Package ‘amapGeocode’

October 12, 2022

Type Package
Title An Interface to the ‘AutoNavi Maps’ API Geocoding Services
Version 0.6.0
Description Getting and parsing data of location geocode/reverse-geocode and administrative regions from ‘AutoNavi Maps’<https://lbs.amap.com/api/webservice/summary> API.
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Depends R (>= 3.5)
Imports httr, jsonlite, magrittr, sjmisc, stats, xml2, data.table, furrr
Suggests stringr, knitr, rmarkdown, testthat, spelling, covr
VignetteBuilder knitr
Encoding UTF-8
RoxygenNote 7.1.1
Language en-US
URL https://github.com/womeimingzi11/amapGeocode
BugReports https://github.com/womeimingzi11/amapGeocode/issues
NeedsCompilation no
Author Han Chen [aut, cre], Wanyanhan Jiang [ctb]
Maintainer Han Chen <chenhan28@gmail.com>
Repository CRAN
Date/Publication 2021-04-19 07:20:02 UTC

R topics documented:

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convertCoord

Convert coordinate from different coordinate systems to AutoNavi system

Description

This function is a wrap of coordinate convert API of AutoNavi Map Service. While how to input the origin coordinate is still unstable and 95% sure that it will have a breaking change in the future. Please consider carefully if introduced this function in product environment.

Usage

convertCoord(
  locations,
  key = NULL,
  coordsys = NULL,
  sig = NULL,
  output = "data.table",
  keep_bad_request = TRUE,
  ...
)

Arguments

locations Required.
String coordinate point from other coordinate system

key Optional.
Amap Key.
Applied from AutoNavi Map API official website https://lbs.amap.com/dev/

coordsys Optional.
Coordinate System.
Support: 'gps','mapbar','baidu' and 'autonavi'-not convert
**convertCoord.individual**

**Description**

Convert an individual coordinate from different coordinate systems to AutoNavi system

**sig**

Optional.
Digital Signature.
How to use this argument? Please check here: https://lbs.amap.com/faq/account/key/72

**output**

Optional.
Output Data Structure.
Support JSON, XML and data.table. The default value is data.table.

**keep_bad_request**

Optional.
Keep Bad Request to avoid breaking a workflow, especially meaningful in a batch request

**Value**

Returns a JSON, XML or data.table of results containing detailed geocode information. See https://lbs.amap.com/api/webservice/guide/api/convert for more information.

**See Also**

convertCoord

**Examples**

```r
## Not run:
library(amapGeocode)

# Before the 'convertCoord()' is executed,
# the token should be set by 'option(amap_key = 'key')'
# or set by key argument in 'convertCoord()'

# get result of converted coordinate system as a data.table
convertCoord("116.481499,39.990475", coordsys = "gps")
# get result of converted coordinate system as a XML
convertCoord("116.481499,39.990475", coordsys = "gps", to_table = FALSE)
```

## End(Not run)
Usage

convertCoord.individual(
  locations,
  key = NULL,
  coordsys = NULL,
  sig = NULL,
  output = "data.table",
  keep_bad_request = TRUE,
  ...
)

Arguments

locations	Required.	String coordinate point from other coordinate system
key	Optional.	Amap Key. Applied from AutoNavi Map API official websitehttps://lbs.amap.com/dev/
sig	Optional.	Digital Signature. How to use this argument? Please check herehttps://lbs.amap.com/faq/account/key/72
output	Optional.	Output Data Structure. Support JSON, XML and data.table. The default value is data.table.
keep_bad_request	Optional.	Keep Bad Request to avoid breaking a workflow, especially meaningful in a batch request
...	Optional.	For compatibility only

Value

Returns a JSON, XML or data.table of results containing detailed geocode information. See https://lbs.amap.com/api/webservice/guide/api/convert for more information.

extractAdmin

Get Subordinate Administrative Region from getAdmin request Now, it only support extract the first layer of subordinate administrative region information.
Description

Get Subordinate Administrative Region from getAdmin request. Now, it only supports extracting the first layer of subordinate administrative region information.

Usage

extractAdmin(res)

Arguments

res  
Response from getAdmin.

Value

Returns a data.table which extracts detailed subordinate administrative region information from the results of getCoord. See https://lbs.amap.com/api/webservice/guide/api/district for more information.

