Package ‘censusapi’

October 14, 2020

Version 0.7.1

Title Retrieve Data from the Census APIs

Description A wrapper for the U.S. Census Bureau APIs that returns data frames of Census data and metadata. Available datasets include the Decennial Census, American Community Survey, Small Area Health Insurance Estimates, Small Area Income and Poverty Estimates, Population Estimates and Projections, and more.

URL https://github.com/hrecht/censusapi

BugReports https://github.com/hrecht/censusapi/issues

Depends R (>= 3.0.0)

License GPL-3

LazyData true

RoxygenNote 7.1.1

Imports httr, jsonlite

Suggests knitr, rmarkdown

VignetteBuilder knitr

Encoding UTF-8

NeedsCompilation no

Author Hannah Recht [aut, cre]

Maintainer Hannah Recht <censusapi.rstats@gmail.com>

Repository CRAN

Date/Publication 2020-10-14 14:10:03 UTC

R topics documented:

fips ......................................................... 2
getCensus .............................................. 2
listCensusApis ......................................... 4
listCensusMetadata ................................. 4
makeVarlist .......................................... 5

Index 6
getCensus

fips  List of state fips codes - 50 states plus DC

Description
Some small geographies in some Census APIs can only be used under a state hierarchy. This is a list of fips codes that may be looped over to retrieve data for all states.

Usage
fips

Format
A list of fips codes for 50 states and the District of Columbia

Examples
fips

getCensus  Retrieve Census data from a given API

Description
Retrieve Census data from a given API

Usage
getcensus(
  name,
  vintage = NULL,
  key = Sys.getenv("CENSUS_KEY"),
  vars,
  region = NULL,
  regionin = NULL,
  time = NULL,
  date = NULL,
  period = NULL,
  monthly = NULL,
  show_call = FALSE,
  category_code = NULL,
  data_type_code = NULL,
  naics = NULL,
  pscode = NULL,
  naics2012 = NULL,
Arguments

name: API name - e.g. acs5. See list at https://api.census.gov/data.html
vintage: Year of dataset, e.g. 2014 - not required for timeseries APIs
key: Your Census API key, gotten from https://api.census.gov/data/key_signup.html
vars: List of variables to get
region: Geography to get
region_in: Optional hierarchical geography to limit region
time, date, period, monthly: Optional arguments used for some time series APIs
show_call: List the underlying API call sent to the Census Bureau and other info
category_code, data_type_code: Arguments used in Economic Indicators Time Series API
naics, pscode: Arguments used in Annual Survey of Manufactures API
naics2012, naics2007, naics2002, naics1997, sic: Arguments used in Economy Wide Key Statistics APIs and Business Patterns APIs
...: Other valid parameters to pass to the Census API. Note: the APIs are case sensitive.

Examples

```r
df <- getCensus(name = "acs/acs5", vintage = 2017,
vars = c("B01001_001E", "NAME", "B01002_001E", "B19013_001E"),
region = "tract:*", region_in = "state:06")
head(df)
```

# Use American Community Survey variable groups to get all data from a given table.
# This returns estimates as well as margins of error and annotation flags.
acs_group <- getCensus(name = "acs/acs5",
vintage = 2017,
vars = c("NAME", "group(B19013)"),
region = "county:*")
head(acs_group)

# Retrieve block-level data within a specific tract using a nested region_in argument
data2010 <- getCensus(name = "dec/sf1",
vintage = 2010,
vars = c("NAME","P001001"),
region = "block:*",
... NULL,
naics2007 = NULL,
naics2002 = NULL,
sic = NULL,
... )
```
# Get poverty rates for children and all ages over time
saipe <- getCensus(name = "timeseries/poverty/saipe",
vars = c("NAME", "SAEPOVRT0_17_PT", "SAEPOVRTALL_PT"),
region = "state:01",
time = "from 2000 to 2017")
head(saipe)

# Get county business patterns data for a specific NAICS sector
cbp_2016 <- getCensus(name = "cbp",
vintage = "2016",
vars = c("EMP", "ESTAB", "NAICS2012_TTL", "GEO_TTL"),
region = "state:*",
naics2012 = "23")
head(cbp_2016)

---

### listCensusApis

*Get dataset metadata on all available APIs as a data frame*

**Description**

Scrapes https://api.census.gov/data.json and returns a dataframe that includes: title, name, vintage (where applicable), url, isTimeseries (binary), temporal (helpful for some time series), description, modified date

**Usage**

```r
listCensusApis()
```

**Examples**

```r
apis <- listCensusApis()
head(apis)
```

---

### listCensusMetadata

*Get variable or geography metadata for a given API as a data frame*

**Description**

Get variable or geography metadata for a given API as a data frame

**Usage**

```r
listCensusMetadata(name, vintage = NULL, type = "variables", group = NULL)
```
makeVarlist

Arguments

name  
API name - e.g. acs5. See list at https://api.census.gov/data.html
vintage  
Year of dataset, e.g. 2014 - not required for timeseries APIs
type  
Type of metadata to return, either "variables", "geographies" or "geography", or "groups". Default is variables.
group  
An optional variable group code, used to return metadata for a specific group of variables only.

makeVarlist  
Use variable metadata to find variables containing a given string.

Description

Return a list of variable names or data frame of variable metadata containing a given string. This can be used create a list of variables to later pass to getCensus, or a data frame documenting variables used in a given project.

Usage

makeVarlist(name, vintage = NULL, find, varsearch = "all", output = "list")

Arguments

name  
API name - e.g. acs5. See list at https://api.census.gov/data.html
vintage  
Year of dataset, e.g. 2014 - not required for timeseries APIs
find  
A string to find in the variable metadata
varsearch  
Optional argument specifying which fields to search. Default is "all". Options are "all", "name", "label", or "concept".
output  
Optional argument, specifying output to "list" or "dataframe". Default is "list".

Examples

# Return a list, and then use getCensus function to retrieve those variables
myvars <- makeVarlist(name = "timeseries/poverty/saipe",
                     find = "Ages 0-4",
                     varsearch = "label")
myvars
saipe_dt <- getCensus(name = "timeseries/poverty/saipe",
                      time = 2016,
                      vars = myvars,
                      region = "state:*")
head(saipe_dt)
Index

* api
  getCensus, 2
* datasets
  fips, 2
* metadata
  listCensusApis, 4
  listCensusMetadata, 4

fips, 2
getCensus, 2
listCensusApis, 4
listCensusMetadata, 4
makeVarlist, 5