Package 'chessR'

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Type Package

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

Version 1.5.2

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, httr

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VignetteBuilder knitr

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Repository CRAN

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R topics documented:

`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/) or the filename of a PGN file

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 or the filename of a PGN file

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` *Return the game ending*

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_raw_lichess(player_names = "Georges")

## End(Not run)
```

`get_winner` *Return the game winner*

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_clock_move_time *Get Time Information from Lichess Game Data*

Description

This function returns a data frame of Lichess data with clock and move times

Usage

```
lichess_clock_move_time(games_list)
```

Arguments

games_list	A data frame of lichess data which can be generated from chessR::get_raw_lichess("username")

Value

a data frame of lichess data with move time, clock time, and move numbers

Examples

```
## Not run:
lordy_leroy_data <- get_raw_lichess(player_names = "LordyLeroy")
lordy_leroy_data_with_times <- lichess_clock_move_time(games_list = lordy_leroy_data)

## 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, sleep = 1)
```

Arguments

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

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` *Return the number of moves in a game*

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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