Package: flightsbr (via r-universe)

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Type Package

Title Download Flight and Airport Data from Brazil

Version 1.3.0

Description Download flight and airport data from Brazil's Civil Aviation Agency (ANAC) <https://www.gov.br/anac/pt-br>. The data covers detailed information on aircraft, airports, and airport operations registered with ANAC. It also includes data on airfares, all international flights to and from Brazil, and domestic flights within the country.

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BugReports https://github.com/ipea/flightsbr/issues

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`delete_flightsbr_cache`

Delete data cached by flightsbr

Description

Deletes files from the flightsbr cache folder (see `get_flightsbr_cache_dir()`): all cached files, or only the ones named in `file`.

Usage

```
delete_flightsbr_cache(file = NULL, verbose = TRUE)
```

Arguments

`file`	String. Names of cached files to delete, for example `"basica2000-01.zip"` (see `list_flightsbr_cache()`). If `NULL` (the default), all cached files are deleted.
`verbose`	Logical. Whether to print a message saying what was deleted. Defaults to `TRUE`.

Details

Only files saved directly in the cache folder are deleted. Subfolders and their content are never touched, so pointing the cache at a folder that also holds other things (see `set_flightsbr_cache_dir()`) can't wipe them out. The cache folder itself is removed if it ends up empty.

Value

Invisibly, the path to the cache folder.

See Also

Other Cache data: `get_flightsbr_cache_dir()`, `list_flightsbr_cache()`, `set_flightsbr_cache_dir()`

Examples

```
# delete one file
delete_flightsbr_cache("basica2000-01.zip")

# delete all cached files
delete_flightsbr_cache()
```

`flightsbr` *flightsbr: Download Flight and Airport Data from Brazil*

Description

Download flight and airport data from Brazil's Civil Aviation Agency (ANAC) https://www.gov.br/anac/pt-br. The data includes detailed information on all aircrafts, aerodromes, airports, and airport movements registered in ANAC, and on every international flight to and from Brazil, as well as domestic flights within the country.

Usage

Please check the vignettes and data documentation on the website.

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See Also

Useful links:

- https://github.com/ipea/flightsbr
- https://ipea.github.io/flightsbr/
- Report bugs at https://github.com/ipea/flightsbr/issues

get_flightsbr_cache_dir *Get the folder where flightsbr caches downloaded data*

Description

Returns the folder used to cache data downloaded by flightsbr: the folder set with `set_flightsbr_cache_dir()`, possibly in a previous R session, or the default folder, `tools::R_user_dir("flightsbr", which = "cache")`.

Usage

```
get_flightsbr_cache_dir()
```

Value

String. The path to the cache folder. The folder may not exist yet if no data has been downloaded.

See Also

Other Cache data: `delete_flightsbr_cache()`, `list_flightsbr_cache()`, `set_flightsbr_cache_dir()`

Examples

```
get_flightsbr_cache_dir()
```

latest_airfares_date *Check the date of the latest airfare data available*

Description

Check the date of the latest airfare data available

Usage

```
latest_airfares_date(dom = TRUE)
```

Arguments

dom	Logical. Defaults to `TRUE` download airfares of domestic flights. If `FALSE`, the function downloads airfares of international flights.

Value

A numeric date in the format `yyyymm`.

See Also

Other support function: latest_flights_date()

Examples

```
## Not run:  if (interactive()) {

latest_date <- latest_airfares_date()

}
## End(Not run)
```

`latest_flights_date` *Check the date of the latest flight data available*

Description

Check the date of the latest flight data available

Usage

```
latest_flights_date()
```

Value

A numeric date in the format `yyyymm`.

See Also

Other support function: latest_airfares_date()

Examples

```
## Not run:  if (interactive()) {

latest_date <- latest_flights_date()

}
## End(Not run)
```

list_flightsbr_cache *List the data cached by flightsbr*

Description

Lists the files saved in the flightsbr cache folder (see `get_flightsbr_cache_dir()`).

