Playoffs", week = NA)

# Get Regular season QBR for week 4 of 2019
get_nfl_qbr("2019", season_type = "Regular", week = 4)
```

---

get_nfl_qbr_helper *Get ESPN QBR for NFL football*

Description

Get ESPN QBR for NFL football

Usage

```
get_nfl_qbr_helper(raw_json, week, season, season_type)
```

Arguments

week	Either NA to return season or week 1 to 4 for playoffs or 1 to 17 for regular
season	Either numeric or character
season_type	Character - either "Regular" or "Playoffs"

Value

Returns a tibble

---

get_nfl_schedule   *Get NFL schedule for a specific year from ESPN's API*

Description

Get NFL schedule for a specific year from ESPN's API

Usage

```
get_nfl_schedule(season)
```

Arguments

season   Either numeric or character

Value

Returns a tibble

Examples

```
# Get all games from 2018 season, note that this will have some overlap
# between seasons, for example 2018 returns 2018-01-01 to 2018-12-31
get_nfl_schedule(season = "2018")
```

---

get_nfl_standings   *Get NFL standings for a specific season from ESPN's API*

Description

Get NFL standings for a specific season from ESPN's API

Usage

```
get_nfl_standings(season = 2019, quiet = FALSE)
```

Arguments

season   Either numeric or character

Value

Returns a tibble

Examples

```
# Get standings from 2018 season
get_nfl_standings(season = "2018")

# Get standings from 2010 season
get_nfl_standings(2010)
```

---

get_nfl_teams   *Return all NFL teams with their name, abbreviation,*

Description

Return all NFL teams with their name, abbreviation,

Usage

```
get_nfl_teams()
```

Value

tibble

Examples

```
get_nfl_teams()
```

---

get_sharpe_data   *Get some of Lee Sharpe's datasets from GitHub*

Description

Get some of Lee Sharpe's datasets from GitHub

Usage

```
get_sharpe_data(dataset = "games")
```

Arguments

dataset   Character only, one of "airports", "closing_lines", "draft_picks", "draft_values",
                 "games", "logos", "pff_pfr_map_v1", "positions", "rosters", "sc_lines", "stand-
                 ings", "teamcolors", "teams", "trades", "win_totals"

Value

tibble

Examples

```
# Get NFL games and their outcomes
get_sharpe_data(dataset = "games")

# Get team abbreviations/names/etc by year
get_sharpe_data(dataset = "teams")
```

---

gt_hulk_color *Apply 'hulk' palette to specific columns in a gt table. The hulk names comes from the idea of a divergin purple and green theme that is colorblind safe and visually appealing. It is a useful alternative to the red/green palette.*

Description

Apply 'hulk' palette to specific columns in a gt table. The hulk names comes from the idea of a divergin purple and green theme that is colorblind safe and visually appealing. It is a useful alternative to the red/green palette.

Usage

```
gt_hulk_color(gt_object, ..., domain = NULL, trim = FALSE, reverse = FALSE)
```

Arguments

gt_object	An existing gt table object
...	columns to apply color to
trim	trim the palette to give less intense maximal colors
reverse	reverse the color palette. The default is green = high and purple = low, but reverse = TRUE will make purple high and green low.

Value

Returns a gt table

Examples

```
# basic use
mtcars |>
  head() |>
  gt::gt() |>
  gt_hulk_color(mpg)
```

```
  mtcars |>
    head() |>
    gt::gt() |>
    # trim gives small range of colors
    gt_hulk_color(mpg:disp, trim = TRUE)

  # option to reverse the color palette
  mtcars |>
    head() |>
    gt::gt() |>
    # trim gives small range of colors
    gt_hulk_color(mpg:disp, rev = TRUE)
```

---

gt_theme_538   *Apply FiveThirtyEight theme to a gt table*

Description

Apply FiveThirtyEight theme to a gt table

Usage

```
gt_theme_538(data, ...)
```

Arguments

data	An existing gt table object
...	Optional additional arguments to gt::table_options()

Value

Returns a tibble

---

gt_theme_espn   *Apply ESPN theme to a gt table*

Description

Apply ESPN theme to a gt table

Usage

```
gt_theme_espn(data, ...)
```

Arguments

data	An existing gt table object
...	Optional additional arguments to gt::table_options()

Value

Returns a tibble

---

scrape_espn_stats   *Scrape NFL stats from ESPN*

Description

Scrape NFL stats from ESPN

Usage

```
scrape_espn_stats(season = 2019, stats = "receiving", season_type = "Regular")
```

Arguments

season	character or numeric - greater than 1990
stats	character - either receiving, passing, or rushing
season_type	character - either Regular or Playoffs

Value

tibble

Examples

