

Package ‘RobinHood’

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Type Package

Title Interface for the RobinHood.com No Commission Investing Platform

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Description Execute API calls to the RobinHood <<https://robinhood.com>> investing platform. Functionality includes accessing account data and current holdings, retrieving investment statistics and quotes, placing and canceling orders, getting market trading hours, searching investments by popular tag, and interacting with watch lists.

Imports curl, jsonlite, magrittr, lubridate, profvis

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URL <https://github.com/JestonBlu/RobinHood>

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api_accounts	<i>RobinHood API: User</i>
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Description

Backend function called by `get_user()`, returns a list of user account data.

Usage

```
api_accounts(RH)
```

Arguments

RH	object of class RobinHood
----	---------------------------

api_endpoints	<i>RobinHood API: Endpoints</i>
---------------	---------------------------------

Description

Backend function called by almost every function. Returns the appropriate starting URL for a given endpoint.

Usage

```
api_endpoints(endpoint)
```

Arguments

endpoint (string) which api endpoint to look up?

api_fundamentals	<i>RobinHood API: Fundamentals</i>
------------------	------------------------------------

Description

Backend function called by `get_fundamentals()`, `watchlist()`. Returns a data frame of descriptive data for a given ticker symbol.

Usage

```
api_fundamentals(RH, ticker)
```

Arguments

RH object of class RobinHood
ticker (string) vector of ticker symbols

api_historicals *RobinHood API: Historicals*

Description

Backend function called by `get_historicals()`. Returns a data frame of historical price data.

Usage

```
api_historicals(RH, historicals_url, body)
```

Arguments

RH	object of class RobinHood
historicals_url	(string) api url
body	(string) api body

api_instruments *RobinHood API: Instruments*

Description

Backend function called by `get_tag()`, `get_position()`, `watchlist()`. Returns a list of instrument data.

Usage

```
api_instruments(RH, symbol = NULL, instrument_url = NULL)
```

Arguments

RH	object of class RobinHood
symbol	(string) a single symbol
instrument_url	(string) instrument url

api_login	<i>RobinHood API: Login</i>
-----------	-----------------------------

Description

Backend function called by RobinHood(). Returns a list like object of class RobinHood which stores tokens required by all other functions.

Usage

```
api_login(username, password)
```

Arguments

username	(string) RobinHood username
password	(string) RobinHood password

api_logout	<i>RobinHood API: Logout</i>
------------	------------------------------

Description

Backend function called by logout(). Sends a logout call and disables your oauth2 token.

Usage

```
api_logout(RH)
```

Arguments

RH	object of class RobinHood
----	---------------------------

`api_markets`*RobinHood API: Markets*

Description

Backend function called by `get_market_hours()`. Returns a data frame of markets data and trading hours.

Usage

```
api_markets(RH, markets_url, type = "df")
```

Arguments

<code>RH</code>	object of class <code>RobinHood</code>
<code>markets_url</code>	(string) a single market url
<code>type</code>	(string) structure of data returned, 'df' or 'list'

`api_option_instruments`*RobinHood API: Option Contract Instruments*

Description

RobinHood API: Option Contract Instruments

Usage

```
api_option_instruments(RH, option_instrument_url)
```

Arguments

<code>RH</code>	object of class <code>RobinHood</code>
<code>option_instrument_url</code>	(string) url

api_option_positions *RobinHood API: Option Contract Positions*

Description

Backend function called by `get_contract_positions()`. Returns a data frame of owned options contracts.

Usage

```
api_option_positions(RH)
```

Arguments

RH object of class RobinHood

api_orders *RobinHood API: Orders*

Description

Backend function called by `place_order()`, `get_order_status()`, `cancel_order()`. Issues a buy/sell order or returns the status of an order. When issuing a buy order use the `url` column in the return data to check the status or cancel the order.

