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Lat/lon queries

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Overview

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1. Intro

The following shows a simple way to fetch latitude/longitude coordinates for a street address or similar using ggmap (<https://github.com/dkahle/ggmap>). This package simply uses Google's geocoding API and thus will cap out at 2500 queries per day. Might be a way to spoof Google API to get round this but I haven't tried before.

2. LatLon Examples

Following simply shows how to use it.

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```
install.packages("ggmap",repos = "https://cloud.r-project.org/")
```

```
## package 'ggmap' successfully unpacked and MD5 sums checked
##
## The downloaded binary packages are in
## C:\Users\Oliver\AppData\Local\Temp\RtmpI5XmgW\downloaded_packages
```

[Hide](#)

```
## Then let's build a function to query google for the lat long of our location
latlon_list <- function(location){

  # use the geocode function to query google servers
  geo_reply = ggmap::geocode(location, output='latlon', messaging=FALSE, override_limit=TRUE)

  return(list("lat"=geo_reply$lat,"lon"=geo_reply$lon))
}

## Example address
location <- "Cra. 27 #7-48, Bogotá, Colombia"

## Example use
latlon_list(location)
```

```
## $lat
## [1] 7.130543
##
## $lon
## [1] -73.11965
```

3. Extra

Can also get more information about the address by changing the output argument to "all".

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```
str(ggmap::geocode(location, output='all', messaging=FALSE, override_limit=TRUE))
```

```
## List of 2
## $ results:List of 1
## ..$ :List of 5
## .. ..$ address_components:List of 7
## .. .. ..$ :List of 3
## .. .. .. ..$ long_name : chr "19-10"
## .. .. .. ..$ short_name: chr "19-10"
## .. .. .. ..$ types      : chr "street_number"
## .. .. ..$ :List of 3
## .. .. .. ..$ long_name : chr "Carrera 27"
## .. .. .. ..$ short_name: chr "Cra. 27"
## .. .. .. ..$ types      : chr "route"
## .. .. ..$ :List of 3
## .. .. .. ..$ long_name : chr "San Alonso"
## .. .. .. ..$ short_name: chr "San Alonso"
## .. .. .. ..$ types      : chr [1:2] "neighborhood" "political"
## .. .. ..$ :List of 3
## .. .. .. ..$ long_name : chr "Bucaramanga"
## .. .. .. ..$ short_name: chr "Bucaramanga"
## .. .. .. ..$ types      : chr [1:2] "administrative_area_level_2" "political"
## .. .. ..$ :List of 3
## .. .. .. ..$ long_name : chr "Santander"
## .. .. .. ..$ short_name: chr "Santander"
## .. .. .. ..$ types      : chr [1:2] "administrative_area_level_1" "political"
## .. .. ..$ :List of 3
## .. .. .. ..$ long_name : chr "Colombia"
## .. .. .. ..$ short_name: chr "CO"
## .. .. .. ..$ types      : chr [1:2] "country" "political"
## .. .. ..$ :List of 3
## .. .. .. ..$ long_name : chr "680002"
## .. .. .. ..$ short_name: chr "680002"
## .. .. .. ..$ types      : chr "postal_code"
## .. ..$ formatted_address : chr "Cra. 27 #19-10, Bucaramanga, Santander, Colombia"
## .. ..$ geometry          :List of 3
## .. .. ..$ location       :List of 2
## .. .. .. ..$ lat: num 7.13
## .. .. .. ..$ lng: num -73.1
## .. .. ..$ location_type: chr "ROOFTOP"
## .. .. ..$ viewport       :List of 2
## .. .. .. ..$ northeast:List of 2
## .. .. .. .. ..$ lat: num 7.13
## .. .. .. .. ..$ lng: num -73.1
## .. .. .. ..$ southwest:List of 2
## .. .. .. .. ..$ lat: num 7.13
## .. .. .. .. ..$ lng: num -73.1
## .. ..$ place_id          : chr "ChIJocysm2UVaI4RLY9Y7tTVcV8"
## .. ..$ types             : chr [1:4] "bank" "establishment" "finance" "point_of_interest"
## $ status : chr "OK"
```