Usage

```
list_flightsbr_cache(print_tree = FALSE)
```

Arguments

`print_tree`	Logical. Whether to print the content of the cache folder as a tree. Defaults to `FALSE`.

Value

A character vector with the paths of the cached files (invisibly when `print_tree = TRUE`). An empty vector if nothing is cached.

See Also

Other Cache data: `delete_flightsbr_cache()`, `get_flightsbr_cache_dir()`, `set_flightsbr_cache_dir()`

Examples

```
list_flightsbr_cache()

list_flightsbr_cache(print_tree = TRUE)
```

read_aircraft *Download aircraft data from Brazil*

Description

Download data of all aircraft registered in the Brazilian Aeronautical Registry (Registro Aeronáutico Brasileiro - RAB), organized by the Brazilian Civil Aviation Agency (ANAC). A description of all variables included in the data is available at https://www.gov.br/anac/pt-br/sistemas/rab.

Usage

```
read_aircraft(date = NULL, showProgress = TRUE, cache = TRUE)
```

Arguments

date	Numeric. Date of the data in the format yyyymm. Defaults to the latest date available. To download the data for all months in a year, the user can pass a 4-digit year input yyyy. The function also accepts a vector of dates, like c(202201, 202301) or c(2022, 2024).
showProgress	Logical. Defaults to TRUE display progress.
cache	Logical. Whether the function should read cached data downloaded previously. Defaults to TRUE. Downloaded files are cached in a folder that persists across R sessions (see get_flightsbr_cache_dir() and set_flightsbr_cache_dir()), and a cached file is downloaded again only if ANAC's copy has a different size. If FALSE, the function will always download the data and overwrite cached data. See list_flightsbr_cache() and delete_flightsbr_cache() to manage cached files.

Value

A "data.table" "data.frame" object. Columns of counts and measures are numeric; codes and identifiers (e.g. flight numbers, serial numbers, airport codes) are character, keeping leading zeros. A column with some values that are not numbers stays character, with a message.

See Also

Other download flight data: read_aircrafts(), read_flights()

Examples

```
## Not run:  if (interactive()) {
# Read aircraft data
aircraft <- read_aircraft(date = 202409,
                          showProgress = TRUE
                          )


}
## End(Not run)
```

---

read_airfares *Download data on airfares flights in Brazil*

Description

Download data on air fares of domestic and international flights in Brazil. The data is collected by Brazil's Civil Aviation Agency (ANAC). A description of all variables included in the data for domestic airfares is available at https://www.anac.gov.br/acesso-a-informacao/dados-abertos/areas-de-atuacao/voos-e-operacoes-aereas/tarifas-aereas-domesticas/46-tarifas-aereas-domesticas. A description of all variables included in the data for international airfares is available at https://www.gov.br/anac/pt-br/assuntos/dados-e-estatisticas/microdados-de-tarifas-aereas-comercializadas.

Usage

```
read_airfares(
  date = NULL,
  domestic = TRUE,
  showProgress = TRUE,
  select = NULL,
  cache = TRUE
)
```

Arguments

date	Numeric. Date of the data in the format yyyymm. Defaults to the latest date available. To download the data for all months in a year, the user can pass a 4-digit year input yyyy. The function also accepts a vector of dates, like c(202201, 202301) or c(2022, 2024).
domestic	Logical. Defaults to TRUE download airfares of domestic flights. If FALSE, the function downloads airfares of international flights.
showProgress	Logical. Defaults to TRUE display progress.
select	A vector of column names or positions to keep. The order that the columns passed determines the order of the columns in the result. In read_airfares(), only column names are accepted, and both current and older ANAC names work (see Details).
cache	Logical. Whether the function should read cached data downloaded previously. Defaults to TRUE. Downloaded files are cached in a folder that persists across R sessions (see get_flightsbr_cache_dir() and set_flightsbr_cache_dir()), and a cached file is downloaded again only if ANAC's copy has a different size. If FALSE, the function will always download the data and overwrite cached data. See list_flightsbr_cache() and delete_flightsbr_cache() to manage cached files.

