

Package ‘zipcodeR’

December 13, 2020

Title Data & Functions for Working with US ZIP Codes

Version 0.2.0

Description Make working with ZIP codes in R painless with an integrated dataset of U.S. ZIP codes and functions for working with them. Search ZIP codes by multiple geographies, including state, county, city & across time zones. Also included are functions for relating ZIP codes to Census data.

License GPL-3

URL <https://github.com/gavinrozzi/zipcodeR/>,
<https://www.gavinrozzi.com/project/zipcoder/>

BugReports <https://github.com/gavinrozzi/zipcodeR/issues/>

Encoding UTF-8

LazyData true

RoxygenNote 7.1.1

Imports rlang

Depends R (>= 3.5.0), dplyr, stringr

Suggests knitr, rmarkdown, markdown, readr, tidycensus

VignetteBuilder knitr, rmarkdown

NeedsCompilation no

Author Gavin Rozzi [aut, cre] (<<https://orcid.org/0000-0002-9969-8175>>)

Maintainer Gavin Rozzi <gr@gavinrozzi.com>

Repository CRAN

Date/Publication 2020-12-13 00:10:02 UTC

R topics documented:

| | |
|-----------------------------|---|
| download_zip_data | 2 |
| get_cd | 3 |
| get_tracts | 3 |

| | |
|---------------------------|----|
| is_zcta | 4 |
| reverse_zipcode | 4 |
| search_cd | 5 |
| search_city | 5 |
| search_county | 6 |
| search_fips | 7 |
| search_state | 7 |
| search_tz | 8 |
| zcta_crosswalk | 8 |
| zip_code_db | 9 |
| zip_to_cd | 10 |

| | |
|--------------|-----------|
| Index | 11 |
|--------------|-----------|

| | |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| download_zip_data | <i>Download updated data files needed for library functionality to the package's data directory. To be implemented for future updates.</i> |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------|

Description

Download updated data files needed for library functionality to the package's data directory. To be implemented for future updates.

Usage

```
download_zip_data(force = FALSE)
```

Arguments

force Boolean, if set to TRUE will force overwrite existing data files with new version

Value

Data files needed for package functionality, stored in data directory of package install

Examples

```
download_zip_data()
```

| | |
|--------|-------------------------------------------------------------|
| get_cd | <i>Get all congressional districts for a given ZIP code</i> |
|--------|-------------------------------------------------------------|

Description

Get all congressional districts for a given ZIP code

Usage

```
get_cd(zip_code)
```

Arguments

zip_code A U.S. ZIP code

Value

a named list of two-digit state code and two digit district code

Examples

```
get_cd('08731')  
get_cd('90210')
```

| | |
|------------|------------------------------------------------------|
| get_tracts | <i>Get all Census tracts within a given ZIP code</i> |
|------------|------------------------------------------------------|

Description

Get all Census tracts within a given ZIP code

Usage

```
get_tracts(zip_code)
```

Arguments

zip_code A U.S. ZIP code

Value

tibble of Census tracts and data from Census crosswalk file found for given ZIP code

Examples

```
get_tracts('08731')  
get_tracts('90210')
```

| | |
|---------|------------------------------------------------------------------------------|
| is_zcta | Returns true if the given ZIP code is also a ZIP code tabulation area (ZCTA) |
|---------|------------------------------------------------------------------------------|

Description

Returns true if the given ZIP code is also a ZIP code tabulation area (ZCTA)

Usage

```
is_zcta(zip_code)
```

Arguments

| | |
|----------|-------------------------|
| zip_code | A 5-digit U.S. ZIP code |
|----------|-------------------------|

Value

Boolean TRUE or FALSE based upon whether provided ZIP code is a ZCTA by testing whether it exists in the U.S. Census crosswalk data

Examples

```
is_zcta('90210')  
is_zcta('99999')  
is_zcta('07762')
```

| | |
|-----------------|-------------------------------------------------------------------|
| reverse_zipcode | Given a ZIP code, returns columns of metadata about that ZIP code |
|-----------------|-------------------------------------------------------------------|

Description

Given a ZIP code, returns columns of metadata about that ZIP code

Usage

```
reverse_zipcode(zip_code)
```

Arguments

| | |
|----------|---------------------------------------------------------------------|
| zip_code | A 5-digit U.S. ZIP code or character vector with multiple ZIP codes |
|----------|---------------------------------------------------------------------|

Value

A tibble containing data for the ZIP code(s)

Examples

```
reverse_zipcode('90210')
reverse_zipcode('08731')
reverse_zipcode(c('08734', '08731'))
reverse_zipcode('07762')$county
reverse_zipcode('07762')$state
```

| | |
|-----------|--------------------------------------------------------------------------|
| search_cd | <i>Get all ZIP codes that fall within a given congressional district</i> |
|-----------|--------------------------------------------------------------------------|

Description

Get all ZIP codes that fall within a given congressional district

Usage

```
search_cd(state_fips_code, congressional_district)
```

Arguments

```
state_fips_code
  A two-digit U.S. FIPS code for a state
congressional_district
  A two digit number specifying a congressional district in a given
```

Value

tibble of all congressional districts found for given ZIP code, including state code

Examples

```
search_cd('34', '03')
search_cd('36', '05')
```

| | |
|-------------|---------------------------------------------------------|
| search_city | <i>Search ZIP codes for a given city within a state</i> |
|-------------|---------------------------------------------------------|

Description

Search ZIP codes for a given city within a state

Usage

```
search_city(city_name, state_abb)
```

Arguments

city_name Name of major city to search
state_abb Two-digit code for a U.S. state

Value

tibble of all ZIP code data found for given city

Examples

```
search_city('Spring Lake', 'NJ')
search_city('Chappaqua', 'NY')
```

search_county *Search ZIP codes for a county*

Description

Search ZIP codes for a county

Usage

```
search_county(county_name, state_abb, ...)
```

Arguments

county_name Name of a county within a U.S. state
state_abb Two-digit code for a U.S. state
... if the parameter similar = TRUE, then send the parameter max.distance to the base function agrep. Default is 0.1.

