Mapping

Jeff Hoover

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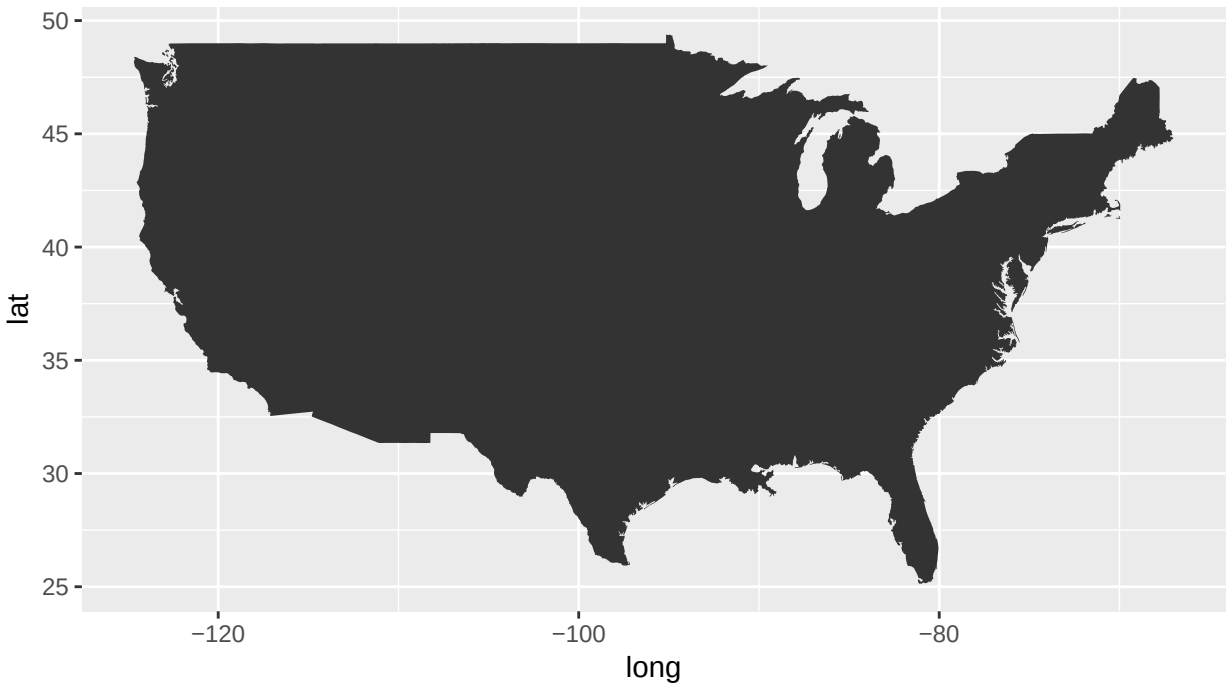
Contents

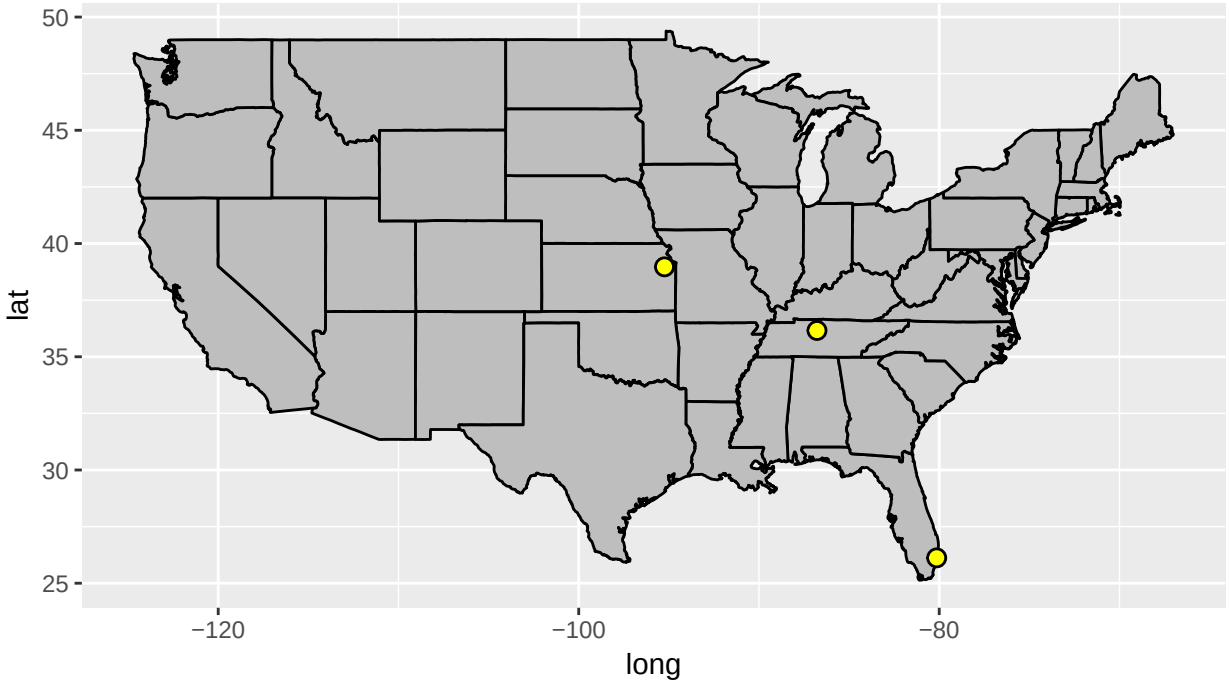
```
library(stringr)
library(maps)
library(mapdata)
library(ggmap)
```

```
## Loading required package: ggplot2
```

```
library(knitr)

#get US data
usa <- map_data("usa")

#graph US
ggplot() +
  geom_polygon(data = usa, aes(x = long, y = lat, group = group)) +
  coord_quickmap()
```



