Package ‘machina’

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Type Package
Title Machina Time Series Generation and Backtesting
Version 0.1.6
Description Connects to <https://machi.na/> and allows the creation of time series, and running backtests on selected strategy if requested.
Imports httr, jsonlite, lubridate, xts, rhandsontable, DT
License GPL
LazyData TRUE
NeedsCompilation no
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addRow

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| addRow | addRow |

Description

This connects to the Machina web service, and adds a row to the open strategy.

Usage

```
addRow(
    query,
    updateStrategy = TRUE,
    includeData = FALSE,
    startDate = NULL,
    endDate = NULL,
    verbose = FALSE
)
```

Arguments

- **query**: This is the machina command, wrapped in quotes, adding a new row to the open strategy. Learn more about Machina query language at [https://machi.na/docs](https://machi.na/docs).
- **updateStrategy**: Not required, this will default to TRUE
- **includeData**: Not required, this will default to FALSE
- **startDate**: Not required, this will default to NULL
- **endDate**: Not required, this will default to NULL
- **verbose**: Not required, this will default to FALSE

Details

This connects to Machina web service, and adds a row to the open strategy.

Value

This function adds a row to the open strategy.

Author(s)

Michael Gursky

Examples

```
# addRow("ibm(o) | xavg(25) | ternary")
```
clearStrategy

Description
This connects to the Machina web service, and clears all rows from the open strategy.

Usage
```
clearStrategy(updateStrategy = TRUE, verbose = FALSE)
```

Arguments
- `updateStrategy` Not required, whether to update the strategy (default = TRUE)
- `verbose` Not required, whether to produce verbose output (default = FALSE)

Details
This connects to Machina web service, and clears all rows from the open strategy.

Value
This function and clears all rows from the open strategy.

Author(s)
Michael Gursky

Examples
```
# clearStrategy()
```

closeStrategy

Description
This connects to Machina web service, and closes the open strategy.

Usage
```
closeStrategy(verbos = FALSE)
```

Arguments
- `verbose` Not required, whether to produce verbose output (default = FALSE)
**Details**

This connects to Machina web service, and closes the open strategy.

**Value**

This function closes the open strategy.

**Author(s)**

Michael Gursky

**Examples**

```r
# closeStrategy()
```

**Description**

This adds one or multiple rows to a chart window at https://account.machi.na.

**Usage**

```r
drawRows(rowsArray, startDate = NULL, endDate = NULL, chartId='', verbose = FALSE)
```

**Arguments**

- `rowsArray` Not required, whether to produce verbose output (default = FALSE)
- `startDate` Not required, start date (default = NULL)
- `endDate` Not required, end date (default = NULL)
- `chartId` Not required, chart ID (default = '')
- `verbose` Not required, whether to produce verbose output (default = FALSE)

**Details**

This adds one or multiple rows to a chart window at https://account.machi.na.

**Value**

This adds one or multiple rows to a chart window at https://account.machi.na.

**Author(s)**

Akram Kamal

**Examples**

```r
# chart <- drawRows(c(2,3))
```
endSession

Description
This connects to Machina web service, and ends your Machina session.

Usage
endSession(Verbose = FALSE)

Arguments
verbose Not required, whether to produce verbose output (default = FALSE)

Details
This connects to Machina web service, and ends your Machina session.

Value
This function returns whether the session is successfully closed.

Author(s)
Michael Gursky

Examples
# endSession()

getRemoteChartUrl

Description
This opens the chart browser (https://account.machi.na/). It’s not necessary to do this separately from drawRows, as drawRows will also open a charts browser.

Usage
getRemoteChartUrl(chartId='', openBrowser=TRUE)
Arguments

chartId Not required, specify a chart id (default = ”)
openBrowser Not required, whether to open chart browser (https://account.machi.na/) (default = TRUE)

Details

This opens the chart browser (https://account.machi.na/).

Value

This opens the chart browser (https://account.machi.na/).

Author(s)

Akram Kamal

Examples

# getRemoteChartUrl()

getRow

description

This connects to the Machina web service, and gets a row, optionally with data.

Usage

getRow(
rowIndex, 
includeData = FALSE, 
startDate = NULL, 
endDate = NULL, 
verbose = FALSE
)

Arguments

rowIndex This is the row number to get (1-based)
includeData Not required, whether to include data (default = FALSE)
startDate This is the start date
endDate This is the end date
verbose Not required, whether to produce verbose output (default = FALSE)
getStrategy

Details
This connects to Machina web service, and gets a row, optionally with data.

