static-mini1

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Link To Interactive Plots

```
#examine state levels
unique(us_states$region)
```

```
 [1] "alabama"              "arizona"              "arkansas"
 [4] "california"           "colorado"             "connecticut"
 [7] "delaware"             "district of columbia" "florida"
[10] "georgia"              "idaho"                "illinois"
[13] "indiana"              "iowa"                 "kansas"
[16] "kentucky"             "louisiana"            "maine"
[19] "maryland"             "massachusetts"        "michigan"
[22] "minnesota"            "mississippi"          "missouri"
[25] "montana"              "nebraska"             "nevada"
[28] "new hampshire"        "new jersey"           "new mexico"
[31] "new york"             "north carolina"       "north dakota"
[34] "ohio"                 "oklahoma"             "oregon"
[37] "pennsylvania"         "rhode island"         "south carolina"
[40] "south dakota"         "tennessee"            "texas"
[43] "utah"                 "vermont"              "virginia"
[46] "washington"           "west virginia"        "wisconsin"
[49] "wyoming"
```

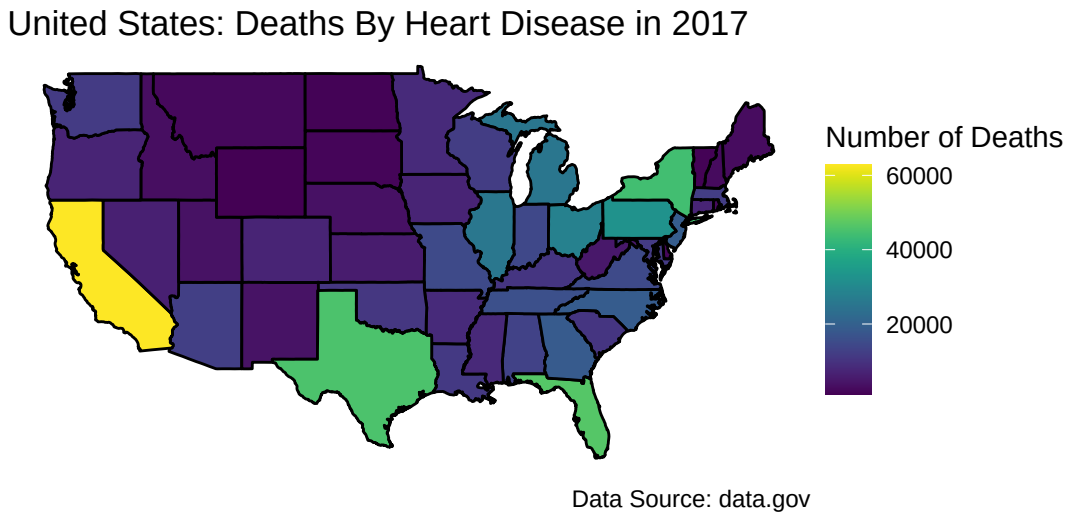
```
unique(death_data$State)
```

```
 [1] "United States"        "Alabama"              "Alaska"
 [4] "Arizona"              "Arkansas"             "California"
 [7] "Colorado"             "Connecticut"          "Delaware"
[10] "District of Columbia" "Florida"              "Georgia"
[13] "Hawaii"               "Idaho"                "Illinois"
```

```
[16] "Indiana"              "Iowa"                 "Kansas"
[19] "Kentucky"             "Louisiana"            "Maine"
[22] "Maryland"             "Massachusetts"        "Michigan"
[25] "Minnesota"            "Mississippi"          "Missouri"
[28] "Montana"              "Nebraska"             "Nevada"
[31] "New Hampshire"        "New Jersey"           "New Mexico"
[34] "New York"             "North Carolina"       "North Dakota"
[37] "Ohio"                 "Oklahoma"             "Oregon"
[40] "Pennsylvania"         "Rhode Island"         "South Carolina"
[43] "South Dakota"         "Tennessee"            "Texas"
[46] "Utah"                 "Vermont"              "Virginia"
[49] "Washington"           "West Virginia"        "Wisconsin"
[52] "Wyoming"
```

```r
#Graph #1: Static with Numeric Value
num_death_data <- death_data |>

  #clean column names and select cols
  clean_names() |>
  select(year, cause_name, state, deaths) |>
  mutate(state = str_to_lower(state)) |>

  #filter -> wanted data to avoid many-to-many issue before join by shrinking dataset down
  filter(!(state %in% c("alaska", "hawaii", "united states"))) |>
  filter(cause_name %in% c("Heart disease"), year == 2017) |>


  #join data from us states into numerical death data set
  right_join(us_states, by = c("state" = "region")) |>
  rename(region = state)

  #plotting data
num_death_data |>
  ggplot(mapping = aes(x = long, y = lat,
                       group = group)) +
  geom_polygon(aes(fill = deaths), color = "black") +
  coord_map() +
  theme_void() +
  scale_fill_viridis() +
  labs(
    title = "United States: Deaths By Heart Disease in 2017",
    fill = "Number of Deaths",
```

```
    caption = "Data Source: data.gov")
```




```
library(tidyverse)
library(maps)
library(viridis)
library(janitor) # r tip of day??
library(leaflet)
library(htmltools)
library(glue)
library(sf)
#data for proj
death_data <- read_csv("~/SDS264_F24/SDS264/Data/death.csv")

#data for map
us_states <- map_data("state")
head(us_states)

#sf
states <- read_sf("https://rstudio.github.io/leaflet/json/us-states.geojson") ②
class(states)                                                                  ③
states
```

