

Package ‘istat’

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Title Download and Manipulate Data from Istat

Version 1.1.2

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Description Download data from ISTAT (Italian Institute of Statistics) database, both old and new provider (respectively, <<http://dati.istat.it/>> and <<https://esploradati.istat.it/databrowser/>>). Additional functions for manipulating data are provided. Moreover, a 'shiny' application called 'shiny-Istat' can be used to search, download and filter datasets more easily.

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Encoding UTF-8

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Imports curl, datamods, digest, DT, dplyr, ggplot2, htmltools, httr, magrittr, openxlsx, reactable, readxl, rsdmx, shiny, shinyBS, shinydashboard, shinyhelper, shinyjs, shinyWidgets, writextl

Suggests knitr, rmarkdown

VignetteBuilder knitr

NeedsCompilation no

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filter_istat	<i>Filter data sets</i>
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Description

Filter data set by column(s). Takes as input a data.frame (not only ISTAT ones) and allows you to select for which column(s) value(s) to filter the dataset. Alternatively, use filter_istat_interactive for an interactive version.

Usage

```
filter_istat(dataset, columns, datatype, lang = "ita")
```

Arguments

dataset	as data.frame.
columns	data set column(s) for which you want to filter the data. If you want to filter for more than one column, write c("column1", "column2", ...) as argument.
datatype	column(s) value(s) for which you want to filter the data. Write as many datatype as many columns that you selected in "columns" (as in examples).
lang	language parameter for labels: "ita" for Italian (default), "eng" for English.

Value

It returns the filtered data set.

Examples

```
filter_istat(iris, columns = "Species", datatype = "setosa") #Here,
#the function filters the data set 'iris' for the value 'setosa' of the column 'Species'.
filter_istat(iris, columns = c("Species", "Petal.Width"),
datatype = list(c("virginica", "setosa"), c("0.1", "1.9")))
# Here, the function filters the data set 'iris' for the values 'virginica'
#and 'setosa' of the column 'Species' and for the values '0.1' and '1.9' of
#the column 'Petal.Width'.
```

`filter_istat_interactive`*Filter data set interactively*

Description

An interactive and more intuitive version of `filter_istat` function. It filters data set by column(s). Takes as input a `data.frame` (not only ISTAT ones) and allows you to select for which column(s) value(s) to filter the data set interactively.

Usage

```
filter_istat_interactive(dataset, lang = "ita")
```

Arguments

`dataset` as `data.frame`.

`lang` language parameter for labels: "ita" for Italian (default), "eng" for English.

Value

It returns the filtered data set.

Note

In this first version, language parameter works only with data sets downloaded with `get_i_stat` (provider I.Stat).

Examples

```
filter_istat_interactive(iris)
```

`get_istatdata`*Download data set by id (source: IstatData)*

Description

Download data sets from `IstatData` (new ISTAT provider). Alternatively, use `get_i_stat` to download data sets from `I.Stat` (old ISTAT provider). The parameters "id_dataset" to download the data sets can be found using `list_istatdata` function or `search_istatdata` function.

get_i_stat	<i>Download data sets by id (source: I.Stat)</i>
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Description

Download data sets from I.Stat (old ISTAT provider). Alternatively, use `get_istatdata` to download data sets from `IstatData` (new ISTAT provider). The parameters "id_dataset" to download data sets can be found using `list_i_stat` function or `search_i_stat` function.

Usage

```
get_i_stat(id_dataset,
          start_period = NULL,
          end_period = NULL,
          recent = FALSE,
          csv = FALSE,
          xlsx = FALSE,
          lang = "both",
          cache = FALSE,
          update_cache = FALSE,
          compress_file = FALSE,
          cache_dir = "cache_dir")
```

Arguments

<code>id_dataset</code>	Data set id.
<code>start_period</code>	Time value for the start (NULL by default).
<code>end_period</code>	Time value for the end (NULL bu default).
<code>recent</code>	FALSE by default, if TRUE, the function retrieves data from last 10 years.
<code>csv</code>	FALSE by default, if TRUE, the function saves the data set to directory as .csv.
<code>xlsx</code>	FALSE by default, if TRUE, the function saves the data set to directory as .xlsx.
<code>lang</code>	Language parameter for labels ("ita" for Italian, "eng" for English). By default both languages are returned.
<code>cache</code>	FALSE by default. If TRUE, downloaded data are cached in the directory specified by <code>cache_dir</code> .
<code>update_cache</code>	FALSE by default. If TRUE, the cache is updated.
<code>compress_file</code>	FALSE by default. It compresses the RDS file when caching. Only used when <code>cache = TRUE</code> .
<code>cache_dir</code>	By default it saves the cache directory into the current working directory when <code>cache = TRUE</code> . The directory is created if it does not exist.

