

Package ‘nsrr’

October 13, 2022

Type Package

Title Interface to National Sleep Research Resource

Version 0.2.0

Description Allows users to access data from the National Sleep Research Resource ('NSRR') <<https://sleepdata.org/>>.

License GPL-3

Imports httr, jsonlite, tools, digest, stats, utils

Suggests covr, DT, knitr, rmarkdown, testthat, xml2, rvest, readr

Encoding UTF-8

LazyData true

VignetteBuilder knitr

URL <https://github.com/muschellij2/nsrr>

BugReports <https://github.com/muschellij2/nsrr/issues>

RoxygenNote 7.1.0

NeedsCompilation no

Author John Muschelli [aut, cre] (<<https://orcid.org/0000-0001-6469-1750>>)

Maintainer John Muschelli <muschellij2@gmail.com>

Repository CRAN

Date/Publication 2020-06-24 18:40:03 UTC

R topics documented:

| | |
|----------------------------------|----------|
| nsrr_all_dataset_files | 2 |
| nsrr_api | 2 |
| nsrr_datasets | 3 |
| nsrr_download_url | 4 |
| nsrr_token | 5 |
| nsrr_version | 6 |
| nsrr_website | 7 |
| Index | 8 |

nsrr_all_dataset_files

NSRR All Dataset files

Description

NSRR All Dataset files

Usage

```
nsrr_all_dataset_files(dataset, token = nsrr_token(), max_files = Inf)
```

Arguments

dataset a dataset "slug", one from [nsrr_datasets](#)
token Token for NSRR resources. Found at <https://sleepdata.org/token>
max_files maximum files to return if not wanting to go through all folders recursively.

Value

A data.frame of the data sets and their endpoints

Examples

```
dataset = "shhs"  
df = nsrr_all_dataset_files(dataset, max_files = 10)  
testthat::expect_lte(nrow(df), 20)  
# keep as donttest - takes a long time  
## Not run:  
df = nsrr_all_dataset_files(dataset)  
  
## End(Not run)
```

nsrr_api

NSRR API Functionality

Description

NSRR API Functionality

Usage

```
nsrr_api(path, query = list(), token = NULL, ...)
```

Arguments

| | |
|-------|--------------------------------------------------------------------|
| path | path to endpoint for NSRR API |
| query | query to pass to GET |
| token | Authorization Token for NSRR, passed to nsrr_token |
| ... | additional arguments to pass to GET |

Value

A response object

| | |
|---------------|-----------------------|
| nsrr_datasets | <i>NSRR data sets</i> |
|---------------|-----------------------|

Description

NSRR data sets

Usage

```
nsrr_datasets(token = nsrr_token(), page = NULL)
nsrr_dataset(dataset = NULL, token = nsrr_token())
nsrr_dataset_files(dataset = NULL, path = NULL, token = nsrr_token())
```

Arguments

| | |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| token | Token for NSRR resources. Found at https://sleepdata.org/token |
| page | which page to grab. Increment over successive requests to retrieve all datasets. A request that return NULL or a number of datasets less than 18 indicates the last page. |
| dataset | a dataset "slug", one from nsrr_datasets |
| path | a folder or file path inside the dataset |

Value

A data.frame of the data sets and their endpoints

Examples

```

df = nsrr_datasets()
if (attributes(df)$status_code == 200) {
  testthat::expect_is(df, "data.frame")
  slugs = c("abc", "bestair", "chat", "ccshs", "cfs",
"heartbeat", "hchs", "homepap", "haassa", "learn")
  testthat::expect_true(all(slugs %in% df$slug))
}
on_cran = !identical(Sys.getenv("NOT_CRAN"), "true")
on_ci <- nzchar(Sys.getenv("CI"))
local_run = grepl("musch", tolower(Sys.info()[["user"]]))
run_example = !on_cran || on_ci || local_run
if (run_example) {
  df = nsrr_datasets(page = 1)
}
nsrr_dataset(dataset = "shhs", token = "")
dataset = "shhs"
token = NULL
df = nsrr_dataset_files(dataset)
ddf = nsrr_dataset_files(dataset, path = df$full_path[1])

dataset = "shhs"
token = NULL
df = nsrr_dataset_files(dataset)
nsrr_dataset_files(dataset = "wecare")

testthat::expect_error(nsrr_dataset_files(), "one data")
testthat::expect_error(nsrr_dataset_files(c("shhs", "chat")), "one data")