Details

ANAC has changed the column names of these files several times. All files are returned with the names ANAC uses in its current files (nr_ano_referencia, nr_mes_referencia, sg_empresa_icao, sg_icao_origem, sg_icao_destino, nr_tarifa, nr_assentos and, for international flights, sg_icao_retorno, cd_classe_ida, cd_classe_volta), so files from different years can be combined. select accepts these names as well as older names such as "TARIFA" or "ano".

Value

A "data.table" "data.frame" object.

Examples

```
## Not run:  if (interactive()) {
# Read air fare data
af_201506 <- read_airfares(date = 201506, domestic = TRUE)
```

```
af_2015 <- read_airfares(date = 2015, domestic = TRUE)
}
## End(Not run)
```

`read_airport_movements` *Download airport movement data from Brazil*

Description

Download airport movements data from Brazil's Civil Aviation Agency (ANAC). The data covers all passenger, aircraft, cargo and mail movement data from airports regulated by ANAC. Data only available from March 2019 onwards. A description of all variables included in the data is available at https://www.anac.gov.br/acesso-a-informacao/dados-abertos/areas-de-atuacao/operador-aeroportuario dados-de-movimentacao-aeroportuaria/60-dados-de-movimentacao-aeroportuaria.

Usage

```
read_airport_movements(date = NULL, showProgress = TRUE, cache = TRUE)
```

Arguments

`date`	Numeric. Date of the data in the format `yyyymm`. Defaults to the latest date available. To download the data for all months in a year, the user can pass a 4-digit year input `yyyy`. The function also accepts a vector of dates, like `c(202201, 202301)` or `c(2022, 2024)`.
`showProgress`	Logical. Defaults to `TRUE` display progress.
`cache`	Logical. Whether the function should read cached data downloaded previously. Defaults to `TRUE`. Downloaded files are cached in a folder that persists across R sessions (see `get_flightsbr_cache_dir()` and `set_flightsbr_cache_dir()`), and a cached file is downloaded again only if ANAC's copy has a different size. If `FALSE`, the function will always download the data and overwrite cached data. See `list_flightsbr_cache()` and `delete_flightsbr_cache()` to manage cached files.

Value

A `"data.table" "data.frame"` object. Columns of counts and measures are numeric; codes and identifiers (e.g. flight numbers, serial numbers, airport codes) are character, keeping leading zeros. A column with some values that are not numbers stays character, with a message.

Examples

```
## Not run:  if (interactive()) {
# Read airport movement data
amov202006 <- read_airport_movements(date = 202006)
```

```
amov2020 <- read_airport_movements(date = 2020)
}
## End(Not run)
```

`read_airports` *Download airports data from Brazil*

Description

Download data of all airports and aerodromes registered in Brazil's Civil Aviation Agency (ANAC). Data source: https://www.gov.br/anac/pt-br/acesso-a-informacao/dados-abertos/areas-de-atuacao/aerodromos. The data dictionary for public airports can be found at https://www.anac.gov.br/acesso-a-informacao/dados-abertos/areas-de-atuacao/aerodromos/lista-de-aerodromos-publicos-v2/70-lista-de-aerodromos-publicos-v2. The data dictionary for private airports can be found at https://www.anac.gov.br/acesso-a-informacao/dados-abertos/areas-de-atuacao/aerodromos/lista-de-aerodromos-privados-v2.

Usage

```
read_airports(type = "all", showProgress = TRUE, cache = TRUE)
```

Arguments

type	String. Whether the function should download data on `all`, `public` or `private` airports. Defaults to `all`, returning fewer columns. Downloading `public` and `private` airports separately will return the full set of columns available for each of those data sets.
showProgress	Logical. Defaults to `TRUE` display progress.
cache	Logical. Whether the function should read cached data downloaded previously. Defaults to `TRUE`. Downloaded files are cached in a folder that persists across R sessions (see `get_flightsbr_cache_dir()` and `set_flightsbr_cache_dir()`), and a cached file is downloaded again only if ANAC's copy has a different size. If `FALSE`, the function will always download the data and overwrite cached data. See `list_flightsbr_cache()` and `delete_flightsbr_cache()` to manage cached files.

