

Package ‘sorvi’

August 29, 2016

Type Package

Title Finnish Open Government Data Toolkit

Version 0.7.26

Date 2015-06-23

Author Leo Lahti, Juuso Parkkinen, Joonas Lehtomäki, Juuso Haapanen, Jussi Paananen, Einari Happonen

Maintainer Leo Lahti <louhos@googlegroups.com>

MailingList <louhos@googlegroups.com>

Description Algorithms for Finnish open government data.

License BSD_2_clause + file LICENSE

VignetteBuilder knitr

BugReports <https://github.com/ropengov/sorvi/issues>

URL <https://github.com/ropengov/sorvi>,
<http://cran.r-project.org/package=sorvi>

Depends R (>= 3.0.2)

Imports ggplot2, RColorBrewer, dplyr, reshape2

Suggests gdata, knitr, rmarkdown, RCurl, rjson, testthat

NeedsCompilation no

Repository CRAN

Date/Publication 2015-06-26 00:30:15

R topics documented:

sorvi-package	2
check_synonymes	3
convert_municipality_codes	4
fi.en.maakunnat	4
get_municipality_info_mml	5
harmonize_names	6

hetu	7
is_url	8
load_sorvi_data	9
municipality_to_province	9
regression_plot	10
ropengov_storage_path	12
valid_hetu	12

Index	14
--------------	-----------

sorvi-package	<i>Algorithmic Tools for Open Data in Finland</i>
---------------	---

Description

Brief summary of the sorvi package

Details

Package:	sorvi
Type:	Package
Version:	See sessionInfo() or DESCRIPTION file
Date:	2010-2015
License:	BSD-2-clause
LazyLoad:	yes

Open Data tools for Finland

Author(s)

Leo Lahti, Juuso Parkkinen, Jussi Paananen, Joona Lehtomaki, Einari Happonen, and Juuso Haapanen <louhos@googlegroups.com>

References

See citation("sorvi") <https://github.com/rOpenGov/sorvi>

Examples

```
library(sorvi)
```

check_synonymes	<i>check_synonymes</i>
-----------------	------------------------

Description

Check synonyme table.

Usage

```
check_synonymes(synonymes, include.lowercase = TRUE)
```

Arguments

`synonymes` `synonymes` data.frame with the self-explanatory fields 'name' and 'synonyme'.
`include.lowercase`
Include lowercase versions of the synonymes

Details

Remove duplicated information. Ensure identical matches are included in synonyme list.

Value

Polished synonyme table

Author(s)

Leo Lahti <leo.lahti@iki.fi>

References

See citation("sorvi")

Examples

```
## Not run: s <- check_synonymes(synonymes)
```

convert_municipality_codes

Conversions between municipality codes and names

Description

Conversions between municipality codes and names

Usage

```
convert_municipality_codes(ids = NULL, municipalities = NULL)
```

Arguments

```
ids          NULL
municipalities NULL
```

Value

Depending on the input. Converted id or name vector, or full conversion table.

Author(s)

Leo Lahti <louhos@googlegroups.com>

References

See citation("sorvi")

Examples

```
## Not run: conversion.table <- convert_municipality_codes()
```

fi.en.maakunnat

fi.en.maakunnat data documentation

Description

Mappings between Finnish and English province (maakunta) names

Usage

```
#translations <- load_sorvi_data("translations")
```

Format

list

Author(s)

Leo Lahti <louhos@googlegroups.com>

`get_municipality_info_mml`

Get information of Finnish municipalities from Land Survey Finland. (C) Maanmittauslaitos MML 2013. For details, see `help(GetShapeMML)`.

Description

Get information of Finnish municipalities from Land Survey Finland. (C) Maanmittauslaitos MML 2013. For details, see `help(GetShapeMML)`.