```
scrape_espn_stats(season = 2000, stats = "passing")
```

scrape_espn_win_rate *Scrape ESPN Pass/Run Block/Rush Win Rates ratings for a specific season from ESPN's site*

Description

Scrape ESPN Pass/Run Block/Rush Win Rates ratings for a specific season from ESPN's site

Usage

```
scrape_espn_win_rate(season = 2022)
```

Value

Returns a tibble

Examples

```
# Get off and def pass/run win rates
scrape_espn_win_rate()
```

scrape_fpi *Scrape ESPN FPI ratings for a specific season from ESPN's site*

Description

Scrape ESPN FPI ratings for a specific season from ESPN's site

Usage

```
scrape_fpi(season = 2020, stat = "FPI")
```

Arguments

| season | Either numeric or character |
| stat | One of 'FPI', 'EFF' or 'PROJ' |

Value

Returns a tibble

Examples

```
# Get team offensive and defensive efficiency from 2020 season
scrape_fpi(2020, stat = "EFF")
```

---

scrape_nfl_qbr   *Scrape ESPN QBR for NFL football*

Description

Scrapes QBR tables for NFL QBs by specific week or at season level.

Usage

```
scrape_nfl_qbr(season = 2019, week = NA, season_type = "Regular")
```

Arguments

season   Either numeric or character. Must be between 2006 and current season.

week   Either NA to return season, week 1 to 4 for playoffs, or 1 to 17 for regular season.

season_type   Character - either "Regular" or "Playoffs"

Details

This function supercedes 'get_nfl_qbr' due to the ESPN API altering past data.

Value

Returns a tibble

Examples

```
# Scrape ALL Playoff QBR from 2016 season
scrape_nfl_qbr("2016", season_type = "Playoffs", week = NA)

# Scrape Regular season QBR for week 4 of 2019
scrape_nfl_qbr("2019", season_type = "Regular", week = 4)
```

---

scrape_nfl_standings   *Scrape NFL standings for a specific season from ESPN's site*

Description

Scrape NFL standings for a specific season from ESPN's site

Usage

```
scrape_nfl_standings(season, add_superbowls = FALSE)
```

Arguments

season	Either numeric or character
add_superbowls	Join superbowl winners (appropriate for historical data or after season over)

Value

Returns a tibble

Examples

```
# Get standings from 2018 season
scrape_nfl_standings(season = "2018")

# Get standings from 2010 season
scrape_nfl_standings(2000, add_superbowls = TRUE)
```

---

scrape_nfl_weekly_standings
Scrape NFL weekly outcomes by week

Description

Scrape NFL weekly outcomes by week

Usage

```
scrape_nfl_weekly_standings(season = 2020, tidy = FALSE)
```

Arguments

season	character or numeric - greater than 1990
tidy	logical - either TRUE to stack data by game/week or FALSE to return table as is

Value

tibble

Examples

```
# Here we run w/ tidy = FALSE to get the exact table from PFR
scrape_nfl_weekly_standings(season = 2020, tidy = FALSE)

# Here we scrape the outcome and stack the games on top of eachother
scrape_nfl_weekly_standings(season = 2020, tidy = TRUE)
```

---

scrape_superbowls   *Scrape NFL superbowl winners for all years*

Description

Scrape NFL superbowl winners for all years

Usage

```
scrape_superbowls()
```

Value

Returns a tibble

Examples

```
# Get superbowls
scrape_superbowls()
```

---

scrape_team_stats_nfl   *Scrape NFL stats from nfl.com at the team level.*

Description

Please note that the column names are identical between offense/defense and you should reference the 'role' column for offensive or defensive stats.

Usage

```
scrape_team_stats_nfl(season = 2019, stats = "passing", role = "offense")
```

Arguments

season	character or numeric - greater than 1971, note that some data is missing for earlier seasons.
stats	character - either "passing", "rushing", "receiving", "scoring", "downs"
role	character - "offense" or "defense"

Value

tibble

Examples

```
# Get the NFL.com game-level stats for offense in 2018
scrape_team_stats_nfl(season = 2018, stats = "passing", role = "offense")

# Get the NFL.com team-level passing stats for defense in 2014
scrape_team_stats_nfl(season = "2014", stats = "rushing", role = "defense")
```

---

scrape_weekly_leaders *Scrape weekly NFL leaders stats from ESPN*

Description

Scrape weekly NFL leaders stats from ESPN

Usage

```
scrape_weekly_leaders(season = 2019, week = 1, stats = "passing")
```

Arguments

season	character or numeric - greater than 2002
week	character or numeric - 1 to 17 for regular season
stats	character - either receiving, passing, or rushing

Value

tibble

Examples

```
scrape_weekly_leaders(season = 2002, stats = "passing", week = 1)
```

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