

Package: location (via r-universe)

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Title Geocode Place Names via Nominatim

Version 0.1.0.9001.9001

Description A minimal interface to the Nominatim geocoding API (OpenStreetMap). Converts place name strings to coordinates and returns structured results. Designed to be used by other packages that need lightweight geocoding.

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Imports curl, jsonlite

Suggests lutz, testthat (>= 3.0.0)

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URL <https://github.com/hypertidy/location>

BugReports <https://github.com/hypertidy/location/issues>

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Repository <https://hypertidy.r-universe.dev>

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loc *Geocode a place name string*

Description

Queries the Nominatim geocoding API (OpenStreetMap) to look up coordinates for one or more place name strings. Returns a data frame with one row per input.

Usage

```
loc(
  x,
  limit = 1L,
  full = FALSE,
  api_url = "https://nominatim.openstreetmap.org"
)
```

Arguments

<code>x</code>	character vector of place names, e.g. "Jackson, TN" or "Davis Station, Antarctica".
<code>limit</code>	integer. Maximum number of results to return <i>per query</i> . Usually 1 is what you want. The Nominatim API caps this at 50.
<code>full</code>	logical. If TRUE, return all fields from the Nominatim response as list-columns. If FALSE (default), return only query, lon, lat, name, query, and osm_type.
<code>api_url</code>	base URL for the Nominatim API. Override to use a local instance: "http://localhost:7070".

Details

Results are cached for the duration of the R session, so repeated calls with the same query string are free. The cache can be inspected with `loc_cache_show()` and cleared with `loc_cache_clear()`.

Nominatim's usage policy requires a descriptive User-Agent and a maximum rate of one request per second. `loc()` enforces the rate limit automatically and warns if the service is being queried heavily. See <https://operations.osmfoundation.org/policies/nominatim/>.

Value

A data frame with columns:

- lon** longitude (numeric, or NA if not found)
- lat** latitude (numeric, or NA if not found)
- name** full place name as returned by Nominatim
- query** the original input string
- osm_type** OSM object type: "node", "way", or "relation"

When `full = TRUE`, all additional Nominatim fields are included as list-columns.

Examples

```
## Not run:
loc("Hobart")
loc("Jackson, TN")
loc(c("Davis Station", "Casey Station", "Mawson Station"))

# repeated calls hit the cache, not Nominatim
loc("Hobart")

# inspect what's been cached this session
loc_cache_show()

## End(Not run)
```

loc_cache_clear	<i>Clear the session cache</i>
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Description

loc() caches results within the R session so repeated queries don't hit Nominatim again. Call this if you need fresh results, e.g. after updating your query strings.

Usage

```
loc_cache_clear()
```

Value

invisibly NULL

loc_cache_show	<i>Show the session cache</i>
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Description

Show the session cache

Usage

```
loc_cache_show()
```

Value

a data frame of all cached results, or an empty data frame if the cache is empty.

loc_tz	<i>Look up the timezone for a place name</i>
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Description

A convenience wrapper that geocodes a place name with `loc()` and then looks up the IANA timezone via the **lutz** package.

Usage

```
loc_tz(x, method = "fast", ...)
```

Arguments

x	character vector of place names.
method	passed to <code>lutz::tz_lookup_coords()</code> : "fast" (default, Rcpp-based, no sf dependency) or "accurate" (sf polygon intersection).
...	passed to <code>loc()</code> .

Value

A character vector of IANA timezone names (e.g. "America/Chicago"), the same length as x. NA where geocoding or timezone lookup failed.

Examples

```
## Not run:  
loc_tz("Jackson, TN")  
loc_tz("Davis Station, Antarctica")  
loc_tz(c("Hobart", "McMurdo"))  
  
## End(Not run)
```

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