Usage

```
get_municipality_info_mml(...)
```

Arguments

... Arguments to be passed

Value

A data frame with municipality data

Author(s)

Leo Lahti <louhos@googlegroups.com>

References

See citation("sorvi")

Examples

```
## Not run: tab <- get_municipality_info_mml()
```

harmonize_names	<i>harmonize_names</i>
-----------------	------------------------

Description

Harmonize names

Usage

```
harmonize_names(x, synonymes, remove.unknown = FALSE,  
               check.synonymes = TRUE)
```

Arguments

x	A character vector
synonymes	synonyme table with the fields 'synonyme' and 'name'
remove.unknown	Logical. Remove terms that do not have synonymes.
check.synonymes	Check the synonyme table

Value

Harmonized vector where synonymes are renamed by the selected names

Author(s)

Leo Lahti <leo.lahti@iki.fi>

References

See citation("sorvi")

Examples

```
## Not run: x2 <- harmonize_names(x, synonymes)
```

hetu	<i>Extract information from Finnish personal identification numbers (hetu)</i>
------	--

Description

Extract information from Finnish personal identification numbers (hetu)

Usage

```
hetu(hetu, extract = NULL)
```

Arguments

hetu	Finnish personal identification number as a character vector, or vector of identification numbers as a character vectors
extract	Extract only selected part of the information. Valid values are "hetu", "gender", "personal.number", "checksum", "date", "day", "month", "year", "century.char". If NULL (default), returns all information.

Value

Finnish personal identification number data.frame, or if extract parameter is set, the requested part of the information as a vector. Returns NA if the given character vector is not a valid Finnish personal identification number.

hetu	Finnish personal identification number as a character vector.
gender	Gender of the person as a character vector ("Male" or "Female").
personal.number	Personal number part of the identification number.
checksum	Checksum for the personal identification number.
date	Birthdate.
day	Day of the birthdate.
month	Month of the birthdate.
year	Year of the birthdate.
century.char	Century character of the birthdate: + (1800), - (1900) or A (2000).

Author(s)

Jussi Paananen <louhos@googlegroups.com>

See Also

[valid_hetu](#) For validating Finnish personal identification numbers.

Examples

```
hetu("111111-111C")
hetu("111111-111C")$date
hetu("111111-111C")$gender
# Same as previous, but using extract argument
hetu("111111-111C", extract="gender")

# Process a vector of hetu's
hetu(c("010101-0101", "111111-111C"))

# Process a vector of hetu's and extract gender information from each
hetu(c("010101-0101", "111111-111C"), extract="gender")
```

is_url

Check if the given object is an url string

Description

Arguments:

Usage

```
is_url(s)
```

Arguments

s input object to check

Returns:

Value

TRUE/FALSE indicating whether the input string is a valid URL.

Author(s)

Leo Lahti <louhos@googlegroups.com>

References

See citation("sorvi")

Examples

```
is_url("http://aa.px")
```

load_sorvi_data	<i>load_sorvi_data</i>
-----------------	------------------------

Description

Arguments:

Usage

```
load_sorvi_data(data.id, verbose = TRUE)
```

Arguments

data.id data ID to download (suffix before .rda). Investigate the contents of the url path to check data.ids

verbose verbose

Return:

Value

translations

Author(s)

Leo Lahti <louhos@googlegroups.com>

References

See citation("sorvi")

Examples

```
# translations <- load_sorvi_data("translations")
```

municipality_to_province

List province for each municipality in Finland.

Description

List province for each municipality in Finland.

Usage

```
municipality_to_province(municipalities = NULL, municipality.info = NULL)
```

Arguments

```
municipalities NULL
municipality.info
                NULL
```

Value

Mapping vector listing the province for each municipality in Finland.

Author(s)

Leo Lahti <louhos@googlegroups.com>

References

See citation("sorvi")

Examples

```
# Info table for municipalities:
# municipality.info <- get_municipality_info_mml()
# List all municipalities:
# all.municipalities <- as.character(municipality.info$Kunta)
# Pick province for given municipalities:
# mapping between municipalities (kunta) and provinces (maakunta)
# m2p <- municipality_to_province(c("Helsinki", "Tampere", "Turku"))
# Speed up by providing predefined table of municipality info:
# m2p <- municipality_to_province(c("Helsinki", "Tampere", "Turku"), municipality.info)
```

regression_plot

Description: Draw regression curve with smoothed error bars based on the Visually-Weighted Regression by Solomon M. Hsiang; see <http://www.fight-entropy.com/2012/07/visually-weighted-regression.html> The R implementation is based on Felix Schonbrodt's code from <http://www.nicebread.de/visually-weighted-watercolor-plots-new-variants-please-vote/>

