

Package ‘owmr’

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Title OpenWeatherMap API Wrapper

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Description Accesses OpenWeatherMap's (owm) <<https://openweathermap.org/>> API. 'owm' itself is a service providing weather data in the past, in the future and now. Furthermore, 'owm' serves weather map layers usable in frameworks like 'leaflet'. In order to access the API, you need to sign up for an API key. There are free and paid plans. Beside functions for fetching weather data from 'owm', 'owmr' supplies tools to tidy up fetched data (for fast and simple access) and to show it on leaflet maps.

URL <https://github.com/crazycapivara/owmr/>,
<https://crazycapivara.github.io/owmr/>

BugReports <https://github.com/crazycapivara/owmr/issues/>

Depends R (>= 3.1.2)

Imports magrittr, httr, jsonlite, plyr, tibble, tidyr

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Encoding UTF-8

LazyData true

RoxygenNote 6.0.1

Suggests leaflet, whisker, testthat, covr

NeedsCompilation no

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add_owm_tiles	<i>Add owm tiles to leaflet map.</i>
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Description

Add owm tiles to leaflet map.

Usage

```
add_owm_tiles(map, layer_name = owm_layers$Temperature_new, ...)
```

Arguments

map	leaflet map object
layer_name	owm layer name, see owm_layers
...	optional parameters passed to addTiles

Value

updated map object

Examples

```
## Not run:
  leaflet() %>% add_owm_tiles() %>%
    addMarkers(data = quakes[1:20, ])

## End(Not run)
```

add_weather	<i>Add weather data to leaflet map.</i>
-------------	---

Description

Add weather data to leaflet map.

Usage

```
add_weather(map, data, lng = NULL, lat = NULL, icon = NULL,
            template = NULL, popup = NULL, ...)
```

Arguments

map	leaflet map object
data	owm data
lng	numeric vector of longitudes (if NULL it will be taken from data)
lat	numeric vector of latitudes (if NULL it will be taken from data)
icon	vector of owm icon names (usually included in weather column of owm data)
template	template in the form of " {{name}} " where variable names in brackets correspond to column names of data (see also render)
popup	vector containing (HTML) content for popups, skipped in case parameter <code>template</code> is given
...	see addMarkers

Value

updated map object

Examples

```
## Not run:
owm_data <- find_city("Malaga", units = "metric") %>%
  owmr_as_tibble()
map <- leaflet() %>% addTiles() %>%
  add_weather(
    owm_data,
    template = "<b>{{name}}</b>, {{temp}}°C",
    icon = owm_data$weather_icon
  )

## End(Not run)
```

cbind_weather

Flatten weather column in data frame. (DEPRECATED)

Description

Flatten weather column in data frame. (DEPRECATED)

Usage

```
cbind_weather(data)
```

Arguments

data data frame containing weather column

Value

data frame with flattened weather (data)

Examples

```
## Not run:
get_forecast("Kassel") %>% cbind_weather()

## End(Not run)
```

find_cities_by_bbox *Find cities by bounding box.*

Description

Get current weather data for a number of cities within a given bounding box.

Usage

```
find_cities_by_bbox(bbox = c(12, 32, 15, 37, 10), ...)
```

Arguments

bbox	bounding box, numeric vector of the form (lon-left, lat-bottom, lon-right, lat-top, zoom)
...	see https://openweathermap.org/current

find_cities_by_geo_point
Find cities by geo point.

Description

Get current weather data for a number of cities around a given geo point.

Usage

```
find_cities_by_geo_point(lat, lon, cnt = 3, ...)
```

Arguments

lat	latitude of geo point
lon	longitude of geo point
cnt	number of cities
...	see owm api documentation

Value

list

See Also

[find_city](#)

Examples

```
## Not run:  
  find_cities_by_geo_point(lat = 51.50853, lon = -0.12574, cnt = 5)  
  
## End(Not run)
```

find_city	<i>Find city by name or coordinates.</i>
-----------	--

Description

Either search for city by name or fetch weather data for a number of cities around geo point.

Usage

```
find_city(city = NA, ...)
```

Arguments

city	city name (and country code)
...	see owm api documentation, pass lat and lon to search by coordinates

Value

list of weather data for matches

See Also

[find_cities_by_geo_point](#)

Examples

```
## Not run:  
  find_city("London,UK")  
  find_city(lat = 51.50853, lon = -0.12574, cnt = 5)  
  
## End(Not run)
```

flatten	<i>Flatten list. (DEPRECATED)</i>
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Description

Flatten list. (DEPRECATED)

Usage

```
flatten(data)
```

Arguments

data	list returned from own
------	------------------------

Value

flattened list

Examples

```
## Not run:  
get_current("Rio de Janeiro") %>% flatten()  
get_current("Rio de Janeiro") %>% flatten() %>%  
  tidy_up_()  
  
## End(Not run)
```

flatten_weather	<i>Parse weather column to (single) data frame. (DEPRECATED)</i>
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Description

Parse weather column to (single) data frame. (DEPRECATED)

Usage

```
flatten_weather(x)
```

Arguments

x	weather column (NOT name)
---	---------------------------

Value

data frame

Examples

```
## Not run:
result <- get_forecast("Kassel", units = "metric")$list
weather <- flatten_weather(result$weather)
weather$description %>% print()

## End(Not run)
```

get_current

Get current weather data for given city.

