Package 'Visualize.CRAN.Downloads'

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Type Package

Title Visualize Downloads from 'CRAN' Packages

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Description Visualize the trends and historical downloads from packages in the 'CRAN' repository. Data is obtained by using the 'API' to query the database from the 'RStudio' 'CRAN' mirror.

Imports graphics, stats, cranlogs, plotly, htmlwidgets

Suggests knitr, devtools, roxygen2, testthat, rmarkdown

License GPL (>= 2)

URL https://github.com/mponce0/Visualize.CRAN.Downloads

BugReports https://github.com/mponce0/Visualize.CRAN.Downloads/issues

RoxygenNote 7.1.0

VignetteBuilder knitr

NeedsCompilation no

Repository CRAN

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R topics documented:

`interactivePlots` *function that generates interactive plots of the package downloads logs from CRAN*

Description

function that generates interactive plots of the package downloads logs from CRAN

Usage

```
interactivePlots(
  downloads.data,
  mytitle = paste(downloads.data$package[1], "Package downloads counts"),
  nbrPlts = 2,
  month.ln = 30,
  HTMLfile = paste0("Interactive_DWNLDS_", downloads.data$package[1], ".html"),
  device = "HTML",
  dirSave = NULL
)
```

Arguments

`downloads.data`	total downloads from the package
`mytitle`	optional char argument specifying the title to be displayed
`nbrPlts`	optional numeric argument specifying number of plots to generate
`month.ln`	optional numeric argument specifying the lenght of the month in days
`HTMLfile`	an optional string argument specifying the name of the file where to save the plots
`device`	an optional string describing whether the interactive plot will be set to screen or to save in an HTLM file
`dirSave`	specify a valid directory where to save the plot

Examples

```
## Not run:
packageXdownloads <- retrievePckgData("ggplot")[[1]]
interactivePlots(packageXdownloads)

## End(Not run)
```

`movingFn` *generic fn that computes the "fn" on a moving window*

Description

generic fn that computes the "fn" on a moving window

Usage

```
movingFn(x, fn = mean, period = length(x), direction = "forward")
```

Arguments

`x`	a numeric vector
`fn`	a function to be applied/computed, default is set to mean()
`period`	size of the "moving window", default set to the lenght of the vector
`direction`	type of moving avergage to consider: "forward", "centered", "backward"; ie. whether the window computation is ("centered" / "forward" / "backward") wrt the data series

Value

a vector with the 'moving operation' applied to the x vector

`processPckg` *main function to analyze a list of packages in a given time frame*

Description

main function to analyze a list of packages in a given time frame

Usage

```
processPckg(
  pckg.lst,
  t0 = lastyear.date(),
  t1 = today(),
  opts = list(),
  device = "PDF",
  dirSave = NULL
)
```

Arguments

pckg.lst	list of packages to process
t0	initial date, begining of the time period given in "YYYY-MM-DD" format
t1	final date, ending of the time period given in "YYYY-MM-DD" format
opts	a list of different options available for customizing the output
device	string to select the output format: 'PDF'/'PNG'/'JPEG' or 'screen'
dirSave	name of a valid directory where to save the file, eg. do not specify this argument or enter "." for using the current working directory

Examples

```
# device is set to "screen" so no files are generated and plots will appear on "screen"
# alternative to 'device' are "PDF"/"PNG"/"JPEG"
processPckg("ehelp", device="screen")
processPckg(c("ehelp","plotly","ggplot2"), "2001-01-01", device="screen")
processPckg(c("ehelp","plotly","ggplot2"), "2001-01-01", opts="nostatic", device="screen")
processPckg(c("ehelp","plotly","ggplot2"), "2001-01-01",
opts=c("nostatic","nocombined","nointeractive"), device="screen")
```

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retrievePckgData *function to download the data from the CRAN logs for an specific package*

Description

function to download the data from the CRAN logs for an specific package

Usage

```
retrievePckgData(pckg = NULL, t0 = lastyear.date(), t1 = today())
```

Arguments

pckg	is the name of the package to look for the downloads data
t0	is the initial date
t1	is the final date

Value

a list composed of the stats from the original time frame and the last month

Examples

```
retrievePckgData("ehelp")
retrievePckgData("ehelp","2018-01-01","2020-01-01")
```

`staticPlots` *function that generates visual trends of the package downloads logs from CRAN, it will generate 4 plots: two histograms, a pulse plot and the main plot is a plot of the downloads as a function of time*

Description

function that generates visual trends of the package downloads logs from CRAN, it will generate 4 plots: two histograms, a pulse plot and the main plot is a plot of the downloads as a function of time

Usage

```
staticPlots(
  pckg.stats.total,
  device = "PDF",
 fileName = paste0("DWNLDS_", pckg.stats.total$package[1], ".", tolower(device)),
  dirSave = NULL,
  combinePlts = FALSE,
  noMovAvg = FALSE,
  noConfBands = FALSE,
  cutOff.pts = 250,
  dbg = FALSE
)
```

Arguments

`pckg.stats.total`	total downloads from the package
`device`	string to select the output format: 'PDF'/'PNG'/'JPEG' or 'screen'
`fileName`	an optional string argument specifying the name of the file where to save the plots
`dirSave`	specify a valid directory where to save the plot
`combinePlts`	a boolean indicating whether the plots generated will be combined into one single figure or not
`noMovAvg`	a boolean indicating whether moving statistical estimators, such as, the moving average will be displayed
`noConfBands`	a boolean indicating whether a confidence band will be displayed
`cutOff.pts`	an integer value indicating the cut-off value to determine whether there would be a subsample for clarity sake in the plots
`dbg`	internal flag for activating debugging options, i.e. display furhter information in screen

Examples

```
packageData <- retrievePckgData("ggplot2")
totalDownloads <- packageData[[1]]
#lastmonthDownloads <- packageData[[2]]
staticPlots(totalDownloads, device="screen")
staticPlots(totalDownloads,combinePlts=TRUE, device="screen")
```

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summaries *function to display the summary of the data*

Description

function to display the summary of the data

Usage

```
summaries(data1, deltaTs = 30)
```

Arguments

data1	first dataset, eg. total data
deltaTs	a numerical (integer) value, indicating the lenght –in days– for selecting a subset of the original dataset; default value is 1 mont, ie. 30 days

Examples

```
packageXdownloads <- retrievePckgData("ehelp")[[1]]
summaries(packageXdownloads)
```

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