Description

Arguments:

Usage

```
regression_plot(formula, data, main = NULL, B = 1000, shade = TRUE,
  shade.alpha = 0.1, spag = FALSE, mweight = TRUE, show.lm = FALSE,
  show.median = TRUE, median.col = "white", show.CI = FALSE,
  method = loess, bw = FALSE, slices = 200,
  palette = colorRampPalette(c("#FFEDA0", "#DD0000"), bias = 2)(20),
  ylim = NULL, quantize = "continuous", ...)
```

Arguments

formula	formula
data	data
main	figure title
B	number bootstrapped smoothers
shade	plot the shaded confidence region?
shade.alpha	shade.alpha: should the CI shading fade out at the edges? (by reducing alpha; 0 = no alpha decrease, 0.1 = medium alpha decrease, 0.5 = strong alpha decrease)
spag	plot spaghetti lines?
mweight	should the median smoother be visually weighted?
show.lm	should the linear regression line be plotted?
show.median	show median smoother
median.col	median color
show.CI	should the 95% CI limits be plotted?
method	the fitting function for the spaghetthis; default: loess
bw	define a default b/w-palette (TRUE/FALSE)
slices	number of slices in x and y direction for the shaded region. Higher numbers make a smoother plot, but takes longer to draw. I wouldn't go beyond 500
palette	provide a custom color palette for the watercolors
ylim	restrict range of the watercoloring
quantize	either "continuous", or "SD". In the latter case, we get three color regions for 1, 2, and 3 SD (an idea of John Mashey)
...	further parameters passed to the fitting function, in the case of loess, for example, "span = .9", or "family = 'symmetric'"

Returns:

Value

ggplot2 object

Author(s)

Based on the original version from Felix Schonbrodt. Modified by Leo Lahti <microbiome-admin@googlegroups.com>

References

See citation("microbiome")

Examples

```
## Not run: library(dplyr); library(RColorBrewer);
           library(ggplot2); data(iris);
           p <- regression_plot(Sepal.Length ~ Sepal.Width, iris)
## End(Not run)
```

ropengov_storage_path *ropengov_storage_path*

Description

Arguments: ... Arguments to pass

Usage

```
ropengov_storage_path()
```

Details

Return:

Value

URL for Louhos data

Author(s)

Leo Lahti <louhos@googlegroups.com>

References

See citation("sorvi")

Examples

```
url <- ropengov_storage_path()
```

valid_hetu

Validate Finnish personal identification numbers (hetu)

Description

Validate Finnish personal identification numbers (hetu)

Usage

```
valid_hetu(hetu)
```

Arguments

hetu Finnish personal identification number as a character vector, or vector of identification numbers as a character vectors.

Value

Is the given string a valid Finnish personal identification number, TRUE or FALSE.

Author(s)

Jussi Paananen <louhos@googlegroups.com>

See Also

[hetu](#) For extracting information from Finnish personal identification numbers.

Examples

```
valid_hetu("010101-0101") # TRUE  
valid_hetu("010101-010A") # FALSE
```

Index

*Topic **data**

fi.en.maakunnat, [4](#)

*Topic **package**

sorvi-package, [2](#)

*Topic **utilities**

check_synonymes, [3](#)

convert_municipality_codes, [4](#)

get_municipality_info_mml, [5](#)

harmonize_names, [6](#)

is_url, [8](#)

load_sorvi_data, [9](#)

municipality_to_province, [9](#)

regression_plot, [10](#)

ropengov_storage_path, [12](#)

check_synonymes, [3](#)

convert_municipality_codes, [4](#)

fi.en.maakunnat, [4](#)

get_municipality_info_mml, [5](#)

harmonize_names, [6](#)

hetu, [7](#), [13](#)

is_url, [8](#)

load_sorvi_data, [9](#)

municipality2province

(municipality_to_province), [9](#)

municipality_to_province, [9](#)

regression_plot, [10](#)

ropengov_storage_path, [12](#)

sorvi (sorvi-package), [2](#)

sorvi-package, [2](#)

valid_hetu, [7](#), [12](#)

vwReg (regression_plot), [10](#)