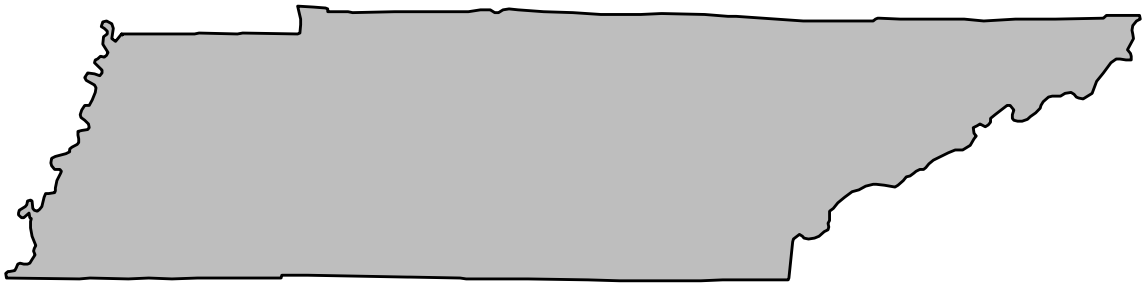
```r
#get states data
states <- map_data("state")

#Specify cities to be marked
labs <- data.frame(long = c(-86.78, -80.14, -95.24),
                   lat = c(36.16, 26.12, 38.97),
                   names = c("Nashville", "Fort Lauderdale", "Lawrence"),
                   stringsAsFactors = FALSE)

#graph grayscale US map with 3 cities identified
ggplot(data = states) +
  geom_polygon(aes(x = long, y = lat, group = group),
               fill = "gray", color = "black") +
  coord_quickmap() +
  guides(fill = FALSE) +
  geom_point(data = labs, aes(x = long, y = lat), color = "black", size = 3) +
  geom_point(data = labs, aes(x = long, y = lat), color = "yellow", size = 2)
```




```r
#getting county data
counties <- map_data("county")

#Tennessee
tn_county <- subset(counties, region == "tennessee")
tn <- subset(states, region == "tennessee")

#creating TN map
```

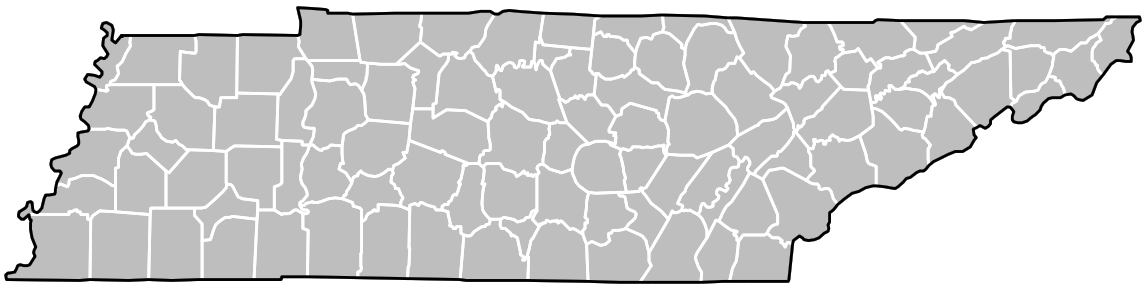
```r
tn_base <- ggplot(data = tn, mapping = aes(x = long, y = lat, group = group)) +
  coord_quickmap() +
  geom_polygon(color = "black", fill = "gray")

tn_base +
  theme_nothing()
```

```
## Warning: `panel.margin` is deprecated. Please use `panel.spacing` property
## instead
```



