

Package ‘gtrendsR’

November 3, 2016

Type Package

Title Perform and Display Google Trends Queries

Version 1.3.5

Date 2016-11-03

Description An interface for retrieving and displaying the information returned online by Google Trends is provided. Trends (number of hits) over the time as well as geographic representation of the results can be displayed.

License GPL (>= 2)

BugReports <https://github.com/PMassicotte/gtrendsR/issues>

URL <https://github.com/PMassicotte/gtrendsR>

Depends R (>= 3.0)

LazyData yes

Imports rvest, googleVis, zoo, ggplot2

RoxygenNote 5.0.1

NeedsCompilation no

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Repository CRAN

Date/Publication 2016-11-03 19:15:03

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categories	<i>Google Trends categories.</i>
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Description

- name Names of the categories
- id IDs of the categories

Usage

```
data("categories")
```

Format

A data frame with 1426 rows and 2 variables

countries	<i>Word countries ISO code.</i>
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Description

- country_code Two-digits country codes
- description Description of the location
- sub_code ISO3166-2 country codes

Usage

```
data("countries")
```

Format

A data frame with 89743 rows and 3 variables

References

http://www.unece.org/cefact/codesfortrade/codes_index.html

gconnect	<i>Connect to Google account</i>
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Description

The resulting connection object is also stored in the package-local environment from which the (internal) helper function `.getDefaultConnection()` retrieves it as needed.

Usage

```
gconnect(usr = NULL, psw = NULL, verbose = FALSE)

.getDefaultConnection()
```

Arguments

usr	User name (ex.: yourmail@gmail.com); alternatively the environment variable GOOGLE_USER as well as options("google.user") can be used to supply the user name.
psw	Account password; alternatively the environment variable GOOGLE_PASSWORD as well as options("google.password") can be used to supply the password.
verbose	Logical for displaying additional information

Details

If the environment variables GOOGLE_USER and GOOGLE_PASSWORD are set, they will be retrieved in case no argument has been supplied. Similarly, the environment variable options("google.user") or options("google.password") can be used. Lastly, if the environment variable GOOGLE_AUTOCONNECT is set to (the text string) 'TRUE', or the the R option options("google.autoconnect") is set to 'TRUE' then the connection is automatically made at package load.

Value

A libcurl handle is returned (invisibly).

Note

Should you have trouble connecting, and also use two-factor authentication on your Google Account, then consider creating another Google account (without two-factor authentication) which should allow automated (i.e. programmatic) connection here.

Examples

```
## Not run:
# use with explicit arguments
session <- gconnect("usr@gmail.com", "psw")

# use with arguments stored in env.var or options()
```

```
# this is preferred for scripts shared with others who
# can place their secret password in a file only they know
session <- gconnect("usr@gmail.com", "psw")

## End(Not run)
```

gtrends

Google Trends Query

Description

The gtrends default method performs a Google Trends query for the ‘query’ argument and session ‘session’. Optional arguments for geolocation and category can also be supplied.

Usage

```
gtrends(query, geo, cat, gprop, session, ...)

## Default S3 method:
gtrends(query = "", geo = "", cat = "0", gprop = c("",
  "news", "images", "froogle", "youtube"), session, res = c(NA, "1h", "4h",
  "1d", "7d"), start_date = as.Date("2004-01-01"),
  end_date = as.Date(Sys.time()), ...)

## S3 method for class 'gtrends'
summary(object, ...)

## S3 method for class 'gtrends'
plot(x, type = c("trend", "geo"), which = 5, ind = 1L,
  ...)

## S3 method for class 'gtrends'
as.zoo(x, ...)
```

Arguments

query	A character vector with the actual Google Trends query keywords. Multiple keywords are possible using <code>gtrends(c("NHL", "NBA", "MLB", "MLS"))</code> .
geo	A character vector denoting geographic regions for the query, default to “all” for global queries. Multiple regions are possible using <code>gtrends("NHL", c("CA", "US"))</code> .
cat	A character denoting the category, defaults to “0”.
gprop	A character string defining the Google product for which the trend query is performed. Valid options are “” (empty string - web search), “news”, “images”, “froogle” and “youtube”. Default is “”.
session	A valid session which can be created via gconnect . Users can either supply an explicit handle, or rely on the helper function <code>.getDefaultConnection()</code> to retrieve the current connection handle.

