Package 'inegiR'

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Type Package

Title Integrate INEGI's (Mexican Stats Office) API with R

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Description Provides functions to download and parse information from INEGI (Official Mexican statistics agency). To learn more about the API, see <https://www.inegi.org.mx/servicios/api_indicadores.html>.

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R topics documented:

`inegiR-package` *Integrate INEGI's (Mexican Stats Office) API with R*

Description

Provides functions to download and parse information from INEGI (Official Mexican statistics agency).

Details

Package:	inegiR
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Author(s)

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References

The INEGI API can be found here: http://www.inegi.org.mx/desarrolladores/indicadores/apiindicadores.aspx

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`ext_geo` *Extracts INEGI GeoJSON*

Description

Helper function

Usage

```
ext_geo(x)
```

Arguments

x	GeoJSON description

Value

Data.frame

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get_gas *Gets gas cost from INEGI API*

Description

Helper function

Usage

```
get_gas(token, onlyPremium = FALSE)
```

Arguments

token	Sakbe API token supplied by INEGI
onlyPremium	Only export premium price

Value

data.frame

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incat_ *Get INEGI Catalogs*

Description

Allows you to download the catalogs of frequencies, sources, notes, topics and indicator names. Called in the background in some functions.

Usage

```
incat_freq(token, id = NULL)

incat_source(token, id = NULL)

incat_notes(token, id = NULL)

incat_topic(token, id = NULL)

incat_indicator(token, id = NULL)
```

Arguments

token	INEGI API token
id	Optional id. If NULL, will download entire catalog.

Value

data.frame

Author(s)

Eduardo Flores

Examples

```
# Get the corresponding frequency for frequency id #8 (monthly)
## Not run:
token <- "webservice token"
incat_freq(token, id = "8")

## End(Not run)
# Get all of the note descriptions
## Not run:
token <- "webservice token"
incat_notes(token)

## End(Not run)
#' # Get all of the sources descriptions
## Not run:
token <- "webservice token"
incat_source(token)

## End(Not run)
```

incat_neumonics *Obtains the catalog of economic data neumonics*

Description

Neumonics are shorthand names for series of economic data, akin to the Fed FRED names. This catalog downloads the neumonic with the indicator code, to easily match with an API call. This catalog is maintained by INEGI.

Usage

```
incat_neumonics()
```

Value

data.frame

Author(s)

Eduardo Flores

Examples

```
## Not run:
catalog <- incat_neumonics()

## End(Not run)
```

inegi_bop *Balance of Payments for Mexico*

Description

Returns Current Account revenue, expenses and total and Financial Account total, errors, reservs and adjustments for Mexico.

Usage

```
inegi_bop(token)
```

Arguments

token	API token supplied by INEGI

Value

Data.frame

Author(s)

Eduardo Flores

Examples

```
## Not run:
token <- "webservice_token"
balance_of_payments <- inegi_bop(token)

## End(Not run)
```

---

inegi_denue *Returns DENUE businesses*

Description

Returns data.frame with businesses registered in DENUE in the vicinity of supplied coordinates.

Usage

```
inegi_denue(latitud, longitud, token, meters = 250, keyword = "todos")
```

Arguments

latitud	Character vector with latitud (in decimals)
longitud	Character vector with longitud (in decimals)
token	API token supplied by INEGI
meters	Meters to search in a circle from coordinates. Defaults to 250
keyword	Keyword to search in business description (in spanish). Defaults to all (todos).

Value

Data.frame

Author(s)

Eduardo Flores

Examples

```
# All businesses in a 1 km radius from the Macroplaza in Monterrey, Mex.
## Not run:
token<-"webservice_token"
latitud<- 25.669194
longitud<- -100.30990
businesses <- inegi_denue(latitud, longitud, token, meters = 1000)

## End(Not run)
```

`inegi_denue_grid` *Find businesses in a grid larger than 5 kms*

Description

Returns data.frame with businesses registered in the DENUE in spaces larger than 5 kilometers. Calls `make_grid`. Functions contributed by Arturo Cardenas https://github.com/arturocm.

