Package 'archeoViz'

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Type Package

Title Visualisation, Exploration, and Web Communication of Archaeological Excavation Data

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Description An R 'Shiny' application for the visualisation, interactive exploration, and web communication of archaeological excavation data. It includes interactive 3D and 2D visualisations, generation of cross sections and map of the remains, basic spatial analysis methods (convex hull, regression surfaces, 2D kernel density estimation), and excavation timeline visualisation. 'archeoViz' can be used locally or deployed on a server, either with interactive input of data or with a static data set.

License GPL-3

Repository CRAN

Encoding UTF-8

Imports ggplot2, plotly, mgcv, cxhull, reshape2, svglite, shiny, shinythemes,

Suggests knitr, covr, rmarkdown, markdown, testthat (>= 3.0.0)

Config/testthat/edition 3

VignetteBuilder knitr

URL https://github.com/sebastien-plutniak/archeoviz

BugReports https://github.com/sebastien-plutniak/archeoviz/issues

NeedsCompilation no

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R topics documented:

`archeoViz` *archeoViz*

Description

Launch the archeoViz application to visualise, interactive explore, and expose on the web archaeological data from excavation

Usage

```
archeoViz(objects.df=NULL, refits.df, timeline.df=NULL,
          title=NULL, home.text=NULL, lang="en", set.theme="cosmo")
```

Arguments

`objects.df`	data frame, with data documenting the location and type of archaeological remains.
`refits.df`	data frame, with two columns containin the ids of refitting objects.
`timeline.df`	data frame, with data documenting the year of excavation of the site's squares.
`title`	character. Title to display on the application.
`home.text`	character. Html content to display on the home page of the application.
`lang`	character. Inteface language, either "en" (English) or "fr" (French).
`set.theme`	character. Name of the shinytheme to use.

Details

This function launches the 'archeoViz' application. It can be used without parameter, allowing the user to input data through the "Input data" tab. Alternatively, the 'objects.df' parameter, and the optional 'refits.df' and 'timeline.df' parameters, can be used to input data.frames about the archaeological objects, the refitting relationships between these objects, and the chronology of the excavation, respectively.

The aspect of the application can be modified using the 'title', 'home.text', and 'set.theme' parameters. Possible values for the 'set.theme' parameter includes the allowed values for the 'shinytheme()' function (i.e., "cerulean", "cosmo", "cyborg", "darkly", "flatly", "journal", "lumen", "paper", "readable", "sandstone", "simplex", "slate", "spacelab", "superhero", "united", "yeti").

Value

Launch the ‘archeoViz‘ Shiny application.

Author(s)

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See Also

shiny shinytheme plotly ggplot2 gam cxhull hullMesh

Examples

```
## Not run:
# running the app with no particular data and settings:
archeoViz()

# running the app with a particular data set:
objects <- demo_objects_data(1000)
refits <- demo_refits_data(1000)
archeoViz(objects.df=objects, refits.df=refits, title="My data set")

## End(Not run)
```

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demo_objects_data *Generates an "objects" data set populated with random values.*

Description

A convenient function to generate a data set to be used for the objects.df parameter of the archeoViz function.

Usage

```
demo_objects_data(n.objects)
```

Arguments

n.objects	numerical, number of objects to include in the data set.

Value

A data.frame with 12 columns ("id", "square_x", "square_y", "xmin", "xmax", "ymin", "ymax", "zmin", "zmax", "layer", "object_type", "object_class_size").

Author(s)

Sebastien Plutniak <sebastien.plutniak at posteo.net>

Examples

```
## Not run: demo_objects_data(n.objects.df=100)
```

`demo_refits_data` *Generates a "refits" data set populated with random values.*

Description

A convenient function to generate a data set to be used for the `refits.df` parameter of the `archeoViz` function.

Usage

```
demo_refits_data(n.objects)
```

Arguments

`n.objects`	numerical, number of objects between which refitting relationships must be created.

Value

A matrix with 2 columns containing random pairs of numerica values (corresponding to the unique identifiers of the objects generated with the `demo_objects_data` function).

Author(s)

Sebastien Plutniak <sebastien.plutniak at posteo.net>

Examples

```
## Not run: demo_refits_data(n.objects.df=100)
```

`demo_timeline_data` *Generates a "timeline" data set populated with random values.*

Description

A convenient function to generate a data set to be used for the `timeline.df` parameter of the `archeoViz` function.

Usage

```
demo_timeline_data()
```

Details

Note that there is no correspondance between the data generated with `demo_timeline_data` and the data generated with `demo_objects_data` and `demo_refits_data`.

Value

A data frame with 3 columns containing random data ("year", "square_x", "square_y").

Author(s)

Sebastien Plutniak <sebastien.plutniak at posteo.net>

Examples

```
## Not run: demo_timeline_data()
```

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