

socviz chapter 7 section 3 Statebins

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Instead of using *ggplot2* or *chloroplethr* packages to achieve chloropleth maps in the United States, *statebins* is another choice.

Install the book's package from github.

```
# devtools::install_github("kjhealy/socviz")
```

Several arguments: * *state_data* refers to the data frame * *state_col* refers to a vector of state names * *value_col* refers to the value to be shown * *statebins_continuous()* refers to continuous variables

```
library(statebins)
library(socviz) # this package has election as a data frame
library(tidyverse)

head(election)
```

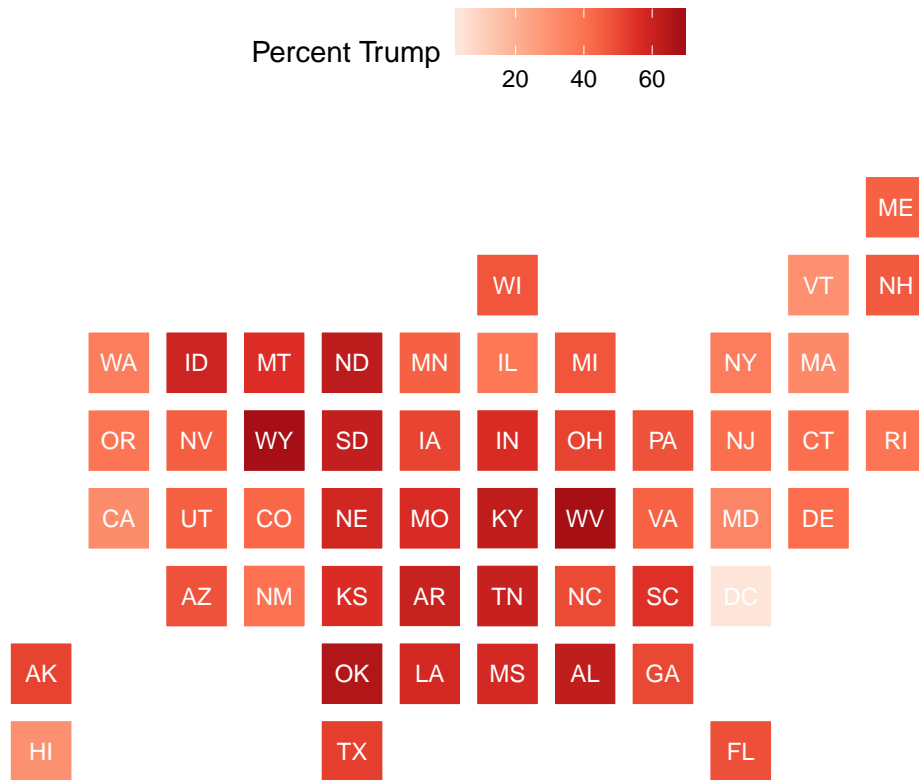
```
## # A tibble: 6 x 22
##   state st      fips total_vote vote_margin winner party pct_margin r_points
##   <chr> <chr> <dbl>      <dbl>      <dbl> <chr>  <chr>      <dbl>    <dbl>
## 1 Alab~ AL      1      2123372      588708 Trump  Repu~      27.7     27.7
## 2 Alas~ AK      2       318608       46933 Trump  Repu~      14.7     14.7
## 3 Ariz~ AZ      4      2604657       91234 Trump  Repu~       3.5      3.5
## 4 Arka~ AR      5      1130635      304378 Trump  Repu~      26.9     26.9
## 5 Cali~ CA      6     14237884     4269978 Clint~ Demo~      30.0    -30.0
## 6 Colo~ CO      8       2780247      136386 Clint~ Demo~       4.91    -4.91
## # ... with 13 more variables: d_points <dbl>, pct_clinton <dbl>,
## #   pct_trump <dbl>, pct_johnson <dbl>, pct_other <dbl>,
## #   clinton_vote <dbl>, trump_vote <dbl>, johnson_vote <dbl>,
## #   other_vote <dbl>, ev_dem <dbl>, ev_rep <dbl>, ev_oth <dbl>,
## #   census <chr>
```

```
election %>% select(state, total_vote, r_points, pct_trump, party, census) %>% sample_n(5)
```

```
## # A tibble: 5 x 6
##   state      total_vote r_points pct_trump party      census
##   <chr>      <dbl>    <dbl>    <dbl> <chr>      <chr>
## 1 Arkansas    1130635     26.9     60.6 Republican South
## 2 Arizona     2604657      3.5     48.1 Republican West
## 3 Indiana     2757828     19.0     56.5 Republican Midwest
## 4 Ohio        5536528      8.07    51.3 Republican Midwest
## 5 Alaska       318608     14.7     51.3 Republican West
```

