

Package ‘chessR’

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Type Package

Title Functions to Extract, Clean and Analyse Online Chess Game Data

Version 1.5.0

URL <https://github.com/JaseZiv/chessR>

BugReports <https://github.com/JaseZiv/chessR/issues>

Description A set of functions to enable users to extract chess game data from popular chess sites, including 'Lichess' <<https://lichess.org/>> and 'Chess.com' <<https://www.chess.com/>> and then perform analysis on that game data.

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Encoding UTF-8

Imports rlang, jsonlite, dplyr, purrr, tidyr, stringr, lubridate, magrittr, xml2, rvest, curl

RoxygenNote 7.1.2

Suggests knitr, rmarkdown, ggplot2, testthat (>= 3.0.0), covr, chess

VignetteBuilder knitr

Config/testthat/edition 3

NeedsCompilation no

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chessdotcom_leaderboard

Get Top 50 on chess.com Leaderboards

Description

This function takes in one parameter, the `game_type`, and returns a data frame of the top 50 players on chess.com.

Usage

```
chessdotcom_leaderboard(game_type = "daily")
```

Arguments

`game_type` A valid chess.com game type to return the leaderboard for

Details

The leaderboard options (games) include:

"daily", "daily960", "live_rapid", "live_blitz", "live_bullet", "live_bughouse", "live_blitz960", "live_threecheck", "live_crazyhouse", "live_kingofthehill", "lessons", "tactics"

Value

a dataframe of the chess.com top 50 players based on `game_type` selected

Examples

```
## Not run:
chessdotcom_leaderboard(game_type = "daily")

## End(Not run)
```

`chessR`*chessR: A package for extracting and analysing chess game data*

Description

This package is designed to aid in the extraction and analysis of game data from the popular chess.com

Author(s)

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See Also

Useful links:

- <https://github.com/JaseZiv/chessR>
- Report bugs at <https://github.com/JaseZiv/chessR/issues>

`extract_moves`*Extract moves from a game as a data.frame*

Description

Extract moves from a game as a data.frame

Usage

```
extract_moves(moves_string)
```

Arguments

`moves_string` string containing moves built by ‘chessR’ (e.g. from <https://www.chess.com/>)

Value

cleaned moves as a data.frame

`extract_moves_as_game` *Extract moves and create 'chess' game*

Description

Extract moves and create 'chess' game

Usage

```
extract_moves_as_game(game)
```

Arguments

`game` a single row of a 'data.frame' provided by 'chessR' containing move information

Value

a [`chess::game()`] game object

`get_each_player` *Extract Single Player's Game Data*

Description

`get_each_player` returns a dataframe of all of the games played by one player

Usage

```
get_each_player(username)
```

Arguments

`username` A string value of a player's name

Details

This function will take in a single player's username and return the data on all the games they have played on chess.com

get_each_player_chessdotcom
Get Single Player Raw chess.com Game Data

Description

This function returns the raw json data for a player's chess.com data as a data frame

Usage

```
get_each_player_chessdotcom(username, year_month)
```

Arguments

username A valid username from chess.com
year_month An integer of YYYYMM

Value

a dataframe of chess.com data

get_game_data *Extract Chess Game Data*

Description

get_game_data returns a dataframe of game data for either a single user or a list of usernames

Usage

```
get_game_data(usernames)
```

Arguments

usernames A character vector of player usernames from chess.com

Details

This function will take in a list of player usernames and return a dataframe of game metadata

Value

a dataframe of chess.com data plus additional analysis columns

Examples

```
## Not run:
chess_analysis_single <- get_game_data(usernames = "JaseZiv")
chess_analysis_multiple <- get_game_data(usernames = c("JaseZiv", "Smudgy1"))

## End(Not run)
```

get_game_ending	<i>Return the game ending</i>
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Description

This function returns a character vector of how the game ended from chess.dom.