See Also

getAdmin

Examples

```r
## Not run:
library(dplyr)
library(amapGeocode)

# Before the `getAdmin()` is executed, 
# the token should be set by `option(amap_key = 'key')`
# or set by key argument in `getAdmin()`

# Get subordinate administrative regions as a XML
getAdmin("Sichuan Province", output = "XML") %>%
  # extract subordinate administrative regions as a data.table
  extractAdmin()

## End(Not run)
```

---

**extractConvertCoord**

*Extract converted coordinate points from convertCoord request*

Description

Extract converted coordinate points from convertCoord request
Usage

extractConvertCoord(res)

Arguments

res Required.
Response from convertCoord.

Value

Returns a data.table which extracts converted coordinate points from request of convertCoord. See https://lbs.amap.com/api/webservice/guide/api/convert for more information.

See Also

calculateCoord

testCalculateCoord

eyes

Examples

## Not run:
library(dplyr)
library(amapGeocode)

# Before the `convertCoord()` is executed,
# the token should be set by `option(amap_key = key)`
# or set by key argument in `convertCoord()`

# get result of converted coordinate system as a XML
convertCoord("116.481499,39.990475", coordsys = "gps", to_table = FALSE) %>%
  extractConvertCoord()

## End(Not run)
extractLocation

Value

Returns a data.table which extracts detailed coordinate information from results of getCoord. See https://lbs.amap.com/api/webservice/guide/api/georegeo for more information.

See Also

getCoord

Examples

```r
## Not run:
library(dplyr)
library(amapGeocode)

# Before the `getCoord()` is executed,
# the token should be set by `option(amap_key = 'key')`
# or set by key argument in `getCoord()`

# Get geocode as a XML
getCoord("IFS Chengdu", output = "XML") %>%
  # extract geocode regions as a data.table
  extractCoord()
```

---

<table>
<thead>
<tr>
<th>extractLocation</th>
<th>Extract location from coordinate request</th>
</tr>
</thead>
</table>

### Description

Extract location from coordinate request

### Usage

```r
extractLocation(res)
```

### Arguments

- `res` Required.
  
  Response from getLocation.

### Value

Returns a data.table which extracts detailed location information from results of getLocation. See https://lbs.amap.com/api/webservice/guide/api/georegeo for more information.
getAdmin

See Also

getLocation

Examples

## Not run:
library(dplyr)
library(amapGeocode)

# Before the `getLocation()` is executed,
# the token should be set by `option(amap_key = 'key')`
# or set by key argument in `getLocation()`
# Get reverse-geocode as a XML
getLocation(104.043284, 30.666864, output = "XML") %>%
  # extract reverse-geocode regions as a table
  extractLocation()

## End(Not run)

getAdmin  

Get Subordinate Administrative Regions from location

Description

Get Subordinate Administrative Regions from location

Usage

getAdmin(
  keywords,  
  key = NULL, 
  subdistrict = NULL, 
  page = NULL, 
  offset = NULL, 
  extensions = NULL, 
  filter = NULL, 
  callback = NULL, 
  output = "data.table", 
  keep_bad_request = TRUE, 
  ...
)

Arguments

keywords  Required.
Search keywords.
Rules: Country/Region, Province/State, City, County/District, Town, Country, 
Road, Number, Room, Building.
getAdmin

