

Package: redistio (via r-universe)

August 28, 2024

Title Interactive Redistricting

Version 0.0.0.9000

Description A point and click editor for districts built on 'shiny' and 'Leaflet'. Users can draw districts and calculate standard redistricting metrics, like compactness or the number of administrative splits. Maps can be exported as assignment files or shapefiles, readable by most other redistricting software.

License GPL (>= 3)

Encoding UTF-8

Roxygen list(markdown = TRUE)

RoxygenNote 7.3.1

Imports bslib, colourpicker, dplyr, DT, geomander, ggredist, gt, leaflet, purrr, redistmetrics, rlang, scales, sf, shiny, stringr, tibble

Depends R (>= 4.1.0)

LazyData true

URL <https://github.com/christopherkenny/redistio>,
<http://www.christophertkenny.com/redistio/>

BugReports <https://github.com/christopherkenny/redistio/issues>

Suggests crayons, planscorer, redist, shinyWidgets, spelling

Language en-US

Repository <https://christopherkenny.r-universe.dev>

RemoteUrl <https://github.com/christopherkenny/redistio>

RemoteRef HEAD

RemoteSha 48df8b344880aad770467ade24c43462f71156e8

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dc	<i>District of Columbia Geographic Data</i>
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Description

This file contains demographic, partisan, and geographic data for DC at the voting district level.

Format

- sf object
- GE0ID20 US Census Geographic Identifier
- state state abbreviation
- county county name
- vtd voting district identifier
- pop total population
- pop_hisp Hispanic population
- pop_white White, non-Hispanic population
- pop_black Black, non-Hispanic population
- pop_aian American Indian and Alaskan Native, non-Hispanic population
- pop_asian Asian, non-Hispanic population
- pop_nhpi Native Hawaiian and Pacific Islander, non-Hispanic population
- pop_other Other, non-Hispanic population
- pop_two Two or More Races, non-Hispanic population
- vap voting age population
- vap_hisp Hispanic voting age population
- vap_white White, non-Hispanic voting age population
- vap_black Black, non-Hispanic voting age population
- vap_aian American Indian and Alaskan Native, non-Hispanic voting age population
- vap_asian Asian, non-Hispanic voting age population

vap_nhpi Native Hawaiian and Pacific Islander, non-Hispanic voting age population
 vap_other Other, non-Hispanic voting age population
 vap_two Two or More Races, non-Hispanic voting age population
 pre_16_dem_cli votes for Clinton 2016, President (D)
 pre_16_rep_tru votes for Trump 2016, President (R)
 uss_18_dem_bro votes for Brown 2018, Shadow Senate (D)
 atg_18_dem_rac votes for Karl Racine, Attorney General (D)
 pre_20_dem_bid votes for Biden 2020, President (D)
 pre_20_rep_tru votes for Trump 2020, President (R)
 uss_20_dem_str votes for Strauss 2020, Shadow Senate (D)
 uss_20_rep_wei votes for Weiss 2020, Shadow Senate (R)
 arv_16 average Republican vote in 2016
 adv_16 average Democratic vote in 2016
 arv_18 average Republican vote in 2018
 adv_18 average Democratic vote in 2016
 arv_20 average Republican vote in 2020
 adv_20 average Democratic vote in 2016
 nrp normal Republican vote
 ndr normal Democratic vote
 geometry sf geometry
 adv_nbr Advisory Neighborhood names estimated to VTDs
 ward 2022 ward lines estimated to VTDs

Examples

```
data(dc)
```

 draw

Interactive Plan Drawing

Description

Interactive Plan Drawing

Usage

```
draw(
  shp,
  init_plan,
  ndists,
  palette,
  layers = NULL,
  pop_tol = 0.05,
  pop_col = "pop",
  adj_col = "adj",
  split_cols = guess_admins,
  elect_cols = guess_elections,
  demog_cols = guesstimate_demographics,
  hover_fn = hover_precinct,
  opts = redistio_options()
)
```

Arguments

<code>shp</code>	an sf tibble that you want to draw with
<code>init_plan</code>	Plan to initialize with.
<code>ndists</code>	Number of districts to draw if <code>init_plan</code> is not supplied.
<code>palette</code>	Color palette to fill shapes with. Default is Polychrome 36 or, if installed, <code>crayons::crayons\$no_48</code> .
<code>layers</code>	Named list of sf objects to overlay. Also takes column names in <code>shp</code> to group by.
<code>pop_tol</code>	the population tolerance.
<code>pop_col</code>	Name of column in <code>shp</code> that contains population data.
<code>adj_col</code>	Name of column in <code>shp</code> that contains adjacency information.
<code>split_cols</code>	Names of column in <code>shp</code> that contain administrative units
<code>elect_cols</code>	Names of column in <code>shp</code> that contain election data
<code>demog_cols</code>	Names of column in <code>shp</code> that contain demographic data
<code>hover_fn</code>	Function to generate tables for mouse hovering. Default is <code>hover_precinct()</code> .
<code>opts</code>	list of options. Default is <code>redistio_options()</code>

Value

Shiny app

Examples

```
if (interactive()) {
  draw(dc, dc$ward)
  draw(dc, dc$ward, layers = list(neighborhoods = 'adv_nbr'))
}
```

`guesstimate_demographics`*Guess and estimate which columns contain demographic data*

Description

Guess and estimate which columns contain demographic data

Usage

```
guesstimate_demographics(shp)
```

Arguments

`shp` an sf tibble that you want to draw with

Value

a named list of columns

Examples

```
guesstimate_demographics(dc)
```

`guess_admins`*Guess which columns contain administrative units*

Description

Guess which columns contain administrative units

Usage

```
guess_admins(shp)
```

Arguments

`shp` an sf tibble that you want to draw with

Value

a named list of types

Examples

```
guess_admins(dc)
```

guess_elections	<i>Guess which columns contain election data</i>
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Description

Guess which columns contain election data

Usage

```
guess_elections(shp)
```

Arguments

shp an sf tibble that you want to draw with

Value

a named list of columns

Examples

```
guess_elections(dc)
```

hover_precinct	<i>Create a tibble of precinct stats</i>
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Description

Create a tibble of precinct stats

Usage

```
hover_precinct(shp, ...)
```

Arguments

shp a [tibble::tibble](#) with precinct stats
... named tidyselections

Value

A [tibble::tibble](#)

Examples

```
hover_precinct(dc, 1, pop = dplyr::starts_with('pop'), vap = dplyr::starts_with('vap'))
```

redistio_options	<i>Set options for redistio</i>
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Description

Set options for redistio

Usage

```
redistio_options(
  theme = "flatly",
  panels = c("elections", "demographics", "integrity", "algorithms"),
  select_color = "purple",
  palette_pop = "Purples",
  palette_pct = "PuOr",
  palette_party = ggredist::ggredist$partisan,
  map_tiles = "CartoDB.Positron",
  leaflet_height = "91vh",
  crs = 4326,
  na_color = "#0000",
  layer_weight = 1.5,
  layer_color = "#000000",
  locked_districts = NULL,
  use_algorithms = TRUE,
  alg_max_districts = 3,
  alg_max_sims = 100,
  use_planscore = TRUE,
  save_assignment_path = "redistio.csv",
  save_shape_path = "redistio.geojson",
  ...
)
```

Arguments

theme	a name of a bootswatch preset theme or other <code>bslib::bs_theme()</code> object
panels	which panels to display in the app, 'draw' is always shown.
select_color	a color to use for highlighting selected districts
palette_pop	a color palette to use for whole people
palette_pct	a color palette to use for percentages of people
palette_party	a color palette to use for parties
map_tiles	a tileset to use for the map background, from <code>leaflet::providers</code>
leaflet_height	height to pass to <code>leaflet::leafletOutput()</code>
crs	a coordinate reference system to use in <code>leaflet::leaflet()</code>
na_color	a color to use for unassigned precincts

`layer_weight` a stroke width to use for layers in `leaflet::leaflet()`
`layer_color` colors to use for layers in `leaflet::leaflet()`
`locked_districts` districts to lock on app start to stop edits
`use_algorithms` whether to use redistricting simulation algorithms
`alg_max_districts` maximum number of districts to use in algorithms
`alg_max_sims` maximum number of simulations to use in algorithms
`use_planscore` whether to use PlanScore to evaluate plans
`save_assignment_path` Output path to save assignment file to.
`save_shape_path` Output path to save shapefile to.
`...` additional arguments (currently ignored)

Value

a list

Examples

```
redistio_options()
```


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