```

| | |
|-------------------|---------------------------|
| nsrr_download_url | <i>NSRR Download file</i> |
|-------------------|---------------------------|

Description

NSRR Download file

Usage

```
nsrr_download_url(dataset, path, token = nsrr_token())
```

```
nsrr_download_file(dataset, path, token = nsrr_token(), check_md5 = TRUE)
```

Arguments

| | |
|-----------|----------------------------------------------------------------------------------------------------------|
| dataset | a dataset "slug", one from nsrr_datasets |
| path | full path to the file. |
| token | Token for NSRR resources. Found at https://sleepdata.org/token |
| check_md5 | check if MD5 checksum agrees when downloaded |

Value

A data.frame of the data sets and their endpoints

Examples

```

if (requireNamespace("xml2", quietly = TRUE) &
    requireNamespace("rvest", quietly = TRUE)) {
  res = httr::with_config(
    config = httr::config(ssl_verifypeer = FALSE),
    httr::GET("https://sleepdata.org/datasets/shhs/files/datasets")
  )
  doc = httr::content(res)
  tab = rvest::html_table(doc)[[1]]
  path = tab$X2
  path = path[ grepl("shhs-data-dictionary-.*-domains", path)]
  path = path[1]
  path = paste0("datasets/", path)
} else {
  path = "datasets/shhs-data-dictionary-0.14.0-domains.csv"
}
dataset = "shhs"
nsrr_download_url(dataset, path, token = "")
if (nsrr_have_token()) {
  res = nsrr_download_file(dataset, path)
  testthat::expect_true(res$success)
  path = "biostatistics-with-r/shhs1.txt"
  res = nsrr_download_file(dataset, path)
}
url = nsrr_download_url("shhs", path = "datasets/CHANGELOG.md",
  token = NULL)
res = nsrr_download_file("shhs", path = "datasets/CHANGELOG.md",
  token = NULL)
testthat::expect_true(res$correct_md5)
res = nsrr_download_file("shhs", path = "datasets/CHANGELOG.md",
  token = NULL, check_md5 = FALSE)
testthat::expect_null(res$correct_md5)

```

nsrr_token

NSRR Token

Description

NSRR Token

Usage

```
nsrr_token(token = NULL)
```

```
nsrr_have_token(token = NULL)
```

```
nsrr_auth(token = NULL)
nsrr_authenticated(token = NULL)
```

Arguments

token Token for NSRR resources. Found at <https://sleepdata.org/token>

Value

A character vector or NULL

Examples

```
is.null(nsrr_token())
if (!is.null(nsrr_token())) {
  res = nsrr_auth()
  res$authenticated
}
bad_res = nsrr_auth("")
bad_res$authenticated
nsrr_have_token()
nsrr_authenticated()
```

| | |
|--------------|--------------------------------|
| nsrr_version | <i>NSRR Gem version online</i> |
|--------------|--------------------------------|

Description

NSRR Gem version online

Usage

```
nsrr_version()
nsrr_gem_version()
nsrr_api_version()
```

Value

A character of the version

Examples

```
nsrr_version()
nsrr_gem_version()
```

| | |
|--------------|-----------------------------|
| nsrr_website | <i>The NSRR Website URL</i> |
|--------------|-----------------------------|

Description

The NSRR Website URL

Usage

nsrr_website()

nsrr_api_url()

Value

A character value of the website

Examples

nsrr_website()

Index

GET, [3](#)

`nsrr_all_dataset_files`, [2](#)

`nsrr_api`, [2](#)

`nsrr_api_url` (`nsrr_website`), [7](#)

`nsrr_api_version` (`nsrr_version`), [6](#)

`nsrr_auth` (`nsrr_token`), [5](#)

`nsrr_authenticated` (`nsrr_token`), [5](#)

`nsrr_dataset` (`nsrr_datasets`), [3](#)

`nsrr_dataset_files` (`nsrr_datasets`), [3](#)

`nsrr_datasets`, [2](#), [3](#), [3](#), [4](#)

`nsrr_download_file` (`nsrr_download_url`),
[4](#)

`nsrr_download_url`, [4](#)

`nsrr_gem_version` (`nsrr_version`), [6](#)

`nsrr_have_token` (`nsrr_token`), [5](#)

`nsrr_token`, [3](#), [5](#)

`nsrr_version`, [6](#)

`nsrr_website`, [7](#)