

Package: redistio (via r-universe)

October 16, 2026

Title Interactive Redistricting

Version 0.0.0.9002

Description A point and click editor for districts built on 'shiny' and 'mapgl'. 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)

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Imports bslib, colourpicker, dplyr, DT, geomander, ggredist, gt, mapgl (>= 0.4.4), purrr, redistmetrics, RColorBrewer, rict, rlang, scales, sf, shiny, stringr, tibble

Depends R (>= 4.1.0)

LazyData true

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

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

Suggests alarndata, crayons, ggplot2, planscorer, redist, shinytest2, shinyWidgets, spelling, testthat (>= 3.0.0)

Language en-US

Config/testthat/edition 3

Config/Needs/website christopherkenny/ctktemplate

Config/pak/sysreqs libabsl-dev cmake libgdal-dev gdal-bin libgeos-dev make libicu-dev libpng-dev libuv1-dev libxml2-dev libssl-dev libproj-dev libsqlite3-dev libudunits2-dev libnode-dev libx11-dev zlib1g-dev

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

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Contents

<code>add_plan_stats</code>	2
<code>adj_editor</code>	3
<code>dc</code>	4
<code>draw</code>	5
<code>guess_admins</code>	6
<code>guess_elections</code>	7
<code>guesstimate_demographics</code>	8
<code>hover_precinct</code>	8
<code>redisio_options</code>	9

Index [11](#)

<code>add_plan_stats</code>	<i>Add summary statistics to plans</i>
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Description

Add summary statistics to plans

Usage

`add_plan_stats(plans, ref_plan, map = NULL, name = NULL, ...)`

Arguments

- `plans` a `redis_tplans` object
- `ref_plan` an integer vector of district assignments
- `map` a `redis_tmap` object. Required if `plans` contains summary statistics.
- `name` name for the reference plan. Defaults to "ref".
- `...` additional arguments (currently ignored)

Value

a `redis_tplans` object with the reference plan added

Examples

```
dc_map <- redis::redis_tmap(dc, existing_plan = ward)
plans <- redis::redis_tsmc(dc_map, nsims = 10)
plans <- add_plan_stats(plans, dc_map$ward, map = dc_map, name = 'example')
```

Description

Interactive Adjacency Graph Editing

Usage

```
adj_editor(  
  shp,  
  adj = geomander::adjacency(shp),  
  init_plan,  
  palette = NULL,  
  layers = NULL,  
  hover_fn = hover_precinct,  
  opts = redistio_options()  
)
```

Arguments

shp	an sf tibble that you want to draw with
adj	a zero-indexed adjacency graph
init_plan	plan to initialize coloring
palette	Color palette to fill shapes with. Default is Polychrome 36 or, if installed, crayons::crayons\$no_48.
layers	Named list of sf objects to overlay. Also takes column names in shp to group by.
hover_fn	Function to generate tables for mouse hovering. Default is hover_precinct().
opts	list of options. Default is redistio_options()

Value

Shiny app

Examples

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

dc

*District of Columbia Geographic Data***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
nrv normal Republican vote
ndv 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 = NULL,
  layers = NULL,
  pop_tol = 0.05,
  pop_col = "pop",
  adj_col = "adj",
  split_cols = guess_admins,
  elect_cols = guess_elections,
  demog_cols = guesstimate_demographics,
  plans = NULL,
  plans_fn = NULL,
  hover_fn = hover_precinct,
  opts = redistio_options()
)

```

Arguments

shp	an sf tibble that you want to draw with
init_plan	Plan to initialize with.
ndists	Number of districts to draw if init_plan is not supplied.
palette	Color palette to fill shapes with. Default is Polychrome 36 or, if installed, crayons::crayons\$no_48.
layers	Named list of sf objects to overlay. Also takes column names in shp to group by.
pop_tol	the population tolerance.
pop_col	Name of column in shp that contains population data.
adj_col	Name of column in shp that contains adjacency information.
split_cols	Names of column in shp that contain administrative units
elect_cols	Names of column in shp that contain election data
demog_cols	Names of column in shp that contain demographic data
plans	a redist_plans object plans for browsing and comparison
plans_fn	a function to add a reference plan to plans and compute summary statistics. Should follow the signature of add_plan_stats().
hover_fn	Function to generate tables for mouse hovering. Default is hover_precinct().
opts	list of options. Default is redistio_options()

Value

Shiny app

Examples

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

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)
```

