Package 'LightningR'

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Type Package

Title Tools for Communication with Lightning-Viz Server

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Description

The purpose of this package is to enable usage of lightningviz server to be accessible from R. The server itself can be found at http://lightning-viz.org/ and is required to work with this package. Package by itself cannot and will not create any visualizations.

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Depends RJSONIO, RCurl, R6, httr

URL https://github.com/Ermlab/lightining-rstat/

BugReports https://github.com/Ermlab/lightining-rstat/issues

NeedsCompilation no

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Contents

`Lightning` *Class providing object with methods for communication with lightning-viz server*

Description

Class providing object with methods for communication with lightning-viz server

Usage

```
Lightning
```

Format

`R6Class` object.

Value

Object of `R6Class` with methods for communication with lightning-viz server.

Fields

`serveraddress` Stores address of your lightning server.

`sessionid` Stores id of your current session on the server.

`url` Stores url of the last visualization created by this object.

`autoopen` Checks if the server is automatically opening the visualizations.

`notebook` Checks if the server is in the jupyter notebook mode. #'

Methods

Documentation For full documentation of each method go to https://github.com/lightning-viz/lightining-r/

`new(serveraddress)` This method is used to create object of this class with `serveraddress` as address of the server object is connecting to.

`sethost(serveraddress)` This method changes server that you are contacting with to `serveraddress`.

`createsession(sessionname = "")` This method creates new session on the server with optionally given name in `sessionname`.

`usesession(sessionid)` This method changes currently used session on the server to the one with id given in `sessionid` parameter.

`openviz(vizid = NA)` This method by default opens most recently created by this object visualization. If `vizid` parameter is given, it opens a visualization with given id instead.

`enableautoopening()` This method enables auto opening of every visualisation that you create since that moment. Disabled by default.

`disableautoopening()` This method disables auto opening of every visualisation that you create since that moment. Disabled by default.

`line(series, index = NA, color = NA, label = NA, size = NA, xaxis = NA, yaxis = NA, logScaleX = "false", logSc` This method creates a line visualization for vector/matrix with each row representing a line, given in `series`.

`scatter(x, y, color = NA, label = NA, size = NA, alpha = NA, xaxis = NA, yaxis = NA)` This method creates a scatterplot for points with coordinates given in vectors `x, y`.

`linestacked(series, color = NA, label = NA, size = NA)` This method creates a plot of multiple lines given in matrix `series`, with an ability to hide and show every one of them.

`force(matrix, color = NA, label = NA, size = NA)` This method creates a force plot for matrix given in `matrix`.

`graph(x, y, matrix, color = NA, label = NA, size = NA)` This method creates a graph of points with coordinates given in `x, y` vectors, with connection given in `matrix` connectivity matrix.

`map(regions, weights, colormap)` This method creates a world (or USA) map, marking regions given as a vector of abbreviations (3-char for countries, 2-char for states) in `regions` with weights given in `weights` vector and with `colormap` color (string from colorbrewer).

`graphbundled(x, y, matrix, color = NA, label = NA, size = NA)` This method creates a bundled graph of points with coordinates given in `x, y` vectors, with connection given in `matrix` connectivity matrix. Lines on this graph are stacked a bit more than in the `graph` function.

`matrix(matrix, colormap)` This method creates a visualization of matrix given in `matrix` parameter, with its contents used as weights for the colormap given in `colormap` (string from colorbrewer).

`adjacency(matrix, label = NA)` This method creates a visualization for adjacency matrix given in `matrix` parameter.

`scatterline(x, y, t, color = NA, label = NA, size = NA)` This method creates a scatterplot for coordinates in vectors `x, y` and assignes a line plot to every point on that plot. Each line is given as a row in `t` matrix.

`scatter3(x, y, z, color = NA, label = NA, size = NA, alpha = NA)` This method creates a 3D scatterplot for coordinates given in vectors `x, y, z`.

`image(imgpath)` This method uploads image from file `imgpath` to the server and creates a visualisation of it.

`gallery(imgpathvector)` This method uploads images from vector of file paths `imgpathvector` to the server and creates a gallery of these images.

Examples

```
Lightning$new("http://localhost:3000/")
Lightning$new("http://your-lightning.herokuapp.com/")
```

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