Value

A `"data.table" "data.frame"` object.

Examples

```
## Not run:  if (interactive()) {
# Read airports data
all_airports <- read_airports(type = 'all')

public_airports <- read_airports(type = 'public')
```

```
private_airports <- read_airports(type = 'private')
}
## End(Not run)
```

`read_flights` *Download flight data from Brazil*

Description

Download flight data from Brazil's Civil Aviation Agency (ANAC). The data includes detailed information on every international flight to and from Brazil, as well as domestic flights within the country. The data include flight-level information of airports of origin and destination, flight duration, aircraft type, payload, and the number of passengers, and several other variables. A description of all variables included in the data is available at https://www.gov.br/anac/pt-br/assuntos/regulados/empresas-aereas/Instrucoes-para-a-elaboracao-e-apresentacao-das-demonstracoes-contabeis/descricao-de-variaveis.

Usage

```
read_flights(
  date = NULL,
  type = "basica",
  showProgress = TRUE,
  select = NULL,
  cache = TRUE
)
```

Arguments

`date`	Numeric. Date of the data in the format `yyyymm`. Defaults to the latest available month. To download the data for all months in a year, the user can pass a 4-digit year input `yyyy`. The parameter also accepts a vector of dates such as `c(202001, 202006, 202012)`.
`type`	String. Whether the data set should be of the type `basica` (flight stage, the default) or `combinada` (On flight origin and destination - OFOD).
`showProgress`	Logical. Defaults to `TRUE` display progress.
`select`	A vector of column names or positions to keep. The order that the columns passed determines the order of the columns in the result. In `read_airfares()`, only column names are accepted, and both current and older ANAC names work (see Details).
`cache`	Logical. Whether the function should read cached data downloaded previously. Defaults to `TRUE`. Downloaded files are cached in a folder that persists across R sessions (see `get_flightsbr_cache_dir()` and `set_flightsbr_cache_dir()`), and a cached file is downloaded again only if ANAC's copy has a different size. If `FALSE`, the function will always download the data and overwrite cached data. See `list_flightsbr_cache()` and `delete_flightsbr_cache()` to manage cached files.

Value

A "data.table" "data.frame" object. Columns of counts and measures are numeric; codes and identifiers (e.g. flight numbers, serial numbers, airport codes) are character, keeping leading zeros. A column with some values that are not numbers stays character, with a message.

See Also

Other download flight data: read_aircraft(), read_aircrafts()

Examples

```
## Not run:  if (interactive()) {
# Read flights data
f201506 <- read_flights(date = 201506)

f2015 <- read_flights(date = 2015)
}
## End(Not run)
```

---

set_flightsbr_cache_dir

Set the folder where flightsbr caches downloaded data

Description

flightsbr saves the files it downloads from ANAC in a cache folder, so that each file is downloaded only once, even across R sessions. This function sets which folder is used. The choice is saved and persists across R sessions.

Files already cached in the previous folder are not moved. They stay where they are until you delete them, for example with delete_flightsbr_cache() before changing the folder.

Usage

```
set_flightsbr_cache_dir(path = NULL, verbose = TRUE)
```

Arguments

path	String. The path to the folder used to cache downloaded data. If NULL (the default), flightsbr goes back to its default folder, tools::R_user_dir("flightsbr", which = "cache").
verbose	Logical. Whether to print a message with the cache folder. Defaults to TRUE.

Value

Invisibly, the path to the cache folder.

See Also

Other Cache data: delete_flightsbr_cache(), get_flightsbr_cache_dir(), list_flightsbr_cache()

Examples

```
# use a custom folder
set_flightsbr_cache_dir(tempdir())

# go back to the default folder
set_flightsbr_cache_dir(NULL)
```

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