Value

It returns the data set as `data.frame`. It can be saved to environment or as .csv/.xlsx.

Note

Downloading may take some time. Future versions will speed up the process.

Examples

```
## Not run: get_i_stat("12_60",  
                      start_period = 2015,  
                      end_period = 2018,  
                      lang = "eng",  
                      cache = FALSE)  
## End(Not run)
```

list_istatdata	<i>Obtain the complete list of available data sets (source: IstatData)</i>
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Description

Obtain the complete list of available data sets (source: IstatData)

Usage

```
list_istatdata(lang = "ita")
```

Arguments

lang language parameter for labels: "ita" for Italian (default), "eng" for English.

Value

It returns the complete list of available data sets from IstatData with their ids and names.

Examples

```
list_istatdata()
```

list_i_stat	<i>Obtain the complete list of available data sets (source: I.Stat)</i>
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Description

Obtain the complete list of available data sets (source: I.Stat)

Usage

```
list_i_stat(lang = "ita")
```

Arguments

lang language parameter for labels: "ita" for Italian (default), "eng" for English.

Value

It returns the complete list of available data sets from I.Stat with their ids and names.

Examples

```
list_i_stat()
```

plot_interactive	<i>Plot dataset interactively</i>
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Description

Build different types of exploratory graphs (scatter plot, bar plot, pie chart). You can interactively choose the plot that you want create. Once you have chosen the plot, you can interactively choose the variables from the data set for which you want to build the plot.

Usage

```
plot_interactive(df)
```

Arguments

df data set as data.frame.

Value

It returns the chosen plot.

Note

plot_interactive allows you to have an idea about the general trend of your data, and it's intended to be used with exploratory purpose.

Examples

```
if(interactive()) {  
  plot_interactive(iris)  
}
```

search_istatdata	<i>Search data sets by keywords (source: IstatData).</i>
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Description

Search IstatData data sets by keywords. To download data sets use "get_istatdata" function and insert data set ids.

Usage

```
search_istatdata(keywords,  
                 lang = "ita")
```

Arguments

keywords	keyword(s) to search data sets.
lang	language parameter for labels: "ita" for Italian (default), "eng" for English.

Value

It returns a list of data sets containing the keyword(s) with their ids and names.

Note

Searching may take some time. Future versions will speed up the process.

Examples

```
search_istatdata(c("incidenti", "stradali"))  
search_istatdata("population", lang = "eng")
```

search_i_stat	<i>Search data sets by keywords (source: I.Stat)</i>
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Description

Search I.Stat data sets by keywords. To download data sets, use "get_i_stat" function and insert data set ids.

Usage

```
search_i_stat(keywords,  
              lang = "ita")
```

Arguments

keywords	keyword(s) to search data sets.
lang	language parameter for labels: "ita" for Italian (default), "eng" for English.

Value

It returns a list of data sets containing the keyword(s) with their ids and names.

Note

Searching may take some time. Future versions will speed up the process.

Examples

```
search_i_stat(c("incidenti", "stradali"))  
search_i_stat("population", lang = "eng")
```

shinyIstat	<i>shinyIstat</i>
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Description

A graphic interface that makes searching, downloading and filtering data sets from Istat easier. Call shinyIstat() to get started. This shinyApp was built using the same functions of istat package but they have been adapted for the shiny. You will find additional information and help inside the app.

Usage

```
shinyIstat()
```

Value

It opens the app.

Note

Calling a ShinyApp equals to calling a R function. For this reason, once called `shinyIstat()`, R will be busy processing it until the app is closed. As a consequence, all other R console commands can be processed only when the app is closed.

Examples

```
if(interactive()) {  
  shinyIstat()  
}
```

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