Package 'RSocrata'

October 24, 2019

Type Package

Title Download or Upload 'Socrata' Data Sets

Description Provides easier interaction with
'Socrata' open data portals <http://dev.socrata.com>.
Users can provide a 'Socrata' data set resource URL,
or a 'Socrata' Open Data API (SoDA) web query,
or a 'Socrata' ``human-friendly'' URL,
returns an R data frame. Converts dates to 'POSIX'
format and manages throttling by 'Socrata'.
Users can upload data to 'Socrata' portals directly
from R.

Version 1.7.10-6

Date 2019-10-23

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Depends R (>= 3.3.0)

Imports httr (>= 1.0.0), jsonlite (>= 0.9.16), mime (>= 0.3), plyr (>= 1.8.4)

Suggests testthat (>= 0.10.0), roxygen2 (>= 4.1.0), readr (>= 0.2.2)

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URL <https://github.com/Chicago/RSocrata>

BugReports <https://github.com/Chicago/RSocrata/issues>

RoxygenNote 6.1.1

NeedsCompilation no

Repository CRAN

Date/Publication 2019-10-23 23:50:23 UTC

R topics documented:

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fieldName   *Convert Socrata human-readable column name to field name*

Description

Convert Socrata human-readable column name, as it might appear in the first row of data, to field name as it might appear in the HTTP header; that is, lower case, periods replaced with underscores#'

Usage

```
fieldName(humanName)
```

Arguments

humanName   - a Socrata human-readable column name

Value

Socrata field name

Author(s)

Hugh J. Devlin, Ph. D. <Hugh.Devlin@cityofchicago.org>

Examples

```
fieldName("Number.of.Stations") # number_of_stations
```

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isFourByFour	*Checks the validity of the syntax for a potential Socrata dataset Unique Identifier, also known as a 4x4.*

Description

Will check the validity of a potential dataset unique identifier supported by Socrata. It will provide an exception if the syntax does not align to Socrata unique identifiers. It only checks for the validity of the syntax, but does not check if it actually exists.

Usage

```
isFourByFour(fourByFour)
```

Arguments

fourByFour   - a string; character vector of length one

Value

TRUE if is valid Socrata unique identifier, FALSE otherwise

Author(s)

Tom Schenk Jr <tom.schenk@cityofchicago.org>

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ls.socrata	*List datasets available from a Socrata domain*

Description

List datasets available from a Socrata domain

Usage

```
ls.socrata(url)
```

Arguments

url   - A Socrata URL. This simply points to the site root.

Value

an R data frame containing a listing of datasets along with various metadata.

Author(s)

Peter Schmiedeskamp <pschmied@uw.edu>

Examples

```
# Download list of data sets
df <- ls.socrata("http://soda.demo.socrata.com")
# Check schema definition for metadata
attributes(df)
```

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posixify	*Convert Socrata calendar_date string to POSIX*

Description

Convert Socrata calendar_date string to POSIX

Usage

```
posixify(x)
```

Arguments

x   - character vector in one of two Socrata calendar_date formats

Value

a POSIX date

Author(s)

Hugh J. Devlin, Ph. D. <Hugh.Devlin@cityofchicago.org>

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read.socrata	*Get a full Socrata data set as an R data frame*

Description

Manages throttling and POSIX date-time conversions

Usage

```
read.socrata(url, app_token = NULL, email = NULL, password = NULL,
  stringsAsFactors = FALSE)
```

Arguments

`url`	- A Socrata resource URL, or a Socrata "human-friendly" URL, or Socrata Open Data Application Program Interface (SODA) query requesting a comma-separated download format (.csv suffix), May include SoQL parameters, but is assumed to not include a SODA offset parameter
`app_token`	- a string; SODA API token used to query the data portal http://dev.socrata.com/consumers/getting-started.html
`email`	- Optional. The email to the Socrata account with read access to the dataset
`password`	- Optional. The password associated with the email to the Socrata account
`stringsAsFactors`	
	- Optional. Should character columns be converted to factor (TRUE or FALSE)?

Value

an R data frame with POSIX dates

Author(s)

Hugh J. Devlin, Ph. D. <Hugh.Devlin@cityofchicago.org>

Examples

```
## Not run:
# Human-readable URL:
url <- "https://soda.demo.socrata.com/dataset/USGS-Earthquakes-for-2012-11-01-API/4334-bgaj"
df <- read.socrata(url)
# SoDA URL:
df <- read.socrata("http://soda.demo.socrata.com/resource/4334-bgaj.csv")
# Download private dataset
socrataEmail <- Sys.getenv("SOCRATA_EMAIL", "mark.silverberg+soda.demo@socrata.com")
socrataPassword <- Sys.getenv("SOCRATA_PASSWORD", "7vFDsGFDUG")
privateResourceToReadCsvUrl <- "https://soda.demo.socrata.com/resource/a9g2-feh2.csv" # dataset
read.socrata(url = privateResourceToReadCsvUrl, email = socrataEmail, password = socrataPassword)
# Using an API key to read datasets (reduces throttling)
token <- "ew2rEMuESuzWPqMkyPfOSGJgE"
df <- read.socrata("http://soda.demo.socrata.com/resource/4334-bgaj.csv",
                   app_token = token)
nrow(df)
closeAllConnections()

## End(Not run)
```

| validateUrl | *Convert, if necessary, URL to valid REST API URL supported by Socrata.* |

Description

Will convert a human-readable URL to a valid REST API call supported by Socrata. It will accept a valid API URL if provided by users and will also convert a human-readable URL to a valid API URL. Will accept queries with optional API token as a separate argument or will also accept API token in the URL query. Will resolve conflicting API token by deferring to original URL.

Usage

```
validateUrl(url, app_token)
```

Arguments

url	- a string; character vector of length one
app_token	- a string; SODA API token used to query the data portal http://dev.socrata.com/consumers/getting-started.html

Value

a - valid Url

Author(s)

Tom Schenk Jr <tom.schenk@cityofchicago.org>

| write.socrata | *Write to a Socrata dataset (full replace or upsert)* |

Description

Method for updating Socrata datasets

Usage

```
write.socrata(dataframe, dataset_json_endpoint, update_mode, email,
  password, app_token = NULL)
```

Arguments

`dataframe`	- dataframe to upload to Socrata
`dataset_json_endpoint`	
	- Socrata Open Data Application Program Interface (SODA) endpoint (JSON only for now)
`update_mode`	- "UPSERT" or "REPLACE"; consult http://dev.socrata.com/publishers/getting-started.html
`email`	- The email to the Socrata account with read access to the dataset
`password`	- The password associated with the email to the Socrata account
`app_token`	- a (non-required) string; SODA API token can be used to query the data portal http://dev.socrata.com/consumers/getting-started.html

Author(s)

Mark Silverberg <mark.silverberg@socrata.com>

Examples

```
## Not run:
# Store user email and password
socrataEmail <- Sys.getenv("SOCRATA_EMAIL", "mark.silverberg+soda.demo@socrata.com")
socrataPassword <- Sys.getenv("SOCRATA_PASSWORD", "7vFDsGFDUG")

datasetToAddToUrl <- "https://soda.demo.socrata.com/resource/xh6g-yugi.json" # dataset

# Generate some data
x <- sample(-1000:1000, 1)
y <- sample(-1000:1000, 1)
df_in <- data.frame(x,y)

# Upload to Socrata
write.socrata(df_in,datasetToAddToUrl,"UPSERT",socrataEmail,socrataPassword)

## End(Not run)
```

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