Description

Get current weather data for given city.

Usage

```
get_current(city = NA, ...)
```

Arguments

city	city name or id
...	see owm api documentation, you can also skip parameter city and pass lat (latitude) and lon (longitude) or zip (zip code) instead

Value

list

Examples

```
## Not run:
get_current("London", units = "metric")
get_current(2643741, lang = "DE")
get_current(lon = -0.09184, lat = 51.51279)
get_current(zip = "94040,US")

## End(Not run)
```

get_current_for_group *Get current weather data for multiple cities.*

Description

Get current weather data for multiple cities.

Usage

```
get_current_for_group(city_ids, ...)
```

Arguments

city_ids	numeric vector containing city ids
...	see owm api documentation

Value

list

See Also

[owm_cities](#) dataset in order to lookup city ids

Examples

```
## Not run:  
city_ids = c(2831088, 2847639, 2873291)  
result <- get_current_for_group(city_ids)  
result$cnt == nrow(result$list)  
weather_frame <- result$list  
  
## End(Not run)
```

get_forecast *Get 3h forecast data.*

Description

Get 3h forecast data.

Usage

```
get_forecast(city = NA, ...)
```

Arguments

city city name or id
... see owm api documentation, you can also skip parameter city and pass lat (latitude) and lon (longitude) or zip (zip code) instead

Value

list

Examples

```
## Not run:  
result <- get_forecast("Kassel", units = "metric")  
names(result)  
get_forecast("London", cnt = 10)  
get_forecast(lat = -22.90278, lon = -22.90278, cnt = 3, units = "metric")  
  
## End(Not run)
```

get_forecast_daily *Get daily forecast data up to 16 days.*

Description

Get daily forecast data up to 16 days.

Usage

```
get_forecast_daily(city = NA, ...)
```

Arguments

city city name or id
... see owm api documentation, you can also skip parameter city and pass lat (latitude) and lon (longitude) or zip (zip code) instead

Value

list

Examples

```
## Not run:  
# 9 day forecast  
result <- get_forecast_daily("London", cnt = 9)  
forecast_frame <- result$list  
  
## End(Not run)
```

get_icon_url	<i>Get icon url.</i>
--------------	----------------------

Description

Get icon url.

Usage

```
get_icon_url(icon)
```

Arguments

icon icon name as returned by owm

Value

icon url

Examples

```
## Not run:
forecast <- get_forecast("London")$list
weather <- flatten_weather(forecast$weather)
icons <- get_icon_url(weather$icon)

## End(Not run)
```

owmr	<i>owmr - An R interface to access OpenWeatherMap's API</i>
------	---

Description

In order to access the API, you need to sign up for an API key at <https://openweathermap.org/>. For optional parameters (. . .) in functions see <https://openweathermap.org/api/>

Examples

```
## Not run:
# first of all you have to set up your api key
owmr_settings("your_api_key")

# or store it in an environment variable called OWM_API_KEY (recommended)
Sys.setenv(OWM_API_KEY = "your_api_key") # if not set globally

# get current weather data for "Kassel" with temperatures in °C
get_current("Kassel", units = "metric")
```

```
# get 3h forecast data (7 rows)
get_forecast("London", cnt = 7)

# ...

## End(Not run)
```

owmr_as_tibble	<i>Parse owmr response to tibble.</i>
----------------	---------------------------------------

Description

Parse owmr response to tibble.

Usage

```
owmr_as_tibble(resp, simplify = TRUE)

## S3 method for class 'owmr_weather'
owmr_as_tibble(resp, simplify = TRUE)

## Default S3 method:
owmr_as_tibble(resp, simplify = TRUE)

## S3 method for class 'owmr_forecast_daily'
owmr_as_tibble(resp, simplify = TRUE)
```

Arguments

resp	response object returned from functions like get_current or get_forecast
simplify	return tibble only?

Value

list containing tibble or tibble only (simplify = TRUE)

owmr_settings	<i>owmr settings.</i>
---------------	-----------------------

Description

Set api key. Internally it calls `Sys.setenv` to store the api key in an environment variable called OWM_API_KEY.

