Statebins

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Part 1: Continuous Data

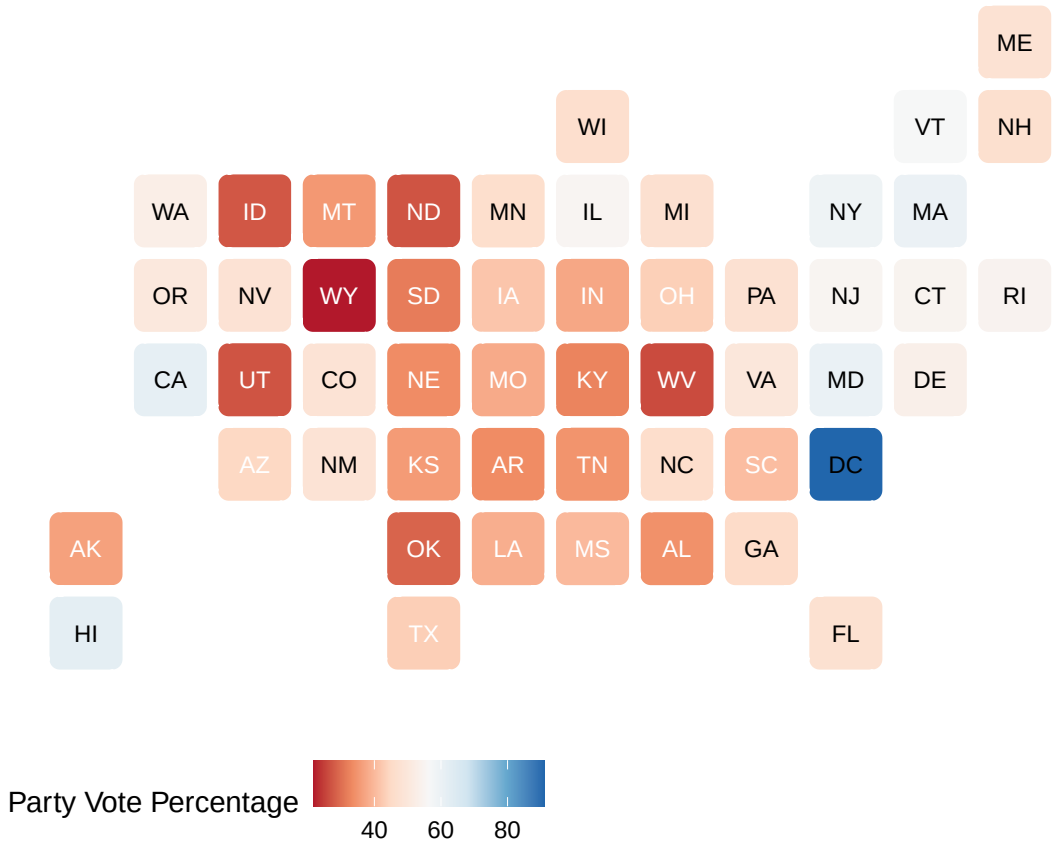
```
data("election")
head(election)
```

```
## # 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 Alabama    AL        1    2123372      588708 Trump  Repu~     0.277     27.7
## 2 Alaska     AK        2     318608       46933 Trump  Repu~     0.147     14.7
## 3 Arizona    AZ        4    2604657       91234 Trump  Repu~     0.035      3.5
## 4 Arkansas   AR        5    1130635      304378 Trump  Repu~     0.269     26.9
## 5 California