Usage

```
api_orders(RH, action, order_url = NULL, instrument_id = NULL,
           symbol = NULL, type = NULL, time_in_force = NULL, trigger = NULL,
           price = NULL, stop_price = NULL, quantity = NULL, side = NULL)
```

Arguments

RH object of class RobinHood

action (string) one of "order", "status", "cancel", or "history"

order_url (string) action is "status" or "cancel", only order_url is required

instrument_id (string) URL of the instrument_id

symbol (string) Ticket symbol you are attempting to buy or sell

type (string) "market" or "limit"

time_in_force (string) Good For Day ("gfd"), Good Till Canceled ("gtc"), Immediate or Cancel ("ioc"), or Opening ("opg")

trigger (string) "immediate" or "stop"

price (number) the price you are willing to sell or buy at

stop_price	(number) if trigger = stop, enter stop price, otherwise leave blank
quantity	(int) number of shares you wish to transact
side	(string) "buy" or "sell"

api_portfolios	<i>RobinHood API: Portfolio</i>
----------------	---------------------------------

Description

Backend function called by get_portfolio(). Returns a data frame of account summaries.

Usage

```
api_portfolios(RH)
```

Arguments

RH	object of class RobinHood
----	---------------------------

api_positions	<i>RobinHood API: Positions</i>
---------------	---------------------------------

Description

Backend function called by get_positions(). Returns a data frame of instrument position data.

Usage

```
api_positions(RH)
```

Arguments

RH	object of class RobinHood
----	---------------------------

api_quote	<i>RobinHood API: Quote</i>
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Description

Backend function called by `get_positions()`, `get_quote()`, `place_order()`. Returns a data frame of quote data

Usage

```
api_quote(RH, symbols_url)
```

Arguments

RH	object of class RobinHood
symbols_url	(string) url of query with ticker symbols

api_tag	<i>RobinHood API: Tag</i>
---------	---------------------------

Description

Backend function called by `get_tag()`. Returns a list of instrument ids.

Usage

```
api_tag(RH, tag)
```

Arguments

RH	object of class RobinHood
tag	(string) a hyphenated tag such as "100-most-popular"

api_tickers	<i>RobinHood API: Tickers</i>
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Description

Backend function called by `get_ticker`. Returns a data frame of all instruments listed on RobinHood.

Usage

```
api_tickers(RH)
```

Arguments

RH	object of class RobinHood
----	---------------------------

api_user	<i>RobinHood API: User</i>
----------	----------------------------

Description

Backend function called by get_user() to return user data

Usage

api_user(RH)

Arguments

RH object of class RobinHood

api_watchlist	<i>RobinHood API: watchlist</i>
---------------	---------------------------------

Description

Backend function called by watchlist(). Adds or remove instruments from the default watchlist. The create and delete watchlist features are disabled as it appears that the functionality is not currently available on the platform.

Usage

api_watchlist(RH, watchlist_url, detail = FALSE, delete = FALSE)

Arguments

RH object of class RobinHood
watchlist_url (string) a single watchlist url
detail (logical) if null use header api only, otherwise pass options
delete (logical) send delete call

cancel_order	<i>Cancel an existing order on RobinHood</i>
--------------	--

Description

Send a cancel signal for a particular order to RobinHood. You will need to retain the buy/sell order url returned from place_order.

Usage

```
cancel_order(RH, order_url)
```

Arguments

RH	object of class RobinHood
order_url	(string) cancel url returned from place_order()

Examples

```
## Not run:
# Login in to your RobinHood account
RH <- RobinHood("username", "password")

# Place an order, should generate an email confirmation
x <- place_order(RH = RH,
  symbol = "GE",          # Ticker symbol you want to trade
  type = "market",       # Type of market order
  time_in_force = "gfd", # Time period the order is good for (gfd: good for day)
  trigger = "immediate", # Trigger or delay order
  price = 8.96,          # The highest price you are willing to pay
  quantity = 1,         # Number of shares you want
  side = "buy")         # buy or sell

# Cancel the order, should also generate an email confirmation
cancel_order(RH, x$cancel)

## End(Not run)
```

get_accounts	<i>Get account data related to your RobinHood account</i>
--------------	---

Description

Get account data related to your RobinHood account

Usage

```
get_accounts(RH)
```

Arguments

RH object of class RobinHood

Examples

```
## Not run:  
# Login in to your RobinHood account  
RH <- RobinHood("username", "password")  
  
get_accounts(RH)  
  
## End(Not run)
```

get_fundamentals	<i>Get fundamental investment statistics for a particular ticker symbol</i>
------------------	---

Description

Get fundamental investment statistics for a particular ticker symbol

Usage

```
get_fundamentals(RH, ticker, include_description = FALSE)
```

Arguments

RH object of class RobinHood
ticker (string) vector of ticker symbols
include_description (logical) include a long description of the company (default: FALSE)

Examples

```
## Not run:  
# Login in to your RobinHood account  
RH <- RobinHood("username", "password")  
  
get_fundamentals(RH, "CAT")  
  
## End(Not run)
```

get_historical	<i>Get historical price history from RobinHood</i>
----------------	--

Description

Returns a data frame of historical price history for a given symbol.