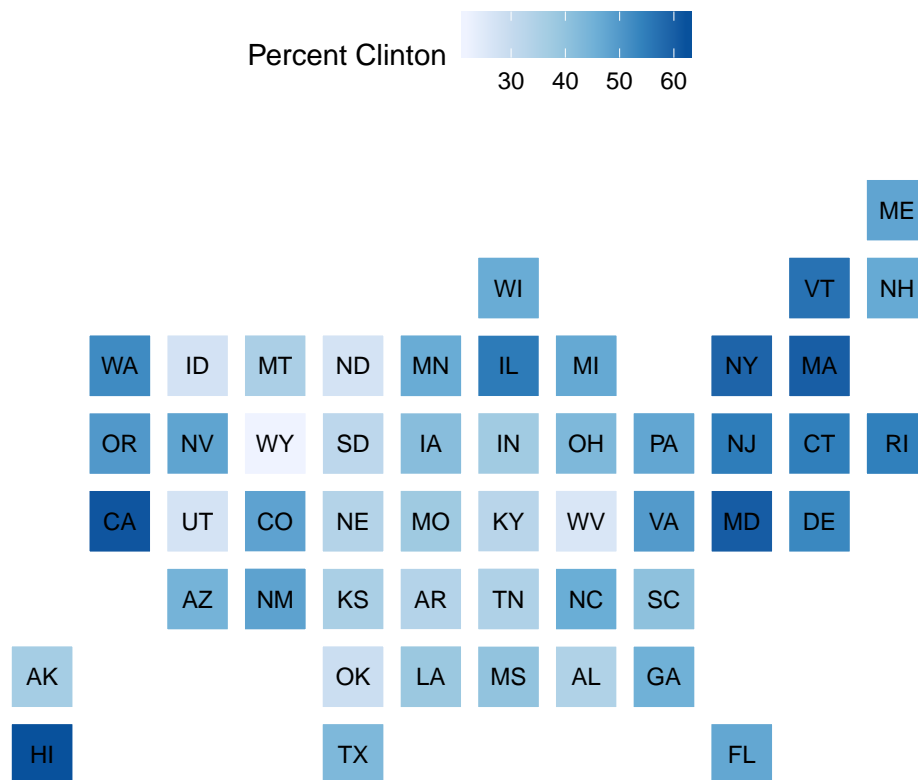
```
statebins_continuous(state_data = election,
                      state_col = "state",
                      text_color = "white",
                      value_col = "pct_trump",
                      brewer_pal = "Reds",
                      font_size = 3,
                      legend_title = "Percent Trump")
```

```
## Warning: `show_guide` has been deprecated. Please use `show.legend`
## instead.
```



```
statebins_continuous(state_data = subset(election, st %nin% "DC"),
  state_col = "state",
  text_color = "black",
  value_col = "pct_clinton",
  brewer_pal = "Blues",
  font_size = 3,
  legend_title = "Percent Clinton")
```

```
## Warning: `show_guide` has been deprecated. Please use `show.legend`
## instead.
```



For categorical data, use `statebins_manual()`. Here a variable called `color` is created to represent the party.