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key</td>
<td>Optional. Amap Key.</td>
</tr>
<tr>
<td></td>
<td>Applied from 'AutoNavi' Map API official website <a href="https://lbs.amap.com/dev">https://lbs.amap.com/dev</a></td>
</tr>
<tr>
<td>subdistrict</td>
<td>Optional. Subordinate Administrative Level.</td>
</tr>
<tr>
<td></td>
<td>Display level of subordinate administrative regions. Available value: 0,1,2,3.</td>
</tr>
<tr>
<td></td>
<td>'0' do not return subordinate administrative regions.</td>
</tr>
<tr>
<td></td>
<td>'1' return first one subordinate administrative regions.</td>
</tr>
<tr>
<td></td>
<td>'2' return first two subordinate administrative regions.</td>
</tr>
<tr>
<td></td>
<td>'3' return first three subordinate administrative regions.</td>
</tr>
<tr>
<td>page</td>
<td>Optional. Which page to return.</td>
</tr>
<tr>
<td></td>
<td>Each time the outmost layer will return a maximum of 20 records. If the limit is exceeded, please request the next page of records with the page argument.</td>
</tr>
<tr>
<td>offset</td>
<td>Optional. Maximum records per page.</td>
</tr>
<tr>
<td></td>
<td>Maximum value is 20.</td>
</tr>
<tr>
<td>extensions</td>
<td>Optional. Return results controller.</td>
</tr>
<tr>
<td></td>
<td>'base': does not return the coordinates of the administrative district boundary.</td>
</tr>
<tr>
<td></td>
<td>'all': returns only the boundary value of the current query district, not the boundary value of the child node.</td>
</tr>
<tr>
<td>filter</td>
<td>Optional. Filter administrative regions.</td>
</tr>
<tr>
<td></td>
<td>Filtering by designated administrative divisions, which returns information only for the province/municipality.</td>
</tr>
<tr>
<td></td>
<td>It is strongly recommended to fill in this parameter in order to ensure the correct records.</td>
</tr>
<tr>
<td>callback</td>
<td>Optional. Callback Function.</td>
</tr>
<tr>
<td></td>
<td>The value of callback is the customized function. Only available with JSON output. If you don’t understand, it means you don’t need it, just like me.</td>
</tr>
<tr>
<td>output</td>
<td>Optional. Output Data Structure.</td>
</tr>
<tr>
<td></td>
<td>Support JSON, XML and data.table.</td>
</tr>
<tr>
<td></td>
<td>The default value is data.table.</td>
</tr>
<tr>
<td>keep_bad_request</td>
<td>Optional. Keep Bad Request to avoid breaking a workflow, especially meaningful in a batch request</td>
</tr>
<tr>
<td>...</td>
<td>Optional.</td>
</tr>
<tr>
<td></td>
<td>For compatibility only</td>
</tr>
</tbody>
</table>

**Value**

Returns a JSON or XML of results containing detailed subordinate administrative region information. See [https://lbs.amap.com/api/webservice/guide/api/district](https://lbs.amap.com/api/webservice/guide/api/district) for more information.
getAdmin.individual

See Also

extractAdmin

Examples

## Not run:
library(amapGeocode)

# Before the `getAdmin()` is executed,
# the token should be set by `option(amap_key = 'key')`
# or set by key argument in `getAdmin`:

# Get subordinate administrative regions as a data.table
getAdmin("Sichuan Province")
# Get subordinate administrative regions as a XML
getCoord("Sichuan Province", output = "XML")

## End(Not run)
**getAdmin.individual**

**Arguments**

- **keywords** Required.
  Search keywords.
  Rules: Country/Region, Province/State, City, County/District, Town, Country, Road, Number, Room, Building.

- **key** Optional.
  Amap Key.
  Applied from 'AutoNavi’ Map API official website https://lbs.amap.com/dev/

- **subdistrict** Optional.
  Subordinate Administrative Level.
  Display level of subordinate administrative regions. Available value: 0,1,2,3.
  ‘0’ do not return subordinate administrative regions.
  ‘1’ return first one subordinate administrative regions.
  ‘2’ return first two subordinate administrative regions.
  ‘3’ return first three subordinate administrative regions.

- **page** Optional.
  Which page to return.
  Each time the outmost layer will return a maximum of 20 records. If the limit is exceeded, please request the next page of records with the page argument.

- **offset** Optional.
  Maximum records per page.
  Maximum value is 20.

- **extensions** Optional.
  Return results controller.
  ‘base’: does not return the coordinates of the administrative district boundary.
  ‘all’: returns only the boundary value of the current query district, not the boundary value of the child node.

- **filter** Optional.
  Filter administrative regions.
  Filtering by designated administrative divisions, which returns information only for the province/municipality.
  It is strongly recommended to fill in this parameter in order to ensure the correct records.

- **callback** Optional.
  Callback Function.
  The value of callback is the customized function. Only available with JSON output. If you don’t understand, it means you don’t need it, just like me.

- **output** Optional.
  Output Data Structure.
  Support JSON, XML and data.table. The default value is data.table.

- **keep_bad_request** Optional.
  Keep Bad Request to avoid breaking a workflow, especially meaningful in a batch request.
... Optional. For compatibility only

Value

Returns a JSON or XML of results containing detailed subordinate administrative region information. See https://lbs.amap.com/api/webservice/guide/api/district for more information.

getCoord

Get coordinate from location

Description

Get coordinate from location

Usage

getCoord(
  address,
  key = NULL,
  city = NULL,
  sig = NULL,
  output = "data.table",
  callback = NULL,
  keep_bad_request = TRUE,
  ...
)