Usage

```
get_historical(RH, symbol, interval, span)
```

Arguments

RH	object of class RobinHood
symbol	(string) Stock symbol to query, single symbol only
interval	(string) Interval of time to aggregate to (examples: hour, day, week, month)
span	(string) Period of time you are interested in (examples: day, week, month, year)

Examples

```
## Not run:  
# Login in to your RobinHood account  
RH <- RobinHood("username", "password")  
  
get_historical (RH = RH, symbol = "CAT", interval = "day", span = "month")  
  
## End(Not run)
```

get_market_hours	<i>Get open market hours</i>
------------------	------------------------------

Description

Get a list of markets available on RobinHood with trading hours for a specific date.

Usage

```
get_market_hours(RH, market_date = NULL)
```

Arguments

RH	object of class RobinHood
market_date	(string) date in the form 'yyyy-mm-dd', default today

Examples

```
## Not run:  
# Login in to your RobinHood account  
RH <- RobinHood("username", "password")  
  
get_market_hours(RH)  
  
## End(Not run)
```

get_order_history *Download all available order history for your RobinHood account*

Description

Download all available order history for your RobinHood account

Usage

```
get_order_history(RH)
```

Arguments

RH object of class RobinHood

Examples

```
## Not run:  
# Login in to your RobinHood account  
RH <- RobinHood("username", "password")  
  
get_order_history(RH)  
  
## End(Not run)
```

get_order_status *Get a current status of an order on RobinHood*

Description

Returns a list of order information given a buy/sell order url returned from place_order().

Usage

```
get_order_status(RH, order_url, limit_output = TRUE)
```

Arguments

RH object of class RobinHood
 order_url (string) url of order returned from place_order
 limit_output (logical) return limited info on the order (default TRUE)

Examples

```
## Not run:
# Login in to your RobinHood account
RH <- RobinHood("username", "password")

# Place an order, should generate an email confirmation
x <- place_order(RH = RH,
  symbol = "GE",           # Ticker symbol you want to trade
  type = "market",        # Type of market order
  time_in_force = "gfd",  # Time period the order is good for (gfd: good for day)
  trigger = "immediate",  # Trigger or delay order
  price = 8.96,           # The highest price you are willing to pay
  quantity = 1,          # Number of shares you want
  side = "buy")          # buy or sell

get_order_status(RH, x$url)

## End(Not run)
```

get_portfolios *Get portfolio summaries related to your RobinHood account*

Description

Get portfolio summaries related to your RobinHood account

Usage

```
get_portfolios(RH)
```

Arguments

RH object of class RobinHood

Examples

```
## Not run:
# Login in to your RobinHood account
RH <- RobinHood("username", "password")

get_portfolios(RH)

## End(Not run)
```

get_positions	<i>Get the currently held positions for your RobinHood account</i>
---------------	--

Description

Get the currently held positions for your RobinHood account

Usage

```
get_positions(RH, limit_output = TRUE)
```

Arguments

RH	object class RobinHood
limit_output	(logical) if true, return a simplified positions table, false returns all position details

Examples

```
## Not run:  
# Login in to your RobinHood account  
RH <- RobinHood("username", "password")  
  
get_positions(RH)  
  
## End(Not run)
```

get_quote	<i>Get a quote from RobinHood</i>
-----------	-----------------------------------

Description

Get a quote from RobinHood

Usage

```
get_quote(RH, symbol, limit_output = TRUE)
```

Arguments

RH	object class RobinHood
symbol	(string) of ticker symbols
limit_output	(logical) if TRUE (default) return less quote detail

Examples

```
## Not run:  
# Login in to your RobinHood account  
RH <- RobinHood("username", "password")  
  
get_quote(RH, "IR")  
  
## End(Not run)
```

`get_tag`*Get ticker symbols for popular tags on RobinHood*

Description

Get a data frame of ticker symbols and names linked to trending tags on the RobinHood website.