Usage

```
inegi_denue_grid(lat1, lat2, lon1, lon2, token, meters = 5000,
  keyword = "todos", space_lat = 0.07, space_lon = 0.07,
  uniqueonly = TRUE)
```

Arguments

`lat1`	First corner (latitud)
`lat2`	Second corner (latitud)
`lon1`	First corner (longitud)
`lon2`	Second corner (longitud)
`token`	API token supplied by INEGI
`meters`	Distance in meters to search by coordinate
`keyword`	Keyword of businesses to include. Defaults to all ("todos")
`space_lat`	Space between latitud coordinates defaults to 0.07 degrees
`space_lon`	Space between longitud coordinates defaults to 0.07 degrees
`uniqueonly`	Default = TRUE, eliminates duplicate businesses

Details

Makes a loop for each pair of coordinates, creating a grid to extract businesses inside. Uses maximum and minimum coordinate pairs to draw frame.

Value

Data.frame

Author(s)

Arturo Cardenas

Examples

```
## Not run:
token<-"webservice_token"
latitud1 <- 25.669194
latitud2 <- 25.169194
longitud1 <- -100.30990
longitud2 <- -101.20102
businesses <- inegi_denue_grid(latitud1, latitud2, longitud1, longitud2, token)

## End(Not run)
```

`inegi_denue_stats` *Returns statistics of coordinate*

Description

Returns basic statistics of businesses, using DENUE, in the vecinity of coordinates.

Usage

```
inegi_denue_stats(latitud_vector, longitud_vector, token, meters = 250,
  keyword = "todos")
```

Arguments

`latitud_vector`	number of column in data with latitud column
`longitud_vector`	number of column in data with longitud column
`token`	API token supplied by INEGI
`meters`	Distance in meters to search by coordinate
`keyword`	Keyword of businesses to include. Defaults to all ("todos")

Details

Some columns, like employee numbers are experimental (the employees are added considering size of company).

Value

Data.frame

Author(s)

Eduardo Flores

Examples

```
## Not run:
token<-"webservice_token"
df <- as.data.frame(latitud  = c(25.669194, 25.121194),
                    longitud = c(-100.30990, -99.81923))
stats <- denue_varios_stats(data     = df,
                            col_lat  = 1,
                            col_long = 2,
                            metros   = 500)

## End(Not run)
```

`inegi_destiny` *Returns INEGI destiny id's with matching searches*

Description

Returns data.frame with id's and coordinates that match with the API names.

Usage

```
inegi_destiny(search, token)
```

Arguments

`search`	Character vector to search for
`token`	Sakbe API token supplied by INEGI

Value

Data.frame

Author(s)

Eduardo Flores

Examples

```
# All id's in Monterrey, Mex.
## Not run:
token <- "webservice_token"
dest_ids <- inegi_destiny("monterrey", token)

## End(Not run)
```

inegi_partner_exports *Exports of Mexico to trade partners*

Description

Returns exports to main trading partners of all products. Regions are the following: United States, Canada, China, CentralAmerica, SouthAmerica

Usage

```
inegi_partner_exports(token)
```

Arguments

token	API token supplied by INEGI

Value

data.frame

Author(s)

Eduardo Flores

Examples

```
## Not run:
token <- "webservice_token"
xbycountry <- inegi_partner_exports(token)

## End(Not run)
```

inegi_route *Returns the route between two points in Mexico*

Description

Uses SAKBE API to return a route between two destiny id's considering the given parameters.