Arguments

<table>
<thead>
<tr>
<th>Argument</th>
<th>Required</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>address</td>
<td>Required</td>
<td>Structured address information. Rules: Country/Region, Province/State, City, County/District, Town, Country, Road, Number, Room, Building.</td>
</tr>
<tr>
<td>key</td>
<td>Optional</td>
<td>Amap Key. Applied from 'AutoNavi' Map API official website <a href="https://lbs.amap.com/dev/">https://lbs.amap.com/dev/</a></td>
</tr>
<tr>
<td>city</td>
<td>Optional</td>
<td>Specify the City. Support: city in Chinese, full pinyin, citycode, adcode <a href="https://lbs.amap.com/api/webservice/download">https://lbs.amap.com/api/webservice/download</a>. The default value is NULL which will search country-wide. The default value is NULL.</td>
</tr>
<tr>
<td>sig</td>
<td>Optional</td>
<td>Digital Signature. How to use this argument? Please check here <a href="https://lbs.amap.com/faq/account/key/72">https://lbs.amap.com/faq/account/key/72</a></td>
</tr>
</tbody>
</table>
getCoord.individual

Get an individual coordinate from location

Description

Get an individual coordinate from location

output
Optional.
Output Data Structure.
Support JSON, XML and data.table. The default value is data.table.

callback
Optional.
Callback Function.
The value of callback is the customized function. Only available with JSON output. If you don’t understand, it means you don’t need it, just like me.

keep_bad_request
Optional.
Keep Bad Request to avoid breaking a workflow, especially meaningful in a batch request

Value

Returns a JSON, XML or data.table of results containing detailed geocode information. See https://lbs.amap.com/api/webservice/guide/api/georegeo for more information.

See Also

extractCoord

Examples

## Not run:
library(amapGeocode)

# Before the `getCoord()` is executed,
# the token should be set by `option(amap_key = 'key')`
# or set by key argument in `getCoord()`

# Get geocode as a data.table
getCode("IFS Chengdu")
# Get geocode as a XML
getCode("IFS Chengdu", output = "XML")

## End(Not run)
Usage

getCoord.individual(
    address,
    key = NULL,
    city = NULL,
    sig = NULL,
    output = "data.table",
    callback = NULL,
    keep_bad_request = TRUE,
    ...
)

Arguments

address  Required.
          Structured address information.
          Rules: Country/Region, Province/State, City, County/District, Town, Country,
          Road, Number, Room, Building.

key      Optional.
          Amap Key.
          Applied from 'AutoNavi' Map API official website https://lbs.amap.com/dev/

city     Optional.
          Specify the City.
          The default value is NULL which will search country-wide. The default value is NULL.

sig      Optional.
          Digital Signature.
          How to use this argument? Please check here https://lbs.amap.com/faq/account/key/72

output   Optional.
          Output Data Structure.
          Support JSON, XML and data.table. The default value is data.table.

callback Optional.
          Callback Function.
          The value of callback is the customized function. Only available with JSON output. If you don’t understand, it means you don’t need it, just like me.

keep_bad_request Optional.
                    Keep Bad Request to avoid breaking a workflow, especially meaningful in a batch request

...         Optional.
          For compatibility only
getLocation

Value

Returns a JSON, XML or data.table of results containing detailed geocode information. See https://lbs.amap.com/api/webservice/guide/api/georegeo for more information.

getDescription

Get location from coordinate

Usage

getLocation(
  lng, 
  lat, 
  key = NULL, 
  poitype = NULL, 
  radius = NULL, 
  extensions = NULL, 
  roadlevel = NULL, 
  sig = NULL, 
  output = "data.table", 
  callback = NULL, 
  homeorcorp = 0, 
  keep_bad_request = TRUE, 
  ...
)

Arguments

lng Required.
Longitude in decimal

lat Required.
Latitude in decimal

key Optional.
Amap Key.
Applied from 'AutoNavi’ Map API official website https://lbs.amap.com/dev/

poitype Optional.
Return nearby POI types.
When 'extensions = all', this argument makes sense. For detailed poitype type, please refer https://lbs.amap.com/api/webservice/download

radius Optional.
Searching radius.
radius ranges from 0 to 3000, the default value is 1000, unit: meter.
getLocation

extensions Optional.
Return results controller.
‘base’: the default value, it only return base information about coordinate.
‘all’: it will return nearby POI, road information and cross information.

roadlevel Optional.
Road levels.
When ‘extensions = all’, this argument makes sense.
‘roadlevel=0’, return all roads.
‘roadlevel=1’, only return main roads.