Usage

```
get_tag(RH, tag)
```

Arguments

<code>RH</code>	object class <code>RobinHood</code>
<code>tag</code>	(string) a hyphenated tag such as "100-most-popular"

Examples

```
## Not run:  
# Login in to your RobinHood account  
RH <- RobinHood("username", "password")  
  
get_tag(RH, "100-most-popular")  
  
## End(Not run)
```

`get_tickers`*Download all financial instruments available on RobinHood*

Description

Get a dataframe of all listed companies including ticker symbols and tradeability indicators.

Usage

```
get_tickers(RH)
```

Arguments

RH object of class RobinHood

Examples

```
## Not run:  
# Login in to your RobinHood account  
RH <- RobinHood("username", "password")  
  
get_tickers(RH)  
  
## End(Not run)
```

get_user

Get personal user data related to your RobinHood account

Description

Get personal user data related to your RobinHood account

Usage

```
get_user(RH)
```

Arguments

RH object class RobinHood

Examples

```
## Not run:  
# Login in to your RobinHood account  
RH <- RobinHood("username", "password")  
  
get_user(RH)  
  
## End(Not run)
```

logout	<i>Logout of RobinHood</i>
--------	----------------------------

Description

Send a logout call through the RobinHood API service and disable your token.

Usage

```
logout(RH)
```

Arguments

RH	object of class RobinHood
----	---------------------------

Examples

```
## Not run:
# Login in to your RobinHood account
RH <- RobinHood("username", "password")

logout(RH)

## End(Not run)
```

place_order	<i>Place a buy or sell order against your RobinHood account</i>
-------------	---

Description

Place a buy or sell order against your RobinHood account

Usage

```
place_order(RH, symbol, type, time_in_force, trigger, price,
  stop_price = NA, quantity, side)
```

Arguments

RH	object of class RobinHood
symbol	(string) Ticket symbol you are attempting to buy or sell
type	(string) "market" or "limit"
time_in_force	(string) Good For Day ("gfd"), Good Till Canceled ("gtc"), Immediate or Cancel ("ioc"), or Opening ("opg")
trigger	(string) "immediate" or "stop"

price	(number) the price you are willing to sell or buy at
stop_price	(number) if trigger = stop, enter stop price, otherwise leave blank
quantity	(int) number of shares you wish to transact
side	(string) "buy" or "sell"

Examples

```
## Not run:
# Login in to your RobinHood account
RH <- RobinHood("username", "password")

# Place an order, should generate an email confirmation
x <- place_order(RH = RH,
  symbol = "GE",          # Ticker symbol you want to trade
  type = "market",       # Type of market order
  time_in_force = "gfd", # Time period the order is good for (gfd: good for day)
  trigger = "immediate", # Trigger or delay order
  price = 8.96,          # The highest price you are willing to pay
  quantity = 1,         # Number of shares you want
  side = "buy")         # buy or sell

## End(Not run)
```

RobinHood

RobinHood Account Authentication

Description

This function returns an object of S3 class `RobinHood` and establishes a connection to a RobinHood account. It is a required input for every other function in the package.

Usage

```
RobinHood(username, password)
```

Arguments

username	user name or email
password	password

Examples

```
## Not run:
RH <- RobinHood("username", "password")

## End(Not run)
```

watchlist	<i>Manage your RobinHood watchlist</i>
-----------	--

Description

Add and delete instruments from your RobinHood watchlist.

Usage

```
watchlist(RH, action, watchlist = "", ticker = "")
```

Arguments

RH	object class RobinHood
action	(string) one of: get, add, delete
watchlist	(string) name of watchlist to add, delete, or get instruments, null will return a list of watchlist
ticker	(string) list of tickers to add or delete, null will add or delete watchlist

Examples

```
## Not run:  
# Login in to your RobinHood account  
RH <- RobinHood("username", "password")  
  
# Get a vector of your watchlist names  
watchlist(RH, action = "get")  
  
# Get a vectors of symbols on your watchlist  
watchlist(RH, action = "get", watchlist = "Default")  
  
# Add a symbol to your watchlist  
watchlist(RH, action = "add", watchlist = "Default", ticker = "CAT")  
  
# Delete a symbol from your watchlist  
watchlist(RH, action = "delete", watchlist = "Default", ticker = "CAT")  
  
## End(Not run)
```

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