Value
This function and gets a row, optionally with data.

Author(s)
Michael Gursky

Examples
```
  rowData <- getRow(21, includeData = TRUE)
```

getStrategy

descr

Description
This connects to the Machina web service, and gets all the rows in the open strategy.

Usage
```
getStrategy(verb = FALSE)
```

Arguments

verbose
Not required, whether to produce verbose output (default = FALSE)

Details
This connects to Machina web service, and gets all the rows in the open strategy.

Value
This function and gets all the rows in the open strategy.

Author(s)
Michael Gursky

Examples
```
  getStrategy()
```
listStrategies  

**Description**

This connects to the Machina web service, and gets a list of your models.

**Usage**

```r
listStrategies(verb col = FALSE)
```

**Arguments**

- `verbose`: Not required, whether to produce verbose output (default = FALSE)

**Details**

This connects to Machina web service, and gets a list of your strategies.

**Value**

This function returns a list of your models.

**Author(s)**

Michael Gursky

**Examples**

```r
# listStrategies()
```
Open a strategy
A strategy contains an algo or groups of algos, that you are building into an integrated strategy.

```r
openstrategy("myFirststrategy")
```

**openstrategy**: specifies the name of an existing strategy, or creates a new one if the strategy name used is either blank or not found. In this example, the strategy "myFirststrategy" is either opened, or a new one with that name is created.

Add an algo row
Adding an algo to your strategy is as simple as using addRow with your query.

```r
addRow("spy | savg(10)")
```

**addRow**: This adds a row to your strategy. In quotes use Machina query language. Learn more about Machina query language at https://machi.na/docs.

Get more help
Visit our quick-start guide and more documentation at https://machi.na/community. Don’t see what you are looking for? Post your questions by clicking the ’Ask a Question’ button.

Author(s)
Machina

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**openStrategy**

**openStrategy**

Description
This connects to Machina web service, and opens a strategy to work in.

Usage

```r
openStrategy(
strategyName = NULL,
updateStrategy = TRUE,
verbose = FALSE
)
```

Arguments

- **strategyName**: If you know the name of the strategy, you can put it here. Not required, this will default to NULL.
- **updateStrategy**: Not required, default to TRUE.
- **verbose**: Not required, whether to produce verbose output (default = FALSE)

Details
This connects to Machina web service, and opens your strategy.
Value

This function returns the Machina strategy object.

Author(s)

Michael Gursky

Examples

```r
# openStrategy(strategyName = "default")
```

Description

This connects to Machina web service, sending user credentials and other parameters if desired, and returns the machi.na session object to R.

Usage

```r
startSession(
  userName = NULL,
  password = NULL,
  serviceHost = "account.machi.na",
  protocol = "https",
  strategyCallback = viewStrategy,
  verbose = FALSE
)
```

Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>userName</td>
<td>Your Machi.na user ID</td>
</tr>
<tr>
<td>password</td>
<td>Your password</td>
</tr>
<tr>
<td>serviceHost</td>
<td>Not required, this will default to 'account.machi.na'</td>
</tr>
<tr>
<td>protocol</td>
<td>Not required, defaults to 'https'</td>
</tr>
<tr>
<td>strategyCallback</td>
<td>Not required, this will default to viewStrategy</td>
</tr>
<tr>
<td>verbose</td>
<td>Not required, this will default to FALSE</td>
</tr>
</tbody>
</table>

Details

This connects to Machina web service, sending user credentials and other parameters if desired, and returns the Machina session object to R.
undoStrategy

Value
This function returns the Machina session object.

Author(s)
Michael Gursky

Examples

# startSession("billy@email.com", "password")

Description
This connects to the Machina web service, and undoes last operation on the open strategy (addRow or clear).

Usage
undoStrategy(updateStrategy = TRUE, verbose = FALSE)

Arguments
updateStrategy Not required, whether to update the strategy (default = TRUE)
verbose Not required, whether to produce verbose output (default = FALSE)

Details
This connects to Machina web service, and undoes last operation on the open strategy (addRow or clear).

Value
This function undoes last operation on the open strategy (addRow or clear).

Author(s)
Michael Gursky

Examples

# undoStrategy()
Description

This outputs the open strategy rows in a data frame.

Usage

viewStrategy(verbos e = FALSE)

Arguments

verbose

Not required, whether to produce verbose output (default = FALSE)

Details

This outputs the open strategy rows in a data frame.

Value

This outputs the open strategy rows in a data frame.

Author(s)

Michael Gursky

Examples

# viewStrategy()
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