CA        6   14237893     4269978 Clint~ Demo~     0.300    -30.0
## 6 Colorado   CO        8    2780247      136386 Clint~ Demo~     0.0491    -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>
```

```
theme_set(theme_statebins())

statebins(election,state_col="state",value="pct_clinton",round=TRUE) %>%
  gf_refine(scale_fill_distiller(palette="RdBu",direction=1)) %>%
   gf_labs(fill="Party Vote Percentage",
          title="    DC had the Biggest Percentage of
  Democratic Votes in the 2016 Election")
```

```
## Scale for 'fill' is already present. Adding another scale for 'fill', which
## will replace the existing scale.
```




```
# Adjust missing values
statebins(election,state_col="state",value="pct_clinton",round=TRUE) %>%
  gf_refine(scale_fill_distiller(palette="RdBu",direction=1, na.value="blue",
    limits = c(0,80), breaks=c(0,20,40,60))) %>%
   gf_labs(fill="Party Vote",
          title="    DC had the Biggest Percentage of
  Democratic Votes in the 2016 Election")
```

```
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```
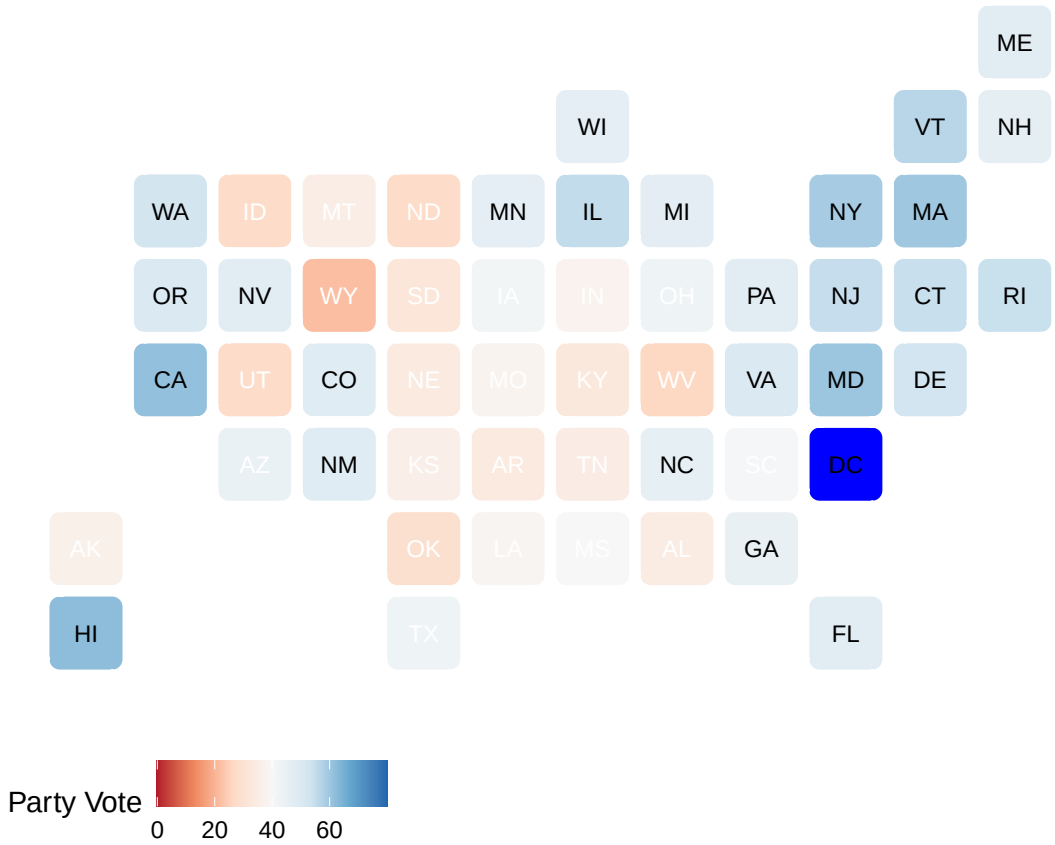
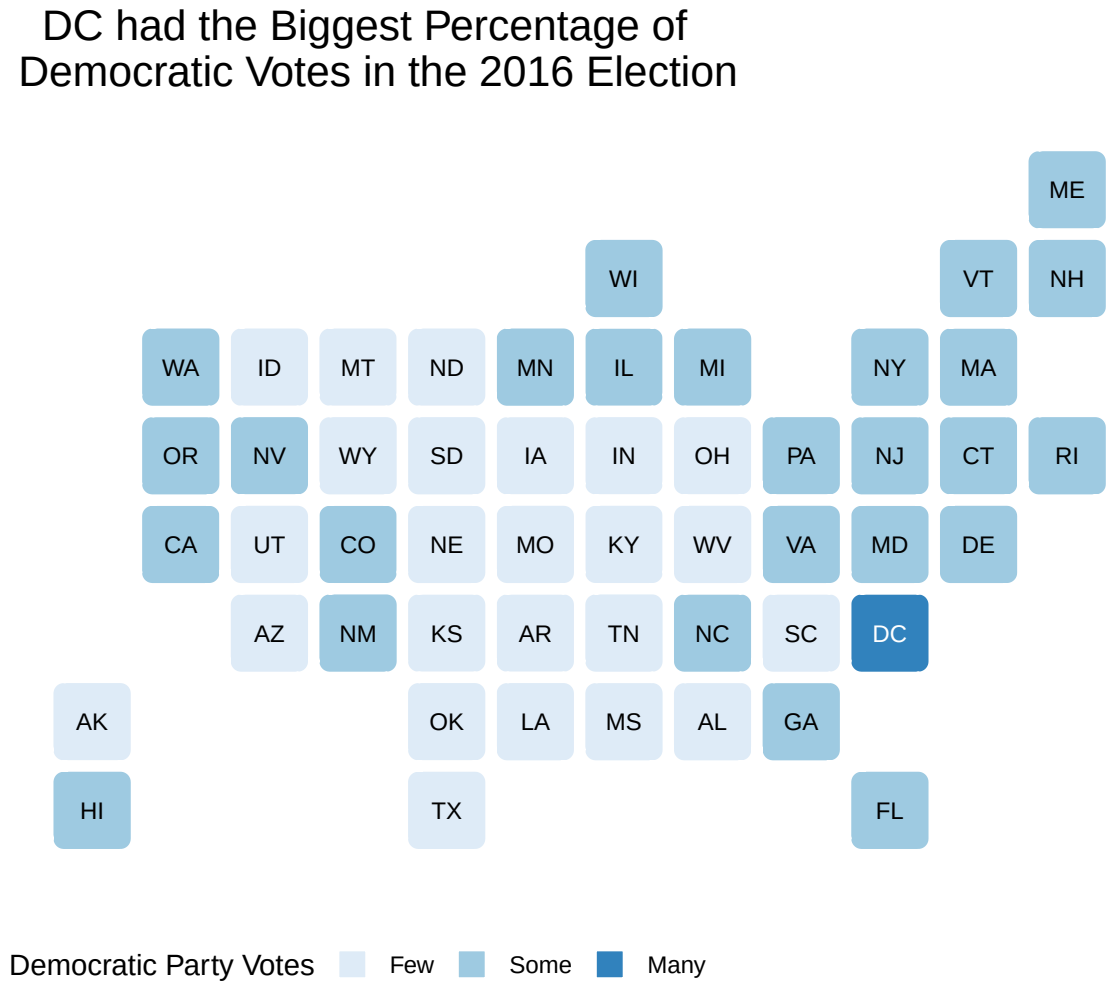




