Package 'zipcodeR'

June 25, 2022

Title Data & Functions for Working with US ZIP Codes

Version 0.3.4

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, geocoding & distance calculations.

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 7.2.0

Imports rlang, stringr, raster, tidycensus, tidyr, dplyr, jsonlite, httr, curl, RSQLite, DBI

Depends R (>= 3.5.0)

Suggests knitr, rmarkdown, markdown, readr, testthat (>= 3.0.0), covr

VignetteBuilder knitr, rmarkdown

Config/testthat/edition 3

NeedsCompilation no

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

Maintainer Gavin Rozzi <gr@gavinrozzi.com>

Repository CRAN

Date/Publication 2022-06-25 02:20:02 UTC

R topics documented:

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

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

```
## Not run:
download_zip_data()

## End(Not run)
```

geocode_zip *Returns that lat / lon pair of the centroid of a given ZIP code*

Description

Returns that lat / lon pair of the centroid of a given ZIP code

Usage

```
geocode_zip(zip_code)
```

Arguments

zip_code	A 5-digit U.S. ZIP code

Value

tibble of lat lon coordinates

Examples

```
geocode_zip("07762")
geocode_zip("90210")
geocode_zip("90210")$lat
geocode_zip("90210")$lng
```

get_cd *Get all congressional districts for a given ZIP code*

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 *Get all Census tracts within a given ZIP code*

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")
```

`normalize_zip` *Normalize ZIP codes*

Description

Normalize ZIP codes

Usage

```
normalize_zip(zipcode)
```

Arguments

`zipcode`	messy ZIP code to be normalized

Value

Normalized zipcode

Examples

```
normalize_zip(0008731)
```

`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 chracter 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` *Get all ZIP codes that fall within a given congressional district*

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` *Search ZIP codes for a given city within a state*

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 *Returns all ZIP codes found within a given FIPS code*

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_radius *Search for ZIP codes that are within a given radius from a point*

Description

Search for ZIP codes that are within a given radius from a point

Usage

```
search_radius(lat, lng, radius = 1)
```

Arguments

lat	latitude
lng	longitude
radius	distance to search in miles, set by default to 1

Value

a tibble containing the ZIP code(s) within the provided radius and distance from the provided coordinates in miles

Examples

```
## Not run:
search_radius(39.9, -74.3, 10)

## End(Not run)
```

`search_state` *Search for ZIP codes located within a given state*

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 *Search all ZIP codes located within a given timezone*

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 *ZCTA to Census Tract (2010) Crosswalk*

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_distance *Calculate the distance between two ZIP codes in miles*

Description

Calculate the distance between two ZIP codes in miles

Usage

```
zip_distance(zipcode_a, zipcode_b, lonlat = TRUE, units = "miles")
```

Arguments

zipcode_a	First vector of ZIP codes
zipcode_b	Second vector of ZIP codes
lonlat	lonlat argument to pass to raster::pointDistance() to select method of distance calculation. Default is TRUE to calculate distance over a spherical projection. FALSE will calculate the distance in Euclidean (planar) space.
units	Specify which units to return distance calculations in. Choices include meters or miles.

Value

a data.frame containing a column for each ZIP code and a new column containing the distance between the two columns of ZIP code

Examples

```
zip_distance("08731", "08901")
```

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