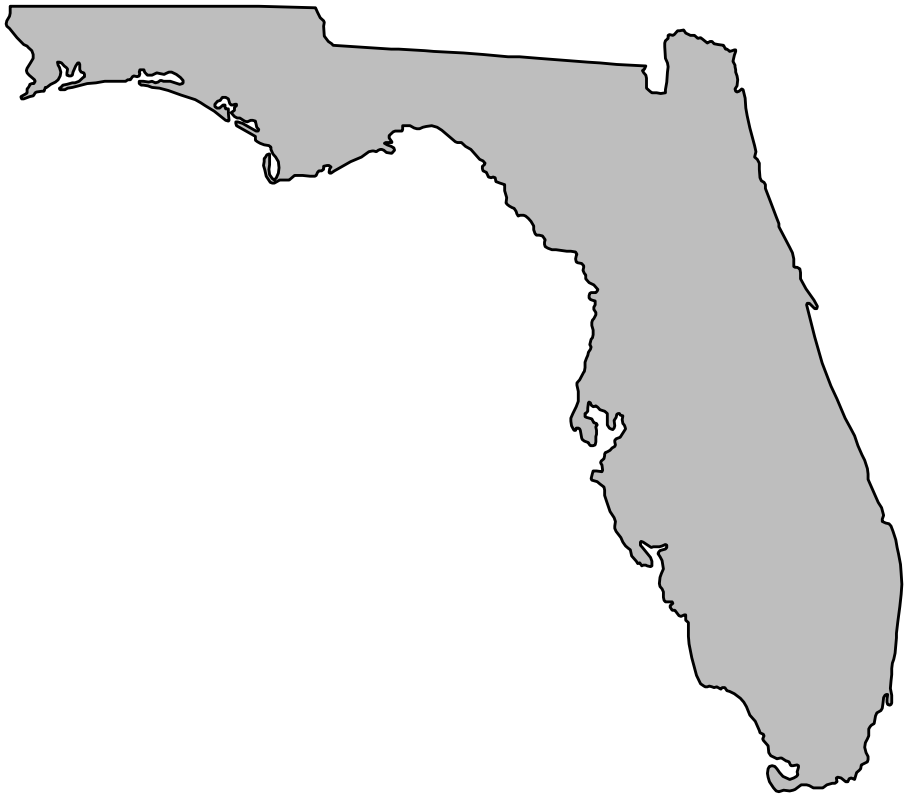
```r
#creating TN county map
tn_base +
  theme_nothing() +
  geom_polygon(data = tn_county, fill = NA, color = "white") +
  geom_polygon(color = "black", fill = NA)
```

```
## Warning: `panel.margin` is deprecated. Please use `panel.spacing` property
## instead
```



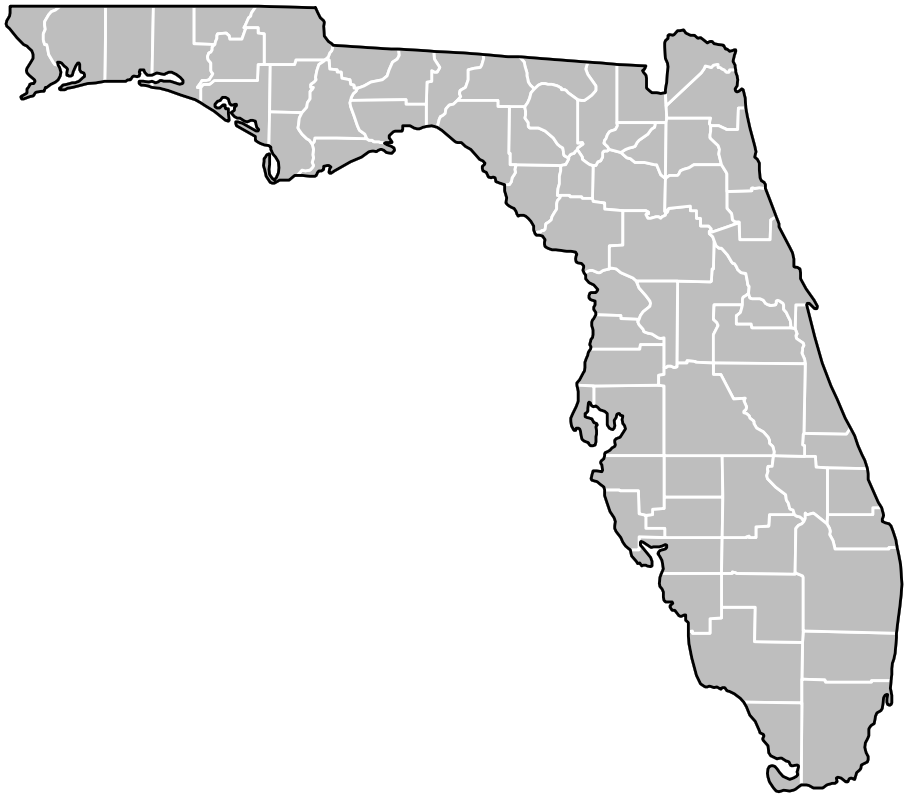
```
#subset of Florida data
fl <- subset(states, region == "florida")
fl_county <- subset(counties, region == "florida")

#creating Florida map
fl_base <- ggplot(data = fl, mapping = aes(x = long, y = lat, group = group)) +
  coord_quickmap() +
  geom_polygon(color = "black", fill = "gray")

fl_base +
  theme_nothing()
```

```
## Warning: `panel.margin` is deprecated. Please use `panel.spacing` property
## instead
```