```
# As Categorical
new_election = election %>% mutate(new_pct_clinton = cut(pct_clinton,breaks=3,
  labels = c("Few", "Some", "Many")))

statebins(new_election,state_col="state",value="new_pct_clinton",round=TRUE,
          ggplot2_scale_function = scale_fill_brewer) %>%
  gf_refine(scale_fill_brewer(palette="Blues",direction=1)) %>%
   gf_labs(fill="Democratic Party Votes",
          title="    DC had the Biggest Percentage of
  Democratic Votes in the 2016 Election")
```

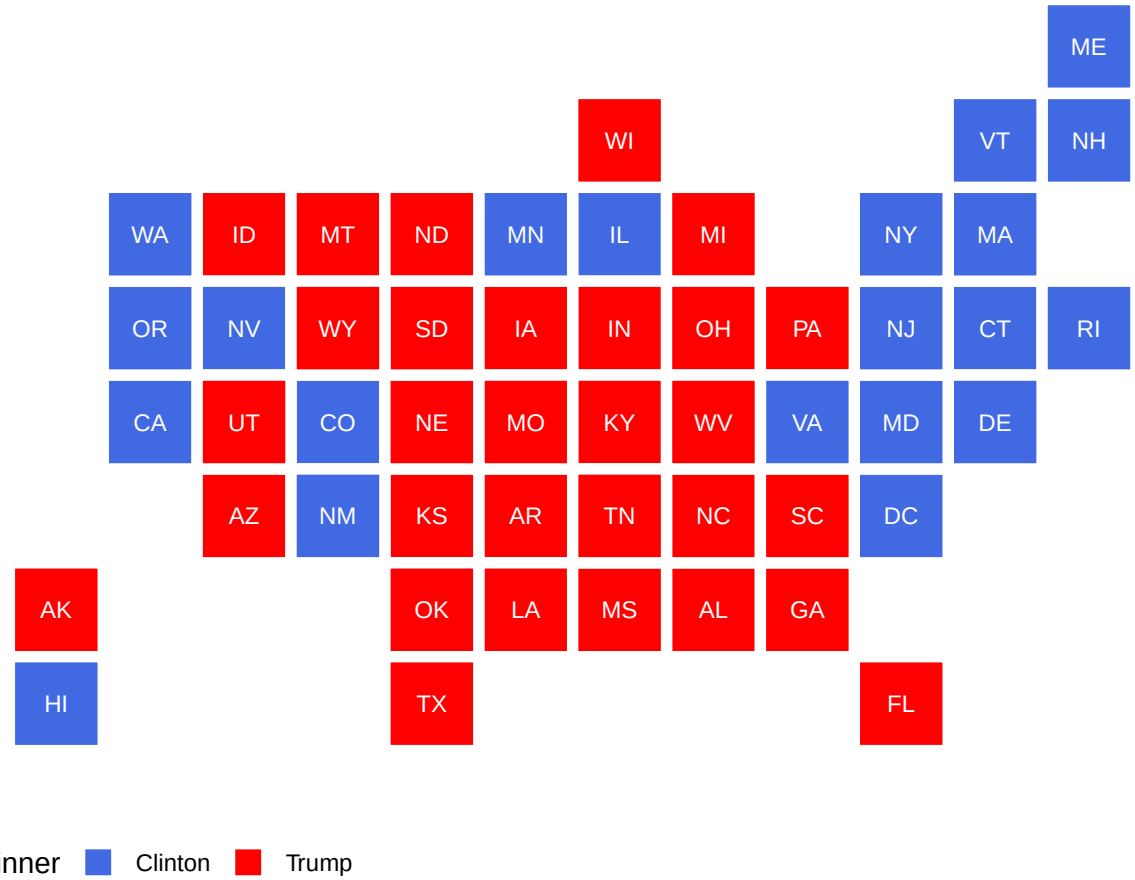
```
## Scale for 'fill' is already present. Adding another scale for 'fill', which
## will replace the existing scale.
```



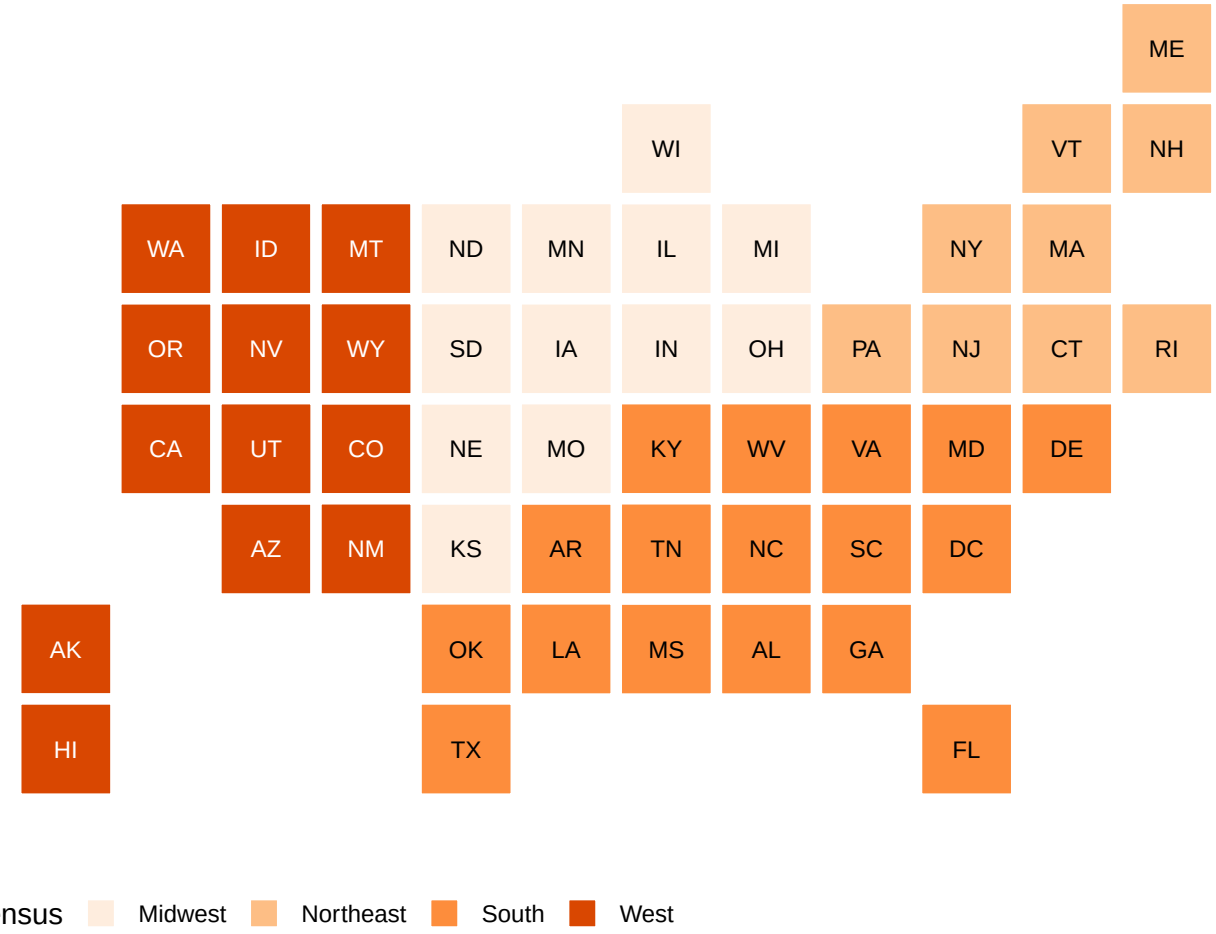
Part 2: Discrete Data