Usage

```
inegi_route(from, to, token, pref, vehicle, calc_cost = FALSE,
  rawJSON = FALSE)
```

Arguments

from	Destiny id from where the route begins
to	Destiny id of end of route
token	Sakbe API token supplied by INEGI
pref	Preference for road: 1 = with tolls (cuota), 2 = without tolls (libre), 2 = suggested route
vehicle	Vehicle choice: 0 = motorcycle, 1 = auto, 2 = two axis bus, 3 = three axis bus, 4 = four axis bus, 5 = two axis truck, 6 = three axis truck, 7 = four axis truck, 8 = five axis truck, 9 = six axis truck, 10 = seven axis truck, 11 = eight axis truck, 12 = nine axis truck.
calc_cost	if TRUE will use the price of gasoline to calculate total cost of trip. Very experimental, defaults to FALSE.
rawJSON	if TRUE returns only the JSON data, not parsed

Value

list

Note

To calculate the cost, it is wiser to use the more conservative estimate. Thus, this function assumes a premium type of gasoline (the most expensive) at the lower end bound of fuel-efficiency (11 kms per liter)

Author(s)

Eduardo Flores

References

See the official API here: http://www.inegi.org.mx/desarrolladores/sakbe/apisakbe.aspx

Examples

```
# Macroplaza in Monterrey to Mexico City airport.
## Not run:
token <- "webservice_token"
route <- inegi_route(from = 6940, to = 57, token, pref = 2, vehicle = 1)

## End(Not run)
```

inegi_sectors *Sectorial activity indices*

Description

Returns indexes of economic sector as defined in INEGI (subsectors of IGAE). None of the series are seasonally adjusted.

Usage

```
inegi_sectors(token)
```

Arguments

token	API token supplied by INEGI

Value

data.frame

Author(s)

Eduardo Flores

Examples

```
## Not run:
token <- "webservice_token"
sectors <- inegi_sectors(token)

## End(Not run)
```

inegi_series *Returns INEGI data series*

Description

Returns a data.frame with the time series chosen from INEGI webservice. If the parameter Metadata is TRUE, a list is returned with two objects: data and metadata.

Usage

```
inegi_series(series_id, token, geography = "00", database = "BIE",
  metadata = FALSE, lastonly = FALSE, as_tt = FALSE,
  as_compact = FALSE)
```

Arguments

series_id	an indicator ID. These are obtained via the INEGI API documentation.
token	API token supplied by INEGI.
geography	Geography code of INEGI. Defaults to 00 (National)
database	Is the id from BIE (Banco de Informacion Economica) or BISE (Banco de Indicadores)? Defaults to BIE. To learn more about what database your indicator is stored in, visit INEGI docs.
metadata	Defaults to FALSE, if TRUE, returns a list with metadata information.
lastonly	Do you want only the last observation? Defaults to FALSE.
as_tt	Do you want the output of the data.frame to be a tibble time object? Defaults to FALSE.
as_compact	Do you want the output always as a data.frame or time tibble? If the output contains metadata, each data point will be replicated in a column. If the output does not contain metadata there is no change. Previously, this was achieved with compact_inegi_series.

Value

data.frame or list

Note

Adding the entire INEGI URL as a series is deprecated since v3, due to a change of API specifications in INEGI. INEGI docs can be found at: https://www.inegi.org.mx/servicios/api_indicadores.html. Coercing biweekly indicators to monthly is also deprecated inside this function. Use tibbletime functions to coerce instead.

Author(s)

Eduardo Flores

Examples

```
## Not run:
# General INPC series
token <- "webservice_token"
inpc_id <- "216064"
INPC <- inegi_series(inpc_id, token)

## End(Not run)
```

`inegi_series_multiple` *Returns multiple INEGI data series*

Description

Returns a data.frame with multiple time series chosen from INEGI webservice. The output will always be a data.frame (not tibble) with compacted metadata. (See `inegi_series` to understand as_tt = FALSE and as_compact = TRUE).

Usage

```
inegi_series_multiple(series_id, token, names = NULL, geography = "00",
  database = "BIE")
```

Arguments

`series_id`	A vector of indicator ID's. These are obtained via the INEGI API documentation.
`token`	API token supplied by INEGI.
`names`	Optional vector of names to assign to each id. If NULL, a numerical index is assigned.
`geography`	Geography code of INEGI. Defaults to 00 (National)
`database`	Is the id from BIE (Banco de Informacion Economica) or BISE (Banco de Indicadores). Defaults to BIE. To learn more about what database your indicator is stored in, visit INEGI docs.