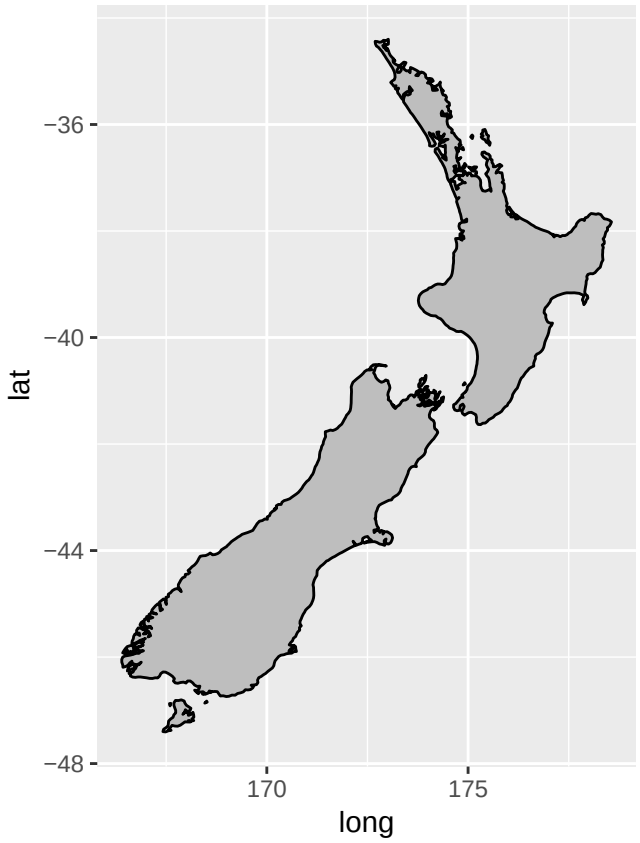


```
#creating Florida map with counties
fl_base +
  theme_nothing() +
  geom_polygon(data = fl_county, fill = "gray", color = "white") +
  geom_polygon(fill = NA, color = "black")
```