```
statebins(election, state_col="state",value="winner",
          ggplot2_scale_function = scale_fill_manual, values=c("royalblue","red")) %>%
  gf_labs(title="2016 Presidential Election Winners by State",fill="Winner")
```

2016 Presidential Election Winners by State




```
statebins(election, state_col="state",value="census",
          ggplot2_scale_function = scale_fill_brewer, palette = "Oranges")
```



Part 3: Explore PoliSci dataset

```
# Import Dataset
poliSciDataset = read_csv("~/CSVs/PoliSciState.csv")
```

```
## New names:
## * `` -> ...1
```

```
## Rows: 50 Columns: 136
```

```
## -- Column specification --------------------------------------------------------
## Delimiter: ","
## chr  (26): abort_rank3, cig_tax12_3, gun_rank3, obama_win12, pot_policy, rel...
## dbl (110): ...1, abortion_rank12, adv_or_more, ba_or_more, cig_tax12, conser...
```

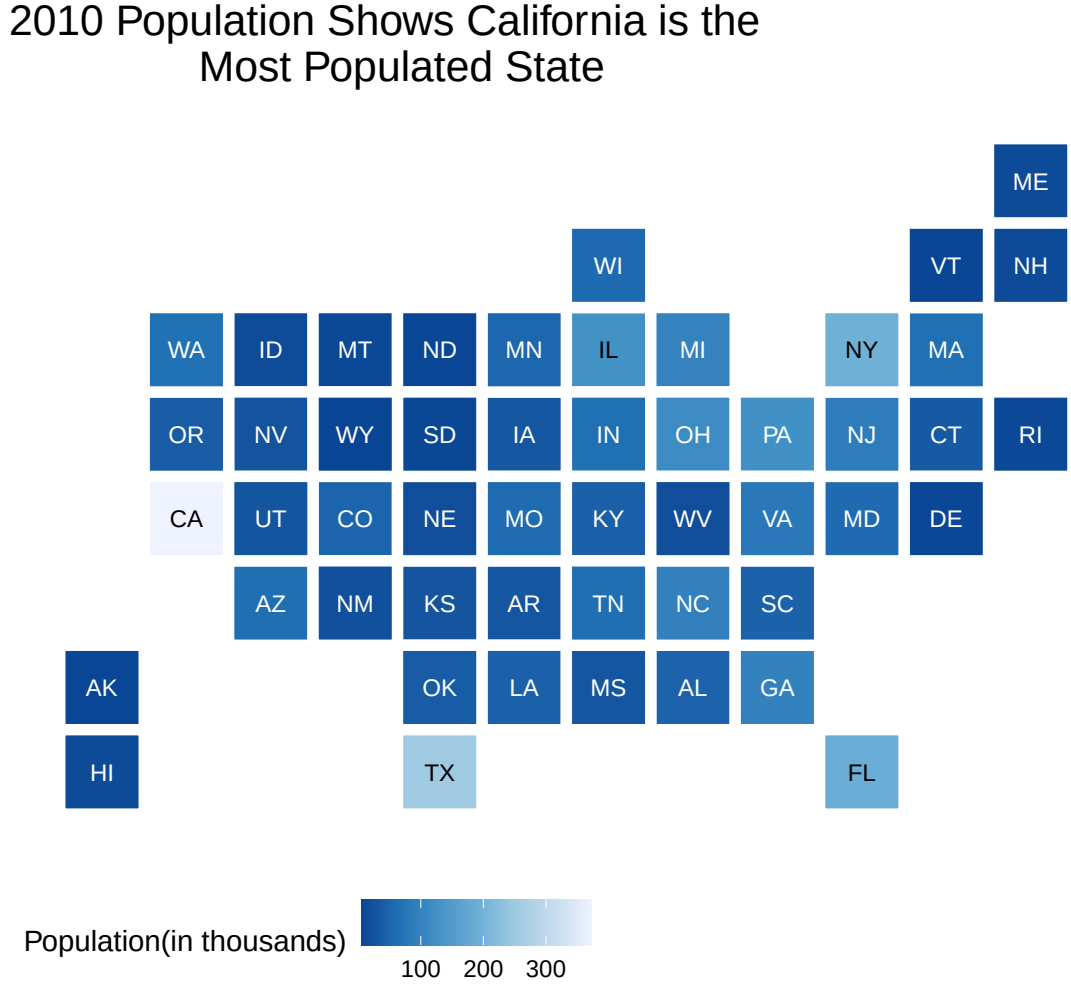
```
##
## i Use `spec()` to retrieve the full column specification for this data.
## i Specify the column types or set `show_col_types = FALSE` to quiet this message.
```

```
# Replace "RhodeIsland" with "Rhode Island" to fix error.
poliSciDataset[poliSciDataset == "RhodeIsland"] <- "Rhode Island"
head(poliSciDataset)
```