...	Additional parameters passed on in method dispatch.
res	Resolution of the trending data to be returned. One of <code>c("1h", "4h", "1d", "7d")</code> . If <code>res</code> is provided, then <code>start_date</code> and <code>end_date</code> parameters are ignored. See <i>Query resolution</i> for more information.
start_date	Starting date using yyyy-mm-dd format. Must be greater than 2004-01-01.
end_date	Starting date using yyyy-mm-dd format. Must be before than current date.
object	A <code>gtrends</code> object
x	A <code>gtrends</code> object
type	A character variable selecting the type of plot; permissible values are 'trends' (which is also the default), 'geo'.
which	Block number containing the geographical data to plot.
ind	A integer selecting the result set in case of multiple search terms.

Value

An object of class 'gtrends' which is list with six elements containing the results.

When `type` is equal to 'trends', the resulting `ggplot2` object is returned silently.

Query resolution

By default, Google returns weekly information when the requested data spans a period greater than three months. It is also possible to obtain *daily* and *hourly* information. However, these are only available for a certain period prior to the *current* date.

For instance, 1h, 7h, 1d and 7d denote trends data for the last 1 hour, last four hours, last day and last seven day respectively. Using one of the above `res` will return the corresponding hourly data.

Note that data requested for a period between one and three months will be returned daily. For a period greater than three months, data will be always returned weekly.

Categories

The package includes a complete list of categories that can be used to narrow requests. These can be accessed using `data("categories")`.

Examples

```
## Not run:
session <- gconnect("usr@gmail.com", "psw")

gtrends(c("NHL", "NBA", "MLB", "MLS"))

gtrends("NHL", geo = c("CA", "US"))

# Search only for the sport category.
gtrends("NHL", geo = c("CA", "US"), cat = "0-20")

# Trends between 2015-01-01 and 2015-03-01 in Sweeden. Will be daily data.
gtrends("NHL", geo = c("SE"), start_date = "2015-01-01", end_date = "2015-03-01")
```

```

# Trends between 2015-01-01 and 2015-04-01 in Sweeden. Will be weekly data.
gtrends("NHL", geo = c("SE"), start_date = "2015-01-01", end_date = "2015-04-01")

# Last 4 hours trends
gtrends("NHL", geo = c("CA"), res = "4h")

# Last 7 days trends
gtrends("NHL", geo = c("CA"), res = "7d")

# Using categories

data("categories")
categories[grepl("music", categories$name, ignore.case = TRUE), ]

gtrends(cat = "1087")

## End(Not run)
data("sport_trend")
plot(sport_trend)

```

sport_trend

Google Trends sport data

Description

Google Trends data for keywords nhl, nba and nfl between 2004-01-04 and 2015-11-14.

Usage

```
data("sport_trend")
```

Format

An object of class `gtrends` containing:

query Query information such has keywords and time of the query

meta Meta data returned by Google Trends upon a query

tend A data frame containing Google Trends data for each keyword

regions A list containing one data frame with top regions hit search for each keyword

topmetros A list containing one data frame with top metros hit search for each keyword

cities A list containing one data frame with top cities hit search for each keyword

searches Top related searches for each keyword

rising Rising searches for each keyword

headers Header information for each bloc described above

Source

www.google.com/trends

References

Data Source: Google Trends (www.google.com/trends)

Examples

```
## Not run:  
ch <- gconnect("usr@gmail.com", "psw")  
sport_trend <- gtrends(c("nhl", "nba", "nfl"), geo = "US")  
  
## End(Not run)  
  
data("sport_trend")  
plot(sport_trend)
```

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