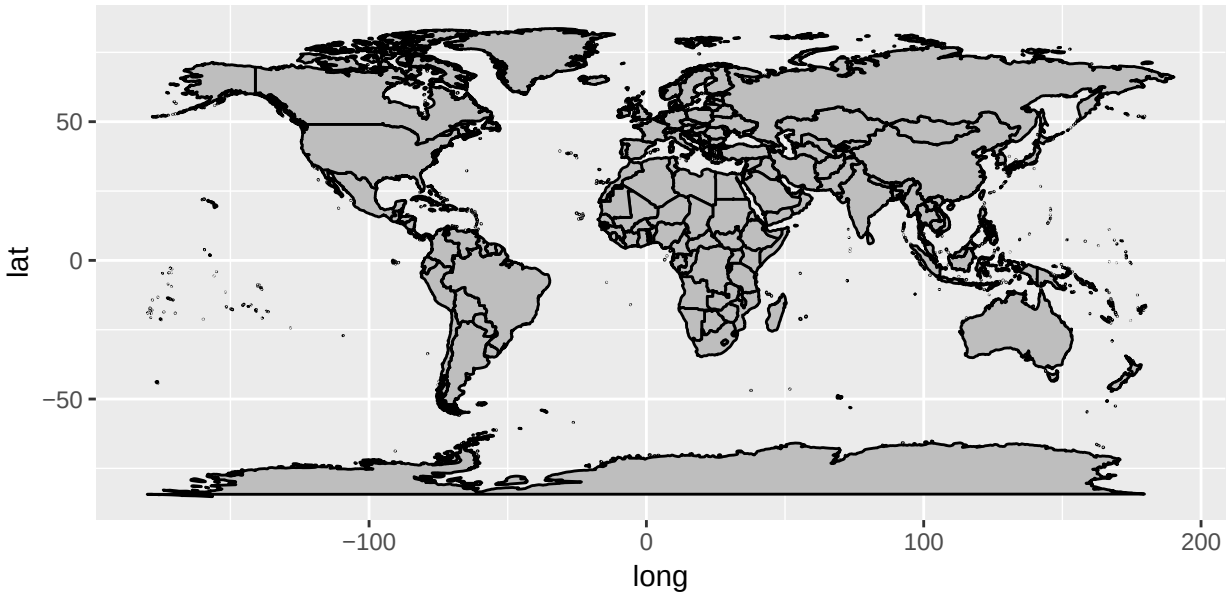
```
## Warning: `panel.margin` is deprecated. Please use `panel.spacing` property
## instead
```



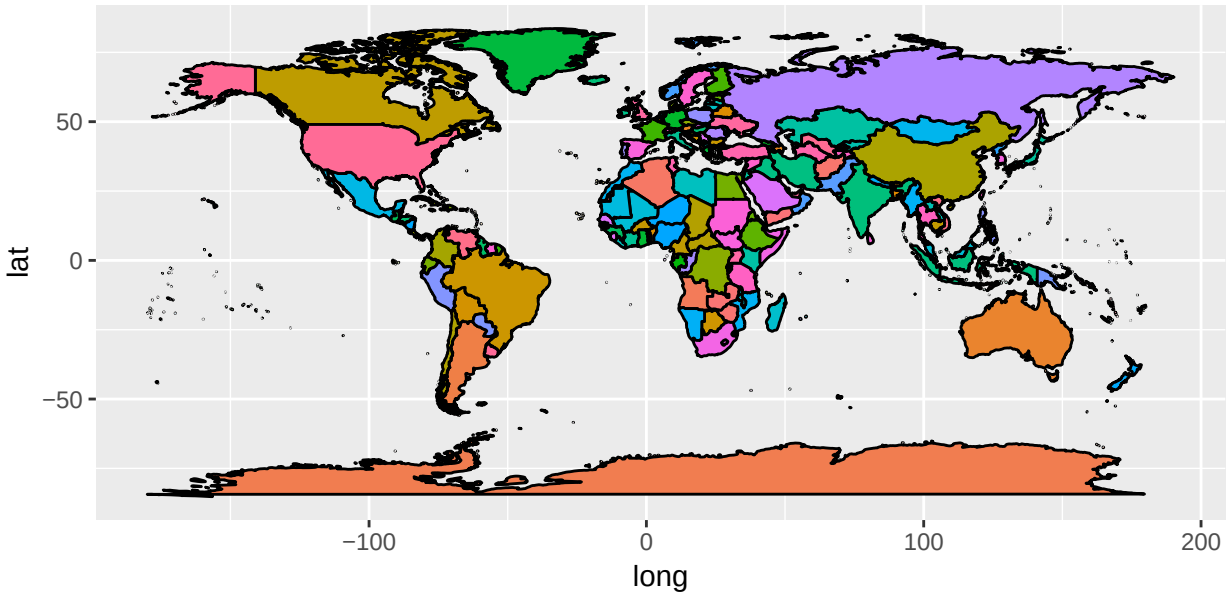
```
#graph new zealand
nz <- map_data("nz")
ggplot(data = nz, aes(long, lat, group = group)) +
  coord_quickmap() +
  geom_polygon(color = "black", fill = "gray")
```




```
#get world map data
map.world <- map_data("world")

#grayscale map
ggplot(data = map.world, mapping = aes(x = long, y = lat, group = group)) +
  coord_quickmap() +
  geom_polygon(color = "black", fill = "gray")
```




```
#color map
ggplot(data = map.world) +
  coord_quickmap() +
  geom_polygon(aes(x =long, y=lat, fill=region, group = group), color = "black") +
  guides(fill = FALSE)
```


50
0
−50
lat
−100
0
100
200
long