```
## # A tibble: 6 x 136
##    ...1 abort_rank3 abortion_rank12 adv_or_more ba_or_more cig_tax12 cig_tax12_3
```

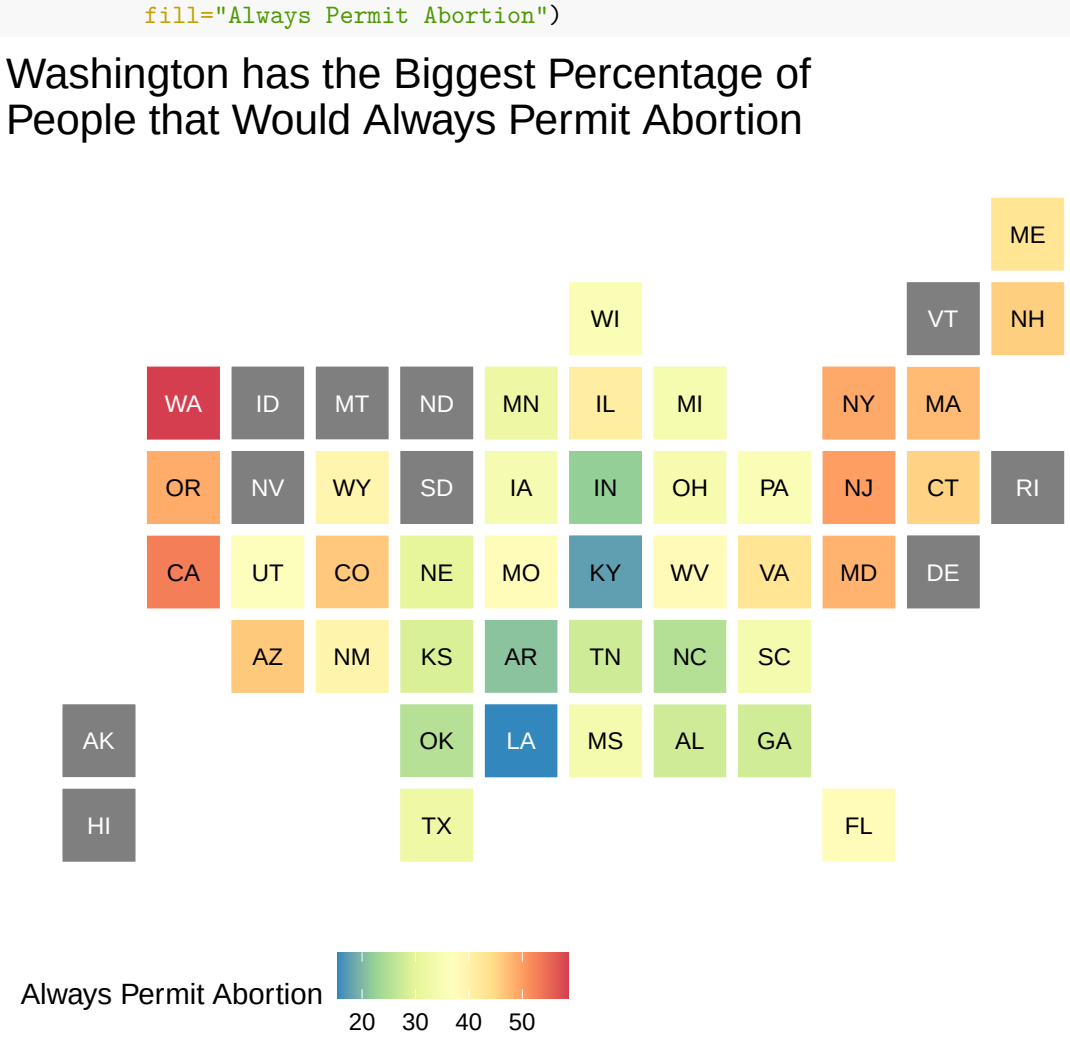
```
##   <dbl> <chr>                <dbl>       <dbl>      <dbl>     <dbl> <chr>
## 1     1 Less restr              35         9         26.6     2     HiTax
## 2     2 Mid                     20         7.7       22       0.425 LoTax
## 3     3 More restr               4         6.1       18.9     1.15  MidTax
## 4     4 More restr               5         9.3       25.6     2     HiTax
## 5     5 Less restr              49        10.7       29.9     0.87  MidTax
## 6     6 Mid                     25        12.7       35.9     0.84  MidTax
## # ... with 129 more variables: conserv_advantage <dbl>, conserv_public <dbl>,
## #   dem_advantage <dbl>, govt_worker <dbl>, gun_rank3 <chr>, gun_rank11 <dbl>,
## #   gun_scale11 <dbl>, hr_cons_rank11 <dbl>, hr_conserv11 <dbl>,
## #   hr_lib_rank11 <dbl>, hr_liberal11 <dbl>, hs_or_more <dbl>, obama2012 <dbl>,
## #   obama_win12 <chr>, pop2000 <dbl>, pop2010 <dbl>, pop2010_hun_thou <dbl>,
## #   popchng0010 <dbl>, popchngpct <dbl>, pot_policy <chr>, prochoice <dbl>,
## #   prolife <dbl>, relig_cath <dbl>, relig_prot <dbl>, relig_high <dbl>, ...
```

