Package 'amapGeocode'

November 20, 2020

Type Package

Title An Interface to the 'AutoNavi Maps' API Geocoding Services

Version 0.5.0

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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URL <https://github.com/womeimingzi11/amapGeocode>

Imports httr,
jsonlite,
magrittr,
sjmisc,
stats,
stringr,
xml2,
lifecycle,
data.table,
parallel

Suggests knitr,
rmarkdown,
testthat,
spelling

VignetteBuilder knitr

Encoding UTF-8

LazyData true

RoxygenNote 7.1.1

RdMacros lifecycle

Language en-US

R topics documented:

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convertCoord	*Convert coordinate from different coordinate systems to AutoNavi system*

Description

Experimental This function is a wrap of coordinate convert API of AutoNavi Map Service.
While how to input the origin coordinate is sill 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 = NULL,
  to_table = TRUE,
  keep_bad_request = TRUE,
  max_core = NULL
)
```

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
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 and XML. The default value is JSON.

| to_table | Optional. |
| Transform response content to data.table. |

keep_bad_request

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

| max_core | Optional. |

A threshold of max cores for parallel operation. There is no need to set a 'max_core' generally. But for some extreme high performance case, like 'AMD Threadripper' and 'Intel Xeon', super multiple-core CPU will meet the limitation of queries per second.

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

```
## 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)
```

convertCoord.individual

Convert an individual coordinate from different coordinate systems to AutoNavi system

Description

Convert an individual coordinate from different coordinate systems to AutoNavi system

Usage

```
convertCoord.individual(
  locations,
  key = NULL,
  coordsys = NULL,
  sig = NULL,
  output = NULL,
  to_table = TRUE,
  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
`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 and XML. The default value is JSON.
`to_table`	Optional. Transform response content to 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.

---

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 support extract 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 results of getCoord. See https://lbs.amap.com/api/webservice/guide/api/district for more information.

See Also

getAdmin

Examples

```
## 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

[convertCoord](#)

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) %>%
   # extract result of converted coordinate system as a data.table
   extractConvertCoord()

## End(Not run)
```

---

extractCoord   *Extract coordinate from location request*

Description

Extract coordinate from location request

Usage

```
extractCoord(res)
```

Arguments

res   Required.
                Response from getCoord.

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

```
## 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()

## End(Not run)
```

---

extractLocation   *Extract location from coordinate request*

Description

Extract location from coordinate request

Usage

```
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.

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 = NULL,
  to_table = TRUE,
  keep_bad_request = TRUE,
  max_core = NULL
)
```

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 websitehttps://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 and XML. The default value is JSON.
to_table	Optional.
	Transform response content to data.table.
keep_bad_request	
	Optional.
	Keep Bad Request to avoid breaking a workflow, especially meaningful in a batch request
max_core	Optional.
	A threshold of max cores for parallel operation. There is no need to set a 'max_core' generally. But for some extreme high performance case, like 'AMD Threadripper' and 'Intel Xeon', super multiple-core CPU will meet the limitation of queries per second.

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.

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	*Get an individual data.table of Subordinate Administrative Regions from location*

Description

Get an individual data.table of Subordinate Administrative Regions from location

Usage

```
getAdmin.individual(
  keywords,
  key = NULL,
  subdistrict = NULL,
  page = NULL,
  offset = NULL,
  extensions = NULL,
  filter = NULL,
  callback = NULL,
  output = NULL,
  to_table = TRUE,
  keep_bad_request = TRUE
)
```

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 and XML. The default value is JSON.
to_table	Optional. Transform response content to data.table.
keep_bad_request	Optional. Keep Bad Request to avoid breaking a workflow, especially meaningful in a batch request

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 = NULL,
  callback = NULL,
  to_table = TRUE,
  keep_bad_request = TRUE,
  max_core = NULL
)
```

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.
  Support: city in Chinese, full pinyin, citycode, adcode https://lbs.amap.com/api/webservice/download.
  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 and XML. The default value is JSON.

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.

to_table
: Optional.
  Transform response content to data.table.

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

max_core
: Optional.
  A threshold of max cores for parallel operation. There is no need to set a 'max_core' generally. But for some extreme high performance case, like 'AMD Threadripper' and 'Intel Xeon', super multiple-core CPU will meet the limitation of queries per second.

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
getCoord('IFS Chengdu')
# Get geocode as a XML
getCoord('IFS Chengdu', output = 'XML')


## End(Not run)
```

---

getCoord.individual   *Get an individual coordinate from location*

Description

Get an individual coordinate from location

Usage

```
getCoord.individual(
  address,
  key = NULL,
  city = NULL,
  sig = NULL,
  output = NULL,
  callback = NULL,
  to_table = TRUE,
  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/](https://lbs.amap.com/dev/) [dev/](https://lbs.amap.com/dev/)
city	Optional.
	Specify the City.
	Support: city in Chinese, full pinyin, citycode, adcode[https://lbs.amap.](https://lbs.amap.com/api/webservice/download) [com/api/webservice/download](https://lbs.amap.com/api/webservice/download).
	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 herehttps://lbs.amap.com/faq/account/key/72
output	Optional.
	Output Data Structure.
	Support JSON and XML. The default value is JSON.
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.
to_table	Optional.
	Transform response content to 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:](https://lbs.amap.com/api/webservice/guide/api/georegeo) [//lbs.amap.com/api/webservice/guide/api/georegeo](https://lbs.amap.com/api/webservice/guide/api/georegeo) for more information.

---

getLocation	*Get location from coordinate*

Description

Get location from coordinate

Usage

```
getLocation(
  lng,
  lat,
  key = NULL,
  poitype = NULL,
  radius = NULL,
  extensions = NULL,
  roadlevel = NULL,
```

```
    sig = NULL,
    output = NULL,
    callback = NULL,
    homeorcorp = 0,
    to_table = TRUE,
    keep_bad_request = TRUE,
    max_core = NULL
)
```

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.
`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 and XML. The default value is JSON.
`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.

to_table	Optional.
	Transform response content to a table.
keep_bad_request	
	Optional.
	Keep Bad Request to avoid breaking a workflow, especially meaningful in a batch request
max_core	Optional.
	A threshold of max cores for parallel operation. There is no need to set a 'max_core' generally. But for some extreme high performance case, like 'AMD Threadripper' and 'Intel Xeon', super multiple-core CPU will meet the limitation of queries per second.

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

```
getLocation.individual(
  lng,
  lat,
  key = NULL,
  poitype = NULL,
  radius = NULL,
  extensions = NULL,
  roadlevel = NULL,
  sig = NULL,
  output = NULL,
  callback = NULL,
  homeorcorp = 0,
  to_table = TRUE,
  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.
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 and XML. The default value is JSON.

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.

to_table   Optional.
                  Transform response content to 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 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

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

Arguments

lng   Required.
                  Longitude in decimal

lat   Required.
                  Latitude in decimal

Value

Comma binded coordinate string

---

parallel_cluster_maker

Create a local parallel cluster

Description

Create a local parallel cluster

Usage

```
parallel_cluster_maker(max_core = NULL)
```

Arguments

max_core   Optional
                A threshold of max cores for parallel operation. There is no need to set a
                'max_core' generally. But for some extreme high performance case, like 'AMD
                Threadripper' and 'Intel Xeon', super multiple-core CPU will meet the limita-
                tion of queries per second.

Value

A local parallel cluster

---

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

Description

Take longitude and latitude from location string out.

Usage

```
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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