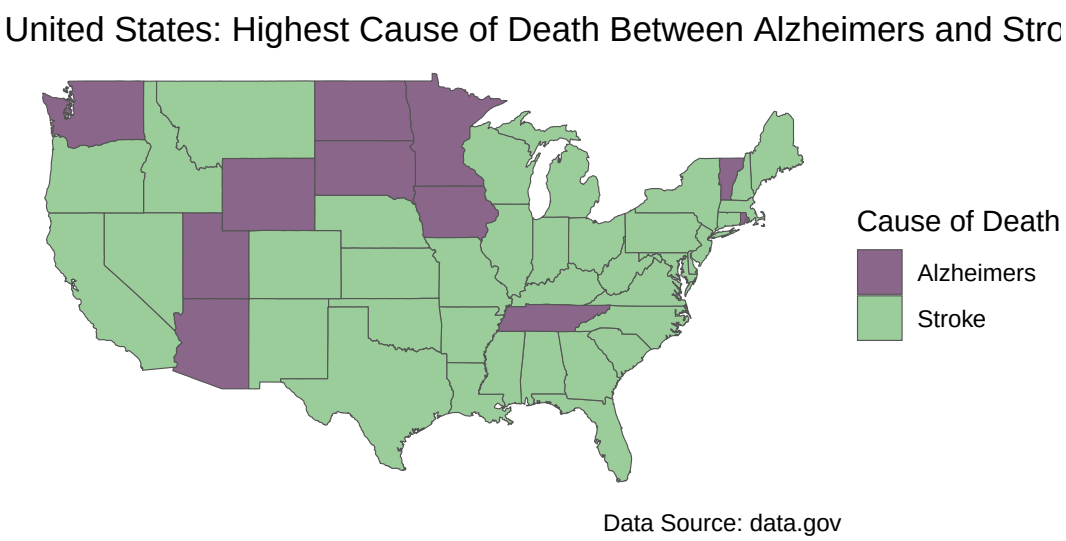
```
       long      lat group order  region subregion
1 -87.46201 30.38968     1     1 alabama      <NA>
2 -87.48493 30.37249     1     2 alabama      <NA>
3 -87.52503 30.37249     1     3 alabama      <NA>
4 -87.53076 30.33239     1     4 alabama      <NA>
5 -87.57087 30.32665     1     5 alabama      <NA>
6 -87.58806 30.32665     1     6 alabama      <NA>
[1] "sf"         "tbl_df"     "tbl"        "data.frame"
Simple feature collection with 52 features and 3 fields
Geometry type: MULTIPOLYGON
Dimension:     XY
Bounding box:  xmin: -188.9049 ymin: 17.92956 xmax: -65.6268 ymax: 71.35163
Geodetic CRS:  WGS 84
# A tibble: 52 x 4
   id    name                 density                                geometry
   <chr> <chr>                  <dbl>                        <MULTIPOLYGON [°]>
 1 01    Alabama                 94.6  (((-87.3593 35.00118, -85.60667 34.98475~
 2 02    Alaska                   1.26 (((-131.602 55.11798, -131.5692 55.28229~
 3 04    Arizona                 57.0  (((-109.0425 37.00026, -109.048 31.33163~
 4 05    Arkansas                56.4  (((-94.47384 36.50186, -90.15254 36.4963~
 5 06    California             242.   (((-123.2333 42.00619, -122.3789 42.0116~
 6 08    Colorado                49.3  (((-107.9197 41.00391, -105.729 40.99843~
 7 09    Connecticut            739.   (((-73.05353 42.03905, -71.79931 42.0226~
 8 10    Delaware               464.   (((-75.41409 39.80446, -75.5072 39.68396~
 9 11    District of Columbia 10065    (((-77.03526 38.99387, -76.90929 38.8952~
10 12    Florida                353.   (((-85.49714 30.99754, -85.00421 31.0030~
# i 42 more rows
```

Description Graph #1:

Alt-Text Graph #1:

```
#Graph #2: Static with categorical value

#Create data set for categorical var
cat_death_data <- death_data |>

  #cleaning col names and selecting cols
  clean_names() |>
  select(year, cause_name, state, deaths) |>
  mutate(state = str_to_lower(state)) |>

  #filtering cols for join
```

```
  filter(!(state %in% c("alaska", "hawaii", "united states"))) |>
  filter(cause_name %in% c("Alzheimer's disease", "Stroke"), year == 2017) |>

  #fixing two rows per state
  pivot_wider(
    names_from = cause_name,
    values_from = deaths
  ) |>

  #get counts and condition for cat var
  clean_names() |>
  count(state, stroke, alzheimers_disease) |>
  mutate(death_type = ifelse(stroke > alzheimers_disease, "S", "A")) |>

  #Join data set to us_states
  right_join(us_states, by = c("state" = "region")) |>
  rename(region = state)

  #plot
  cat_death_data |>
  ggplot(mapping = aes(x = long, y = lat,
                       group = group)) +
  geom_polygon(aes(fill = death_type), color = "gray33", linewidth = 0.2) +
  coord_map() +
  theme_void() +
  scale_fill_manual(values = c("plum4", "darkseagreen3"),
                    labels = c("Alzheimers", "Stroke")) +
  labs(fill = "Cause of Death",
       title = "United States: Highest Cause of Death Between Alzheimers and Stroke in 2017"
       caption = "Data Source: data.gov")
```



Description #2: