Package 'clidatajp'

November 5, 2022

Title Data from Japan Meteorological Agency

Version 0.5.1

Description Includes climate data from Japan Meteorological Agency ('JMA') <https://www.jma.go.jp/jma/indexe.html>.
Can download climate data from 'JMA'.

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Encoding UTF-8

RoxygenNote 7.2.1

Depends R (>= 3.5.0)

URL https://github.com/matutosi/clidatajp

https://github.com/matutosi/clidatajp/tree/develop (devel)

LazyData true

Imports curl, dplyr, httr, magrittr, rlang, rvest, stringi, stringr, tibble, tidyr

Suggests knitr, rmarkdown, spelling, testthat (>= 3.0.0), tidyverse

VignetteBuilder knitr

Config/testthat/edition 3

Language en-US

NeedsCompilation no

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R topics documented:

`as_numeric_without_warnings` *Wrapper function to convert into numeric without warnings*

Description

Wrapper function to convert into numeric without warnings

Usage

```
as_numeric_without_warnings(x)
```

Arguments

x	A string.

Value

A numeric or NA.

`clean_station` *Clean up station information*

Description

Helper function for download_climate().

Usage

```
clean_station(station)
```

Arguments

station	A String of station information.

Value

A tibble including station information.

Examples

```
data(station_links)
station_links %>%
  head(1) %>%
  `$`("station") %>%
  stringi::stri_unescape_unicode() %>%
  clean_station()
```

`download_climate` *download climate data of the world*

Description

For polite scraping, 5 sec interval is set in download_climate(), it takes over 5 hours to get climate data of all stations. Please use existing links by "data(world_climate)", if you do not need to renew climate data. You can see web page as below. https://www.data.jma.go.jp/gmd/cpd/monitor/nrmlist/

Usage

```
download_climate(url)
```

Arguments

`url`	A String to specify target html.

Value

A tibble including climate and station information, or NULL when failed.

Examples

```
# If you want all climate data, remove head().
# The codes take > 5 sec because of poliste scraping.

library(tidyverse)
data(station_links)
station_links <-
  station_links %>%
  head(1) %>%
  `$`("url")

climate <- list()
for(i in seq_along(station_links)){
  print(stringr::str_c(i, " / ", length(station_links)))
  climate[[i]] <- download_climate(station_links[i])
}
world_climate <- dplyr::bind_rows(climate)
world_climate
```

download_links *download links for areas, countries and stations*

Description

For polite scraping, 5 sec interval is set in download_links(), it takes about 15 minutes to get all station links. Please use existing links by "data(station_links)", if you do not need to renew links. You can see web page as below. https://www.data.jma.go.jp/gmd/cpd/monitor/nrmlist/

Usage

```
download_area_links(
  url = "https://www.data.jma.go.jp/gmd/cpd/monitor/nrmlist/"
)

download_links(url)
```

Arguments

url	A String to specify target html.

Value

A string vector of url links, or NULL when failed.

Examples

```
# If you want links for all countries and all sations, remove head().
# The codes take over 5 sec because of poliste scraping.

library(tidyverse)
area_links <- download_area_links()
station_links <- NULL
area_links <- head(area_links, 1)  # for test
for(i in seq_along(area_links)){
    print(stringr::str_c("area: ", i, " / ", length(area_links)))
    country_links <- download_links(area_links[i])
    country_links <- head(country_links, 1)  # for test
    for(j in seq_along(country_links)){
        print(stringr::str_c("    country: ", j, " / ", length(country_links)))
        station_links <- c(station_links, download_links(country_links[j]))
    }
}
station_links <- tibble::tibble(url = station_links)
station_links
```

`gracefully_fail` *Graceful fail*

Description

Graceful fail

Usage

```
gracefully_fail(remote_file)
```

Arguments

`remote_file`	A string of remote file.

Value

```
An XML document when successed, or invisible NULL when failed.
```

References

https://gist.github.com/kvasilopoulos/47f24348ed75cdb6365312b17f4b914c

`head_3` *Wrapper function to head 3 items*

Description

Wrapper function to head 3 items

Usage

```
head_3(x)
```

Arguments

`x`	An object.

Value

An object like x with length 3.

`japan_climate` *Climate data in Japan*

Description

Climate data downloaded from Japan Meteorological Agency web pages. URLs of each station are listed in data(station_links). https://www.data.jma.go.jp/gmd/cpd/monitor/nrmlist/

Usage

```
japan_climate
```

Format

A data frame with 3768 (stations * 12 months) rows and 14 variable:

no Station no

month Month

period Period of observations

temperature Mean temperature

precipitation Mean precipitation

snowfall Mean snowfall

insolation Mean insolation

station Station name. To avoid duplication, including country name after station name. Can split by "_". Escaped by stringi::stri_escape_unicode().

country Country name. Escaped by stringi::stri_escape_unicode().

latitude Latitude. (degree)

NS North or South.

longitude Longitude. (degree)

WE West or East.

altitude Altitude (m)

Examples

```
library(tidyverse)
data(japan_climate)
japan_climate %>%
  dplyr::mutate_all(stringi::stri_unescape_unicode)
```

sleep *Wrapper function to sleep*

Description

Wrapper function to sleep

Usage

```
sleep(sec = 5)
```

Arguments

sec	A numeric to sleep (sec).

Value

No return value, called for side effects.

station_links *Station name and its URL*

Description

Station name and its URL

Usage

```
station_links
```

Format

A data frame with 3444 rows and 3 variable:

no Station no

station Station information including no, month, temperature, precipitation, station, country, latitude, NS, longitude, WE, altitude. The information is NOT cleaned Row information downloaded from each URL. Escaped by stringi::stri_escape_unicode().

url URL of station.

Examples

```
library(tidyverse)
data(station_links)
station_links %>%
  dplyr::mutate_all(stringi::stri_unescape_unicode)
```

`world_climate` *Climate data in the world*

Description

Climate data downloaded from Japan Meteorological Agency web pages. URLs of each station are listed in data(station_links). https://www.data.jma.go.jp/gmd/cpd/monitor/nrmlist/

Usage

```
world_climate
```

Format

A data frame with 41328 (3444 stations * 12 months) rows and 11 variable:

no Station no

month Month

temperature Mean temperature

precipitation Mean precipitation

station Station name. To avoid duplication, including country name after station name. Can split by "_". Escaped by stringi::stri_escape_unicode().

country Country name. Escaped by stringi::stri_escape_unicode().

latitude Latitude. (degree)

NS North or South.

longitude Longitude. (degree)

WE West or East.

altitude Altitude (m)

Examples

```
library(tidyverse)
data(world_climate)
world_climate %>%
  dplyr::mutate_all(stringi::stri_unescape_unicode)
```

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