<code>guess_elections</code>	<i>Guess which columns contain election data</i>
------------------------------	--

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)
```

```
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)
```

```
hover_precinct
```

Create a tibble of precinct stats

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](#) with columns group, rowname, and one column per precinct (V1, V2, ...). Groups are labeled with human-readable names (e.g. "Total Population", "Voting Age Population").

Examples

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

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

Description

Set options for redistio

Usage

```
redistio_options(
  theme = "flatly",
  panels = c("elections", "demographics", "integrity", "algorithms", "plans",
    "comparisons"),
  select_color = "purple",
  border_color = "#000000",
  palette_pop = "Purples",
  palette_pct = "PuOr",
  palette_party = ggredist::ggredist$partisan,
  map_tiles = mapgl::carto_style("voyager"),
  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_plans = TRUE,
  use_comparisons = TRUE,
  use_planscore = TRUE,
  save_assignment_path = "redistio.csv",
  save_shape_path = "redistio.geojson",
  debounce = 150,
  projection = "mercator",
  plot_theme = ggplot2::theme_bw(),
  plot_geom = "boxplot",
  plot_ref_geom = NULL,
  ...
)
```

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

<code>border_color</code>	a color to use for precinct borders in the map
<code>palette_pop</code>	a color palette to use for whole people. Defaults to <code>RColorBrewer::brewer.pal(n = 3, name = 'Purples')</code> .
<code>palette_pct</code>	a color palette to use for percentages of people. Defaults to <code>RColorBrewer::brewer.pal(n = 3, name = 'PuOr')</code> .
<code>palette_party</code>	a color palette to use for parties
<code>map_tiles</code>	a tileset to use for the map background, from <code>leaflet::providers</code>
<code>leaflet_height</code>	height to pass to <code>leaflet::leafletOutput()</code>
<code>crs</code>	a coordinate reference system to use in <code>leaflet::leaflet()</code>
<code>na_color</code>	a color to use for unassigned precincts
<code>layer_weight</code>	a stroke width to use for layers in <code>leaflet::leaflet()</code>
<code>layer_color</code>	colors to use for layers in <code>mapgl::maplibre()</code>
<code>locked_districts</code>	districts to lock on app start to stop edits
<code>use_algorithms</code>	whether to use redistricting simulation algorithms
<code>alg_max_districts</code>	maximum number of districts to use in algorithms
<code>alg_max_sims</code>	maximum number of simulations to use in algorithms
<code>use_plans</code>	whether to show the plans browser tab when plans is provided
<code>use_comparisons</code>	whether to show the comparisons tab when plans and plans_fn are provided
<code>use_planscore</code>	whether to use PlanScore to evaluate plans
<code>save_assignment_path</code>	Output path to save assignment file to.
<code>save_shape_path</code>	Output path to save shapefile to.
<code>debounce</code>	Number of milliseconds to debounce map hover events. Defaults to 150.
<code>projection</code>	Maplibre projection to use. Default is 'mercator'.
<code>plot_theme</code>	a ggplot2 theme to apply to comparison plots. Default is <code>ggplot2::theme_bw()</code> .
<code>plot_geom</code>	a geom to use for district-level comparison plots, passed to the geom argument of <code>redist::redist.plot.distr_qtys()</code> . Can be a string like 'jitter' (default) or a ggplot2 geom function like <code>ggplot2::geom_violin</code> .
<code>plot_ref_geom</code>	a geom function to use for the reference plan overlay in district-level comparison plots, passed to the ref_geom argument of <code>redist::redist.plot.distr_qtys()</code> . Should be a function that accepts ...
<code>...</code>	additional arguments (currently ignored)

Value

a list

Examples

```
redistio_options()
```

Index

* **data**

dc, [4](#)

add_plan_stats, [2](#)

adj_editor, [3](#)

dc, [4](#)

draw, [5](#)

guess_admins, [6](#)

guess_elections, [7](#)

guesstimate_demographics, [8](#)

hover_precinct, [8](#)

redist::redist.plot.distr_qtys(), [10](#)

redistio_options, [9](#)

tibble::tibble, [8](#)