Value

data.frame

Note

Adding the entire INEGI URL as a series is deprecated since v3, due to a change of API specifications in INEGI. INEGI docs can be found at: https://www.inegi.org.mx/servicios/api_indicadores.html. Coercing biweekly indicators to monthly is also deprecated inside this function. Use tibbletime functions to coerce instead.

Author(s)

Eduardo Flores

Examples

```
## Not run:
# General INPC series
token <- "webservice_token"
some_series <- c("216064", "216097")
result <- inegi_series_multiple(some_series, token)

## End(Not run)
```

---

inegi_stind *Student Price Index*

Description

Returns the student price index. See http://enelmargen.org/ds/ipe/ for more information.

Usage

```
inegi_stind(token)
```

Arguments

token	API token supplied by INEGI

Value

Data.frame

Author(s)

Eduardo Flores

Examples

```
## Not run:
token <- "webservice_token"
studentinflation <- inegi_stind(token)

## End(Not run)
```

inegi_tot *Terms of trade for Mexico*

Description

Returns the terms of trade for Mexico, defined as the price index of exports over the price index of imports.

Usage

```
inegi_tot(token)
```

Arguments

token	API token supplied by INEGI

Value

data.frame

Author(s)

Eduardo Flores

Examples

```
## Not run:
token <- "webservice_token"
tot <- inegi_tot(token)

## End(Not run)
```

inegi_tradebal *Trade balance*

Description

Returns exports, imports and trade balance (all products, services and countries) in a data.frame. Wrapper for `inegi_series()` and `YoY()`.

Usage

```
inegi_tradebal(token)
```

Arguments

token	API token supplied by INEGI

Value

data.frame

Author(s)

Eduardo Flores

Examples

```
## Not run:
token<-"webservice_token"
external_com <- inegi_tradebal(token)

## End(Not run)
```

---

inind_ *INEGI Direct Indicators*

Description

Returns common indicators, for simplicity. Will return as a list, with metadata and tibble time dataframe.

Usage

```
inind_commerce(token)

inind_auto(token)

inind_gdp(token)

inind_fx(token)

inind_unemp(token)

inind_prices(token)
```

Arguments

token	API token supplied by INEGI

Details

inind_commerce = terciary industrial activity (commercial activity monthly). inind_auto = auto production. innind_gpd = Gross Domestic Product. inind_fx = USDMXN Exchange rate. inind_unemp = Unemployment rate. inind_prices = National price index (for inflation).

Value

Data.frame

Author(s)

Eduardo Flores

Examples

```
## Not run:
token<-"webservice_token"
commerce_rate <- inind_commerce(token)

## End(Not run)
```

`make_grid` *Makes a grid set of coordinates*

Description

Returns a set of coordinates that intertwine to create an area larger than 5 kilometers. Suggestion by Arturo Cardenas https://github.com/arturocm.

Usage

```
make_grid(lat1, lat2, lon1, lon2, space_lat = 0.07, space_lon = 0.07)
```

Arguments

`lat1`	First corner (latitud). Must be numeric.
`lat2`	Second corner (latitud). Must be numeric.
`lon1`	First corner (longitud). Must be numeric.
`lon2`	Second corner (longitud). Must be numeric.
`space_lat`	Space between latitud coordinates defaults to 0.07 degrees
`space_lon`	Space between longitud coordinates defaults to 0.07 degrees

Value

Data.frame

Author(s)

Arturo Cardenas

See Also

denue_grid

Examples

```
latitud1 <- 25.66919
latitud2 <- 25.169194
longitud1 <- -100.30990
longitud2 <- -101.20102
setofcoords <- make_grid(latitud1, latitud2, longitud1, longitud2)
```

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