

Package ‘censusapi’

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Version 0.6.0

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

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Imports httr, jsonlite

Suggests knitr, rmarkdown

VignetteBuilder knitr

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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

Source

https://www.census.gov/geo/reference/ansi_statetables.html

Examplesfips

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, category_code = NULL,
  data_type_code = NULL, naics = NULL, pscode = NULL,
  naics2012 = NULL, naics2007 = NULL, naics2002 = NULL,
  naics1997 = NULL, sic = 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
regionin	Optional hierarchical geography to limit region
time, date, period, monthly	Optional arguments used for some time series APIs
category_code, data_type_code	Arguments used in Economic Indicators Time Series API
naics, pocode	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

```
df <- getCensus(name = "acs/acs5", vintage = 2017,
vars = c("B01001_001E", "NAME", "B01002_001E", "B19013_001E"),
region = "tract:*", regionin = "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 regionin argument
data2010 <- getCensus(name = "dec/sf1",
vintage = 2010,
vars = c("NAME", "P001001"),
region = "block:*",
regionin = "state:36+county:027+tract:010000")
head(data2010)

# Retrieve block-level data for Decennial Census sf1, 2000
# Note, for this dataset a tract needs to be specified to retrieve blocks
data2000 <- getCensus(name = "sf1",
vintage = 2000,
vars = c("P001001", "P003001"),
region = "block:*",
regionin = "state:36+county:27+tract:010000")
```

```

head(data2000)

# 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	<i>Get dataset metadata on all available APIs as a data frame</i>
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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

```
listCensusApis()
```

Examples

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

listCensusMetadata	<i>Get variable or geography metadata for a given API as a data frame</i>
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Description

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

Usage

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

Arguments

name	API name - e.g. acs5. See list at https://api.census.gov/data.html
vintage	Vintage 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.

Examples

```
bds_vars <- listCensusMetadata(name = "timeseries/bds/firms", type = "variables")
head(bds_vars)

bds_geos <- listCensusMetadata(name = "timeseries/bds/firms", type = "geographies")
head(bds_geos)

acs_geos <- listCensusMetadata(name = "acs/acs5", vintage = 2017, type = "geographies")
head(acs_geos)

acs_groups <- listCensusMetadata(name = "acs/acs5", vintage = 2017, type = "groups")
head(acs_groups)

group_B17020 <- listCensusMetadata(name = "acs/acs5",
vintage = 2017,
type = "variables",
group = "B17020")
head(group_B17020)
```

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

`vsearch` 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",
  vsearch = "label")
myvars
saipe_dt <- getCensus(name = "timeseries/poverty/saipe",
  time = 2016,
  vars = myvars,
  region = "state:*")
head(saipe_dt)
```

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