sig Optional.
Digital Signature.
How to use this argument? Please check here https://lbs.amap.com/faq/account/key/72

output Optional.
Output Data Structure.
Support JSON, XML and data.table. The default value is data.table.

callback Optional.
Callback Function.
The value of callback is the customized function. Only available with JSON output. If you don’t understand, it means you don’t need it, just like me.

homeorcorp Optional.
Optimize the order of returned POI or not.
When ‘extensions = all’, this argument makes sense.
‘homeorcorp=0’, do not optimize, by default.
‘homeorcorp=1’, home related POIs are first, by default.
‘homeorcorp=2’, corporation related POIs are first, by default.

keep_bad_request
Optional.
Keep Bad Request to avoid breaking a workflow, especially meaningful in a batch request

Value
Returns a JSON, XML or data.table of results containing detailed reverse geocode information. See https://lbs.amap.com/api/webservice/guide/api/georegeo for more information.

See Also
extractCoord

Examples
## Not run:
library(amapGeocode)

# Before the `getLocation()` is executed,
# the token should be set by `option(amap_key = 'key')`
# or set by key argument in `getLocation()`

# Get reverse-geocode as a table
getLocation(104.043284, 30.666864)
# Get reverse-geocode as a XML
getLocation("104.043284, 30.666864", output = "XML")

## End(Not run)

---

getLocation.individual

*Get an individual location from coordinate*

**Description**

Get an individual location from coordinate

**Usage**

```r
getLocation.individual(
  lng,
  lat,
  key = NULL,
  poitype = NULL,
  radius = NULL,
  extensions = NULL,
  roadlevel = NULL,
  sig = NULL,
  output = "data.table",
  callback = NULL,
  homeorcorp = 0,
  keep_bad_request = TRUE,
  ...
)
```

**Arguments**

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>lng</td>
<td>Required. Longitude in decimal</td>
</tr>
<tr>
<td>lat</td>
<td>Required. Latitude in decimal</td>
</tr>
<tr>
<td>key</td>
<td>Optional. Amap Key. Applied from 'AutoNavi' Map API official website <a href="https://lbs.amap.com/dev/">https://lbs.amap.com/dev/</a></td>
</tr>
</tbody>
</table>
getLocation.individual

poitype  Optional.
Return nearby POI types.
When 'extensions = all', this argument makes sense. For detailed poitype type,
please refer https://lbs.amap.com/api/webservice/download

radius  Optional.
Searching radius.
radius ranges from 0 to 3000, the default value is 1000, unit: meter.

extensions  Optional.
Return results controller.
'base': the default value, it only return base information about coordinate.
'all': it will return nearby POI, road information and cross information.

roadlevel  Optional.
Road levels.
When 'extensions = all', this argument makes sense.
'roadlevel=0', return all roads.
'roadlevel=1', only return main roads.

sig  Optional.
Digital Signature.
How to use this argument? Please check here https://lbs.amap.com/faq/account/key/72

output  Optional.
Output Data Structure.
Support JSON, XML and data.table. The default value is data.table.

callback  Optional.
Callback Function.
The value of callback is the customized function. Only available with JSON output. If you don’t understand, it means you don’t need it, just like me.

homeorcorp  Optional.
Optimize the order of returned POI or not.
When 'extensions = all', this argument makes sense.
'homeorcorp=0', do not optimize, by default.
'homeorcorp=1', home related POIs are first, by default.
'homeorcorp=2', corporation related POIs are first, by default.

keep_bad_request  Optional.
Keep Bad Request to avoid breaking a workflow, especially meaningful in a batch request

...  Optional.
For compatibility only

Value

Returns a JSON, XML or data.table of results containing detailed reverse geocode information. See https://lbs.amap.com/api/webservice/guide/api/georegeo for more information.
**num_coord_to_str_loc**

**Take longitude and latitude from location string out.**

---

**Description**

Take longitude and latitude from location string out.

**Usage**

```python
num_coord_to_str_loc(lng, lat)
```

**Arguments**

- `lng` Required. Longitude in decimal
- `lat` Required. Latitude in decimal

**Value**

Comma binded coordinate string

---

**str_loc_to_num_coord**

**Take longitude and latitude from location string out.**

---

**Description**

Take longitude and latitude from location string out.

**Usage**

```python
str_loc_to_num_coord(str_location)
```

**Arguments**

- `str_location` Required. Location string from response

**Value**

vector contains Longitude and Latitude in numeric
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