Usage

```
get_game_ending(termination_string, white, black)
```

Arguments

termination_string	A character vector in the chess.com extracted data frame called 'Termination'
white	A character vector in the chess.com extracted data frame called 'White' for the player on white
black	A character vector in the chess.com extracted data frame called 'Black' for the player on black

Value

A character vector of the game ending for each game

Examples

```
## Not run:
get_game_ending(termination_string = df$Termination, df$White, df$Black)

## End(Not run)
```

get_raw_chessdotcom *Get Raw chess.com Game Data*

Description

This function returns the raw json data for a player's or list of players' chess.com data as a data frame, for all or select months played

Usage

```
get_raw_chessdotcom(usernames, year_month = NA_integer_)
```

Arguments

usernames A vector of a valid username or usernames from chess.com
year_month An integer of YYYYMM

Value

a dataframe of chessdotcom data

Examples

```
## Not run:  
get_raw_chessdotcom(usernames = "JaseZiv")  
get_raw_chessdotcom(usernames = "JaseZiv", year_month = c(202112:202201))  
get_raw_chessdotcom(usernames = c("JaseZiv", "Smudgy1"), year_month = 202201)  
  
## End(Not run)
```

get_raw_lichess *Get Raw Lichess Game Data*

Description

This function returns the raw json data for a player's or list of players' Lichess data as a data frame

Usage

```
get_raw_lichess(player_names)
```

Arguments

player_names A vector of a valid username or usernames from Lichess

Value

a dataframe of lichess data

Examples

```
## Not run:  
georges_data <- get_games_lichess(player_names = "Georges")  
  
## End(Not run)
```

get_winner	<i>Return the game winner</i>
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Description

This function returns a character vector of the usernames of the game winners

Usage

```
get_winner(result_column, white, black)
```

Arguments

result_column	A character vector in the extracted data frame called 'Result'
white	A character vector in the extracted data frame called 'White' for the player on white
black	A character vector in the extracted data frame called 'Black' for the player on black

Value

A character vector of the game ending for each game

Examples

```
## Not run:  
get_winner(df$Result, df$White, df$Black)  
  
## End(Not run)
```

lichess_leaderboard *Get top players on Lichess leaderboards*

Description

This function takes in two parameters; how many players you want returned (max 200) and the speed variant. The result is a data frame for each game type

Usage

```
lichess_leaderboard(top_n_players, speed_variant)
```

Arguments

`top_n_players` The number of players (up to 200) you want returned
`speed_variant` A valid lichess speed variant to return the leaderboard for

Details

The leaderboard speed variant options include:

"ultraBullet", "bullet", "blitz", "rapid", "classical", "chess960", "crazyhouse", "antichess", "atomic", "horde", "kingOfTheHill", "racingKings", "threeCheck"

Value

a dataframe of the lichess top players based on speed_variant and top_n_players selected

Examples

```
## Not run:  
top10_blitz <- lichess_leaderboard(top_n_players = 10, speed_variant = "blitz")  
leaderboards <- purrr::map2_df(top_n_players = 10, c("ultraBullet", "bullet"), lichess_leaderboard)  
  
## End(Not run)
```

plot_moves *Plot a game*

Description

Plot a game

Usage

```
plot_moves(game, interactive = TRUE)
```

Arguments

game a [chess::game()] object, likely with moves identified
 interactive wait for 'Enter' after each move? Turn off to use in a gif

Value

'NULL', (invisibly) - called for the side-effect of plotting

Examples

```
## Not run:
hikaru <- get_each_player_chessdotcom("hikaru", "202112")
m <- extract_moves_as_game(hikaru[11, ])
plot_moves(m)

## End(Not run)
```

return_num_moves	<i>Return the number of moves in a game</i>
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Description

This function returns the number of moves played in each game. The function accepts a vector of chess Moves data in PGN notation, usually called 'Moves'

Usage

```
return_num_moves(moves_string)
```

Arguments

moves_string A character vector of chess Moves data in PGN notation usually called 'Moves'
 in extracted data

Value

A numeric vector of the number of moves in each game

Examples

```
## Not run:
return_num_moves(moves_string = df$Moves)

## End(Not run)
```

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