Value

tibble of all ZIP codes for given county name

Examples

```
middlesex <- search_county('Middlesex', 'NJ')
alameda <- search_county('alameda', 'CA')
search_county("ST BERNARD", "LA", similar = TRUE)$zipcode
```

| | |
|-------------|-------------------------------------------------------------|
| search_fips | <i>Returns all ZIP codes found within a given FIPS code</i> |
|-------------|-------------------------------------------------------------|

Description

Returns all ZIP codes found within a given FIPS code

Usage

```
search_fips(state_fips, county_fips)
```

Arguments

| | |
|-------------|-----------------------------------------|
| state_fips | A U.S. FIPS code |
| county_fips | A 1-3 digit county FIPS code (optional) |

Value

tibble of Census tracts and data from Census crosswalk file found for given ZIP code

Examples

```
search_fips('34')  
search_fips('34', '03')  
search_fips('34', '3')  
search_fips('36', '003')
```

| | |
|--------------|----------------------------------------------------------|
| search_state | <i>Search for ZIP codes located within a given state</i> |
|--------------|----------------------------------------------------------|

Description

Search for ZIP codes located within a given state

Usage

```
search_state(state_abb)
```

Arguments

| | |
|-----------|------------------------------------------|
| state_abb | Two-digit code representing a U.S. state |
|-----------|------------------------------------------|

Value

tibble of all ZIP codes for each state code defined in state_abb

Examples

```
search_state('NJ')
search_state(c('NJ', 'NY', 'CT'))
```

| | |
|-----------|-------------------------------------------------------------|
| search_tz | <i>Search all ZIP codes located within a given timezone</i> |
|-----------|-------------------------------------------------------------|

Description

Search all ZIP codes located within a given timezone

Usage

```
search_tz(tz)
```

Arguments

| | |
|----|----------|
| tz | Timezone |
|----|----------|

Value

tibble of all ZIP codes found for given timezone

Examples

```
eastern <- search_tz('Eastern')
pacific <- search_tz('Mountain')
```

| | |
|----------------|----------------------------------------------|
| zcta_crosswalk | <i>ZCTA to Census Tract (2010) Crosswalk</i> |
|----------------|----------------------------------------------|

Description

A dataset containing the relationships between ZIP code tabulation areas (ZCTA) and Census Tracts. This contains selected variables from the official crosswalk file.

Usage

```
zcta_crosswalk
```

Format

A data frame with 148897 rows and 4 variables:

ZCTA5 2010 ZIP Code Tabulation Area

TRACT 2010 Census Tract Code

GEOID Concatenation of 2010 State, County, and Tract

Source

<https://www.census.gov/geographies/reference-files/time-series/geo/relationship-files.html>

zip_code_db

ZIP Code Database

Description

A dataset containing detailed information for U.S. ZIP codes

Usage

zip_code_db

Format

A data frame with 41877 rows and 24 variables:

zipcode 5 digit U.S. ZIP code

zipcode_type 2010 State FIPS Code

major_city Major city serving the ZIP code

post_office_city City of post office serving the ZIP code

common_city_list List of common cities represented by the ZIP code

county Name of county containing the ZIP code

state Two-digit state code for ZIP code location

lat Latitude of the centroid for the ZIP code

lng Longitude of the centroid for the ZIP code

timezone Timezone of the ZIP code

radius_in_miles Radius of the ZIP code in miles

area_code_list List of area codes for telephone numbers within this ZIP code

population Total population of the ZIP code

population_density Population density of the ZIP code (persons per square mile)

land_area_in_sqmi Area of the land contained within the ZIP code in square miles

water_area_in_sqmi Area of the waters contained within the ZIP code in square miles

housing_units Number of housing units within the ZIP code

occupied_housing_units Number of housing units within the ZIP code

median_home_value Median home price within the ZIP code

median_household_income Median household income within the ZIP code

bounds_west Bounding box coordinates

bounds_east Bounding box coordinates

bounds_north Bounding box coordinates

bounds_south Bounding box coordinates

Source

https://github.com/MacHu-GWU/uszipcode-project/files/5183256/simple_db.log

zip_to_cd

ZIP Code to Congressional District Relationship File

Description

A dataset containing mappings between ZIP codes and congressional districts

Usage

zip_to_cd

Format

A data frame with 45914 rows and 2 variables:

ZIP 5 digit U.S. ZIP code

CD Four digit congressional district code (State FIPS code + district number)

Source

https://www.huduser.gov/portal/datasets/usps_crosswalk.html

Index

* datasets

- zcta_crosswalk, 8
- zip_code_db, 9
- zip_to_cd, 10

download_zip_data, 2

get_cd, 3

get_tracts, 3

is_zcta, 4

reverse_zipcode, 4

search_cd, 5

search_city, 5

search_county, 6

search_fips, 7

search_state, 7

search_tz, 8

zcta_crosswalk, 8

zip_code_db, 9

zip_to_cd, 10