

Homework 6

Name: Put your name here

I worked with:

Click the “Knit” button in RStudio to knit this file to a pdf.

Problem 1: Crimes

Scrape the table of data found at https://en.wikipedia.org/wiki/List_of_United_States_cities_by_crime_rate and create a plot showing property crime rate (total property crime) vs. violent crime rate (total violent crime). Identify outlier cities by using a plotting command similar to the one below. (Don't blindly use this without thinking about the column names.)

```
> ggplot(crimes, aes(x = violent_crime, y = property_crime, label = city)) +  
+   geom_point() +  
+   geom_text(  
+     data = filter(crimes, violent_crime > 1500 | property_crime > 6500),  
+     check_overlap = TRUE, size = 2.5, nudge_y = 40  
+   )
```

Problem 2: Movie scraping

```
> url <- "https://www.boxofficemojo.com/chart/ww_top_lifetime_gross/?offset=0&area=XWW"
```

a.

answer:

```
> # put your code here
```

b.

answer: write your answer here

```
> # put your code here
```

c.

answer:

```
> # put your code here
```

d.

answer: write your answer here

```
> # put your code here
```

e.

```
> temp_url <- "https://www.boxofficemojo.com/chart/ww_top_lifetime_gross/?offset=#&area=XWW"
```

answer:

```
> # put your code here
```

f.

answer:

```
> # put your code here
```

Problem 3: Penguins

```
> library(shiny)
> ui <- fluidPage(
+   plotOutput("plot", height = 500)
+ )
>
> server <- function(input, output){
+   output$plot <- renderPlot({
+     g <- ggplot(penguins, aes(x = bill_length_mm, y = body_mass_g))
+     g + geom_point()
+   })
+ }
>
> # you can modify the height to avoid scrolling
> shinyApp(ui, server, options = list(height = 600))
```

Error: object 'penguins' not found

a.

answer:

b.

answer:

c.

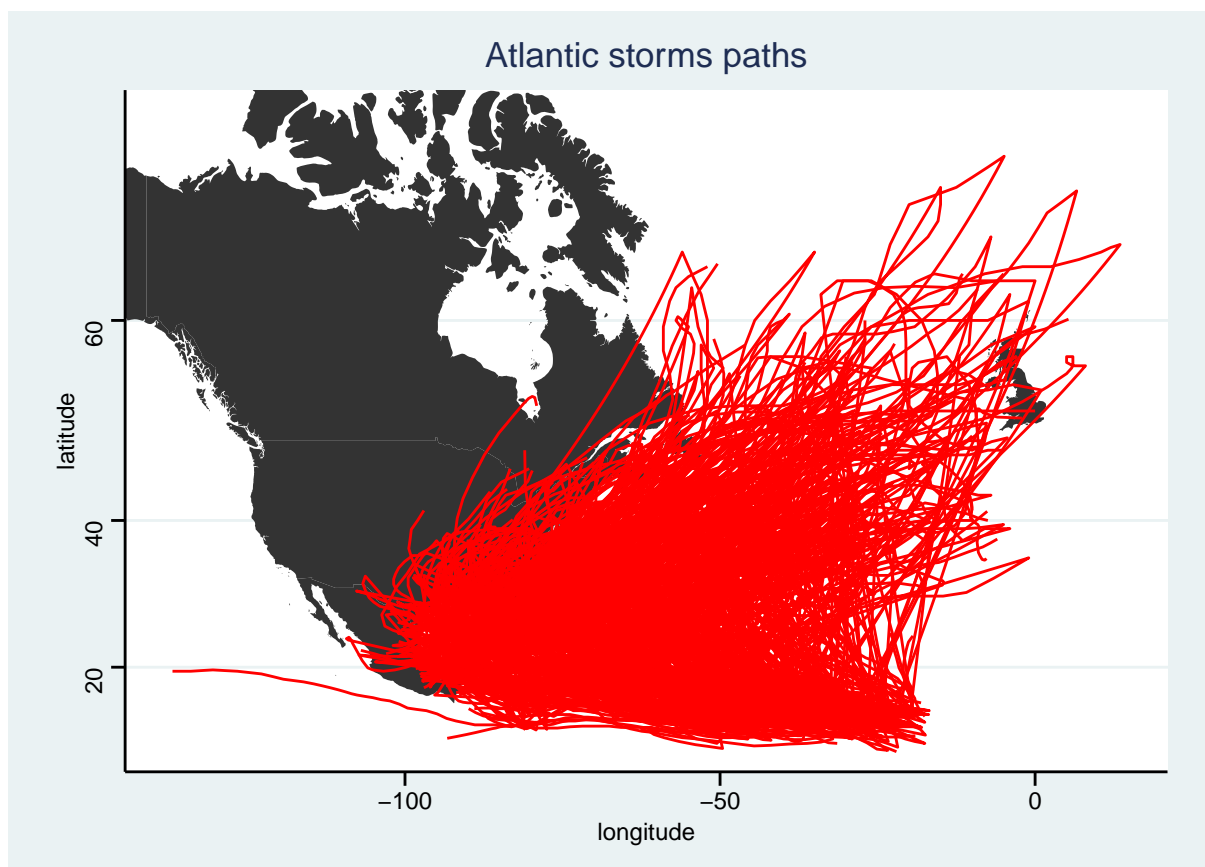
answer:

d.

answer:

Problem 4: Storm paths

```
> ctry <- map_data("world",
+                 region = c(
+                   "usa",
+                   "mexico",
+                   "canada",
+                   "uk"
+                 ))
> base_map <- ggplot(ctry) +
+   geom_polygon(aes(x = long, y = lat, group = group)) +
+   labs(
+     x = "longitude",
+     y = "latitude",
+     title = "Atlantic storms paths"
+   )
>
> base_map +
+   geom_path(data = storms, aes(x = long, y = lat, group = name), color = "red") +
+   coord_map(xlim = c(min(storms$long), max(storms$long)),
+             ylim = c(min(storms$lat), max(storms$lat)))
```



a.

answer:

b.

answer: