Package ‘interactiveDisplay’

April 5, 2024

Type Package

Title Package for enabling powerful shiny web displays of Bioconductor objects

Version 1.41.0

Date 2021-11-17

Imports interactiveDisplayBase (>= 1.7.3), shiny, RColorBrewer, ggplot2, reshape2, plyr, gridSVG, XML, Category, AnnotationDbi

Depends R (>= 2.10), methods, BiocGenerics, grid

Suggests RUnit, hgu95av2.db, knitr, GenomicRanges, SummarizedExperiment, GOstats, ggbio, GO.db, Gviz, rtracklayer, metagenomeSeq, ggplots, vegan, Biobase

Enhances rstudio

Description The interactiveDisplay package contains the methods needed to generate interactive Shiny based display methods for Bioconductor objects.

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Collate 'interactiveDisplay.R' 'ExpressionSet.R' 'GRanges.R'
'GRangesList.R' 'SummarizedExperiment.R' 'gridsvgjs.R'
'bicgo.R' 'gridtweak.R' 'simplenet.R' 'MRexperiment.R'
'altgr.R' 'zzz.R'

VignetteBuilder knitr

biocViews GO, GeneExpression, Microarray, Sequencing, Classification, Network, QualityControl, Visualization, Visualization, Genetics, DataRepresentation, GUI, AnnotationData, ShinyApps

RoxygenNote 7.1.1

git_url https://git.bioconductor.org/packages/interactiveDisplay

git_branch devel

git_last_commit 8e394ce

git_last_commit_date 2023-10-24

Repository Bioconductor 3.19
Description

This opens a shiny visualization application in the browser based on ...

Usage

altgr(object, ...)

Arguments

object data object to display
... additional arguments passed to methods; currently unused.

Value

Any ...

See Also

Examples

if(interactive()) {

## Open an browser application for the purpose of manually biclustering an
## ExpressionSet object and obtaining a GO summary for a specific bicluster.

data(mmgr)
altgr(mmgr)
}

bicgo

bicgo: Open a Shiny Application for manual/interactive biclustering
and GO exploration

Description

This opens a shiny visualization application in the browser based on the submitted ExpressionSet object.

Usage

bicgo(object, ...)

Arguments

object   data object to display
...      additional arguments passed to methods; currently unused.

Value

Any ExpressionSet object.

See Also


Examples

if(interactive()) {

## Open an browser application for the purpose of manually biclustering an
## ExpressionSet object and obtaining a GO summary for a specific bicluster.

data(expr)
bicgo(expr)
}

display

**display**: Open a Shiny application for a Bioconductor object

**Description**
This opens a shiny visualization application in the browser based on the submitted object.

**Usage**

```r
display(object, ...)
```

**Arguments**

- `object`: data object to display
- `...`: additional arguments passed to methods; currently unused.

**Value**

Usually some variation of the initial input object, but it may be altered by the display widget (subset for example).

**Author(s)**

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**See Also**


**Examples**

```r
if(interactive()) {
  ## draw a RangedSummarizedExperiment object
data(se)
display(se)

  ## draw a GRanges object
data(mmgr)
display(mmgr)

  ## some display methods allow subsetting.
  ## To take advantage, just use an assignment operator like this:
  mmgr2 <- display(mmgr)

  ## draw a GRangesList object
data(mmgrl)
display(mmgrl)
```
expr

```r
## draw an ExpressionSet object
data(expr)
display(expr)

## draw an MRexperiment object (placeholder!!!)
data(mr)
display(mr)
```

---

**expr**  
*An Example ExpressionSet object*

### Description

The expression data are real but anonymized. The data are from an experiment that used Affymetrix U95v2 chips. The data were processed by dChip and then exported to R for analysis. The data illustrate ExpressionSet-class, with assayData containing the required matrix element exprs and an additional matrix se.exprs. se.exprs has the same dimensions as exprs. The phenoData and standard error estimates (se.exprs) are made up. The information in the “description” slot is fake.

### Details

The data for 26 cases, labeled A to Z and 500 genes. Each case has three covariates: sex (male/female); type (case/control); and score (testing score).

### Examples

```r
data(expr)
```

---

**gridsvgjs**  
*gridsvgjs: Open a Shiny Application for a Grid Plot*

### Description

This opens a shiny visualization application in the browser based on the submitted plot.

### Usage

```r
gridsvgjs(object, ...)
```

### Arguments

- **object**  
  data object to display
- **...**  
  additional arguments passed to methods; currently unused.
Value

Any grid based plot. For example: a plot produced with lattice, ggplot2 or biobase libraries.

See Also


Examples

```r
if(interactive()) {

  ## Send a grid based plot to a browser as a Javascript interactive SVG

  library(ggplot2)
  data(mtcars)
  qp <- qplot(mpg, data=mtcars, geom="density", fill=factor(cyl), alpha=I(.4))
  gridsvgjs(qp)
}
```

gridtweak

gridtweak: Open a Shiny Application for the purpose of tweaking grid plots

Description

This opens a shiny visualization application in the browser.

Usage

gridtweak(...)

Arguments

... additional arguments passed to methods; currently unused.

Value

Any grid based plot. For example: a plot produced with lattice, ggplot2 or biobase libraries.

See Also

Examples

if(interactive()) {
  ## Send a grid based plot to a browser as a Javascript interactive SVG
  gridtweak()
}

---

**mmgr**  
*An Example GRanges Object*

**Description**

A toy GRanges object for demonstration purposes.

**Examples**

data(mmgr)

---

**mmgrl**  
*An Example GRangesList Object*

**Description**

A toy GRangesList dataset derived from the GRanges dataset in this package for purposes of demonstration.

**Details**

The GRanges dataset was submitted to display(), subsetted and several iterations of the results were fused into a GRangesList object. This is fake data.

**Examples**

data(mmgrl)

---

**se**  
*An Example RangedSummarizedExperiment Object*

**Description**

A toy RangedSummarizedExperiment object for demonstration purposes.

**Examples**

data(se)
simplenet

simplenet: Open a Shiny Application for ...

Description
This opens a shiny visualization application in the browser based on ...

Usage
simplenet(object, ...)

Arguments
  object  data object to display
  ...    additional arguments passed to methods; currently unused.

Value
Any ...

See Also

Examples
if(interactive()) {
  ## Open a browser application for the purpose of manually biclustering an
  ## ExpressionSet object and obtaining a GO summary for a specific bicluster.
  simplenet(mtcars)
}

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