Usage

```
owmr_settings(api_key)
```

Arguments

api_key	owm api key
---------	-------------

Examples

```
## Not run:  
  owmr_settings(api_key = "your-api-key")  
  
## End(Not run)
```

owm_cities	<i>owm city list containing ids and coordinates of cities.</i>
------------	--

Description

A dataset containing city ids and coordinates to be used in queries.

Usage

```
owm_cities
```

Format

data frame with 74071 rows and 4 variables:

id	city id
nm	city name
lat	latitude
lon	longitude
countryCode	two letter country code

Source

<http://bulk.openweathermap.org/sample/city.list.json.gz>

owm_layers	<i>List of available owm weather map layers.</i>
------------	--

Description

List of available owm weather map layers.

Usage

```
owm_layers
```

Format

An object of class list of length 16.

See Also

<https://openweathermap.org/api/weathermaps>

parse_columns	<i>Apply functions to columns.</i>
---------------	------------------------------------

Description

Apply functions to columns.

Usage

```
parse_columns(data, functions_)
```

Arguments

data	data frame
functions_	named list where keys correspond to column names

Value

updated data frame

Examples

```
## Not run:
parse_dt <- function(x){as.POSIXct(x, origin = "1970-01-01")}
forecast <- get_forecast("Kassel")$list
forecast %<>% parse_columns(list(dt = parse_dt))

## End(Not run)
```

remove_prefix	<i>Remove prefixes from column names.</i>
---------------	---

Description

Remove prefixes from column names.

Usage

```
remove_prefix(data, prefixes, sep = ".")
```

Arguments

data	data frame
prefixes	vector of prefixes to be removed from column names
sep	prefix separator

Value

data frame with updated column names

Examples

```
x <- data.frame(main.temp = 1:10, sys.msg = "OK", cnt = 10:1)
names(x)
remove_prefix(x, c("main", "sys")) %>% names()
```

search_city_list	<i>Look up coordinates and city id in owm's city list.</i>
------------------	--

Description

Search [owm_cities](#) dataset by city name and country code.

Usage

```
search_city_list(city, country_code = "")
```

Arguments

city	city name (regex)
country_code	two letter country code (AU, DE, ...), use country_code = "" as wildcard

Value

data frame with matches

See Also

[owm_cities](#) dataset

Examples

```
search_city_list("London", "GB")
search_city_list("London")
search_city_list("Lond")
```

tidy_up

Tidy up owm data. (DEPRECATED)

Description

Calls [tidy_up_](#) passing `data$list` as data argument.

Usage

```
tidy_up(data, ...)
```

Arguments

<code>data</code>	result returned from owm containing data frame in <code>data\$list</code>
<code>...</code>	see tidy_up_

Value

data with updated data frame (`data$list`)

See Also

[tidy_up_](#)

Examples

```
## Not run:
  get_forecast("London") %>% tidy_up()

## End(Not run)
```

tidy_up_	<i>Tidy up owm data. (DEPRECATED)</i>
----------	---------------------------------------

Description

Tidy up owm data. (DEPRECATED)

Usage

```
tidy_up_(data, flatten_weather_ = TRUE, use_underscore_ = TRUE,  
         remove_prefix_ = c("main", "sys"))
```

Arguments

`data` data frame

`flatten_weather_` see [flatten_weather](#)

`use_underscore_` substitute dots in column names with underscores

`remove_prefix_` prefices to be removed for shorter column names (`remove_prefix_ = NULL` will keep all prefices)

Value

updated data frame

See Also

[tidy_up](#),
[remove_prefix](#),
[use_underscore](#)

Examples

```
## Not run:  
result <- find_city("Malaga")  
result$list %>% tidy_up_()  
  
# keep dots in column names  
result$list %>% tidy_up_(use_underscore_ = FALSE)  
  
# keep all prefices  
result$list %>% tidy_up_(remove_prefix_ = NULL)  
  
## End(Not run)
```

use_underscore	<i>Substitute dots in column names with underscores.</i>
----------------	--

Description

Substitute dots in column names with underscores.

Usage

```
use_underscore(data)
```

Arguments

data	data frame
------	------------

Value

data frame with updated column names

Examples

```
names(airquality)
use_underscore(airquality) %>% names()
```

\$\$\$%	<i>Render operator.</i>
---------	-------------------------

Description

Vectorizes function [whisker.render](#).

NOTE: Because **whisker** does not support variable names including dots, a *dot* in column names is replaced by an *underscore*. Therefore, you must use an underscore in the template text for variables including dots.

Usage

```
template $$$% data
```

Arguments

template	template
data	data frame where column names correspond to variables names in template

Value

rendered template

%%%

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See Also

[whisker.render](#)

Examples

```
vars <- data.frame(a = 1:3, b = 23:21)
"a = {{a}} and b = {{b}}" %%% vars
```

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