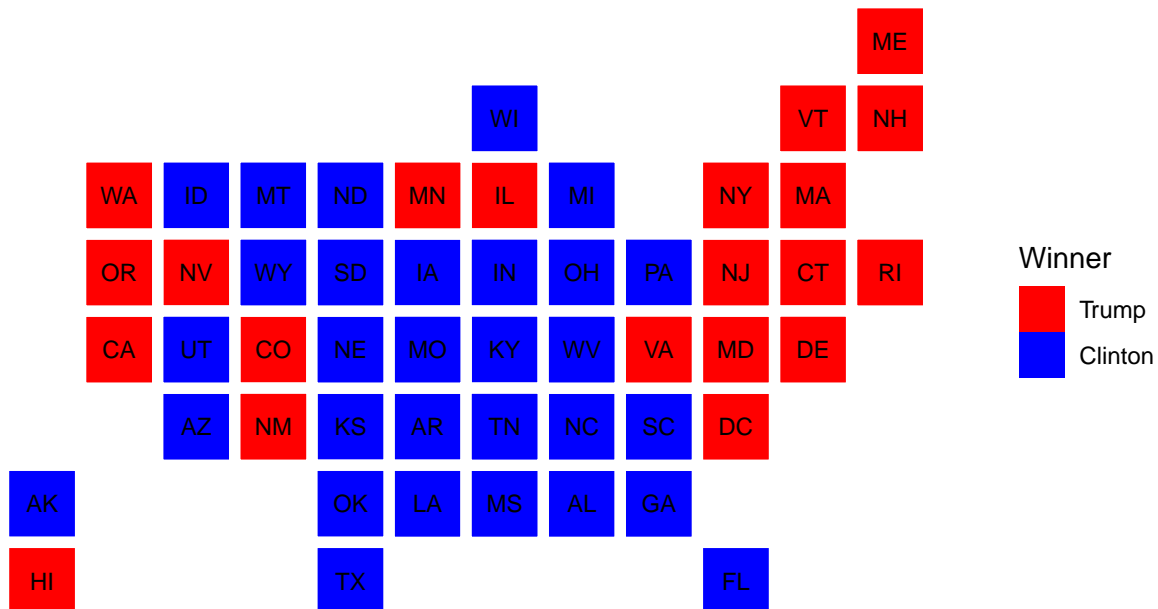
```
election <- election %>% mutate(color = recode(party,
  Republican = "red",
  Democrat = "blue"))

head(election)

## # A tibble: 6 x 23
##   state st    fips total_vote vote_margin winner party pct_margin r_points
##   <chr> <chr> <dbl>      <dbl>      <dbl> <chr>  <chr>      <dbl>      <dbl>
## 1 Alab~ AL      1    2123372    588708 Trump  Repu~    27.7    27.7
## 2 Alas~ AK      2    318608    46933 Trump  Repu~    14.7    14.7
## 3 Ariz~ AZ      4    2604657    91234 Trump  Repu~     3.5     3.5
## 4 Arka~ AR      5    1130635    304378 Trump  Repu~    26.9    26.9
## 5 Cali~ CA      6   14237884   4269978 Clint~ Demo~    30.0   -30.0
## 6 Colo~ CO      8    2780247   136386 Clint~ Demo~     4.91   -4.91
## # ... with 14 more variables: d_points <dbl>, pct_clinton <dbl>,
## #   pct_trump <dbl>, pct_johnson <dbl>, pct_other <dbl>,
## #   clinton_vote <dbl>, trump_vote <dbl>, johnson_vote <dbl>,
## #   other_vote <dbl>, ev_dem <dbl>, ev_rep <dbl>, ev_oth <dbl>,
## #   census <chr>, color <chr>

statebins_manual(state_data = election,
  state_col = "st",
  color_col = "color",
  text_color = "black",
  font_size = 3,
  legend_title = "Winner",
  labels = c("Trump", "Clinton"),
  legend_position = "right")
```

```
## Warning: `show_guide` has been deprecated. Please use `show.legend`
## instead.
```



Alternatively, use `statebins()` cut the data by the *breaks* argument.

```
statebins(state_data = election,
  state_col = "state",
  value_col = "pct_trump",
  text_color = "white",
  breaks = 4,
  labels = c("4-21", "21-37", "37-53", "53-70"),
  brewer_pal = "Reds",
  font_size = 3,
  legend_title = "Percent Trump")
```

```
## Warning: `show_guide` has been deprecated. Please use `show.legend`
## instead.
```

Percent Trump



4–21



21–37



37–53



53–70