```
# Graph 1
statebins(poliSciDataset, state_col="state", value="pop2010_hun_thou") %>%
  gf_labs(title="2010 Population Shows California is the
                 Most Populated State",
          fill="Population(in thousands)")
```



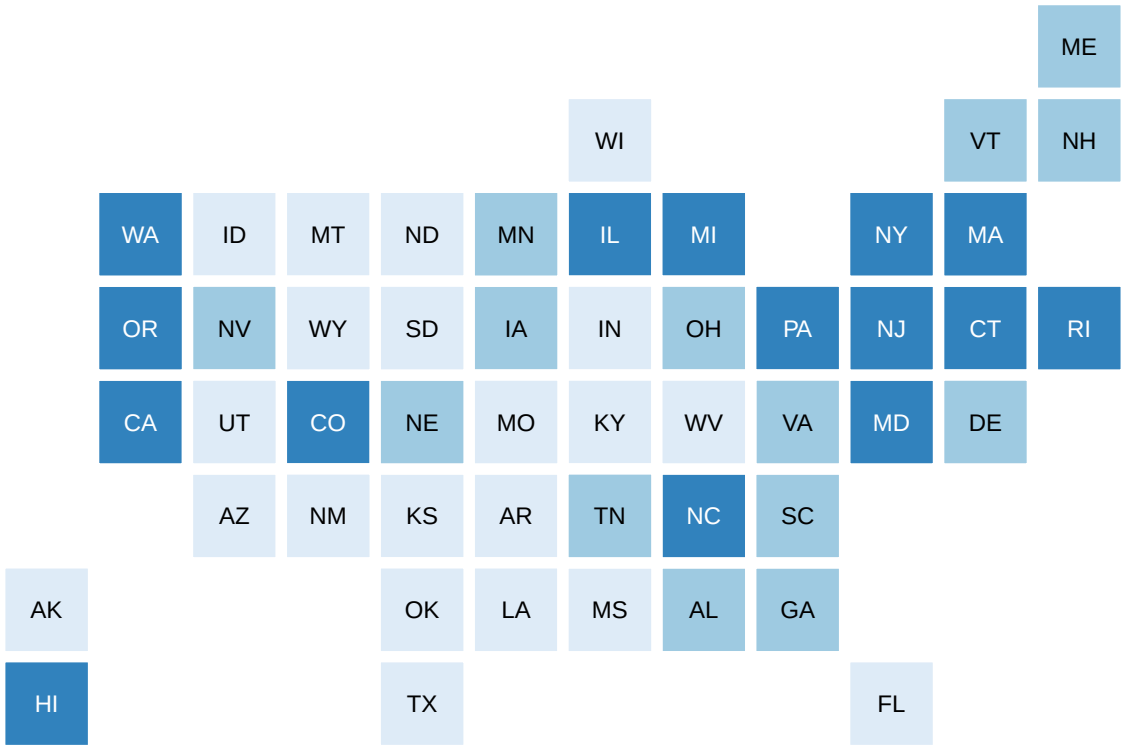

```
# Graph 2
statebins(poliSciDataset, state_col="state", value="permit",
```

```
          ggplot2_scale_function = scale_fill_distiller, palette = "Spectral") %>%
  gf_labs(title="Washington has the Biggest Percentage of
People that Would Always Permit Abortion",
          fill="Always Permit Abortion")
```




```
# Graph 3
statebins(poliSciDataset, state_col="state", value="gun_rank3",
          ggplot2_scale_function = scale_fill_brewer) %>%
  gf_labs(title="US Northeast has the Most Restrictive Gun Laws",
          fill="Gun Ranks")
```

US Northeast has the Most Restrictive Gun Laws




```
# Graph 4
legend_order <- c("Low", "Mid", "High")
poliSciDataset$religiosity3 <- factor(poliSciDataset$religiosity3,
                                      levels = legend_order)


statebins(poliSciDataset, state_col="state", value="religiosity3",
          ggplot2_scale_function = scale_fill_brewer)  %>%
  gf_refine(scale_fill_brewer(palette="RdBu",direction=-1))%>%
  gf_labs(title="People in the US Southwest tend to be more
                          Religious", fill="Religiosity")
```

```
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```

People in the US Southwest tend to be more Religious