Mini Project 4

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I chose to explore where arson charges happened in Minneapolis. So I put the area of Minneapolis on the map and then placed the arson events on that map. I don't think this solves anything though, besides being a cool and fun graphic!

```
library(tidyverse)
```

```
── Attaching core tidyverse packages ──────────────────────── tidyverse 2.0.0 ──
✓ dplyr     1.1.3     ✓ readr     2.1.4
✓ forcats   1.0.0     ✓ stringr   1.5.0
✓ ggplot2   3.4.3     ✓ tibble    3.2.1
✓ lubridate 1.9.2     ✓ tidyr     1.3.0
✓ purrr     1.0.2
── Conflicts ────────────────────────────────────────── tidyverse_conflicts() ──
✖ dplyr::filter() masks stats::filter()
✖ dplyr::lag()    masks stats::lag()
ℹ Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become
errors
```

```
library(sf)     # R wrapper around GDAL/OGR
```

```
Linking to GEOS 3.11.2, GDAL 3.6.2, PROJ 9.2.0; sf_use_s2() is TRUE
```

```
library(leaflet)    # for fortifying shapefiles
```

```
Warning: package 'leaflet' was built under R version 4.3.2
```

```
library(leaflet.extras)   # For leaflet heatmaps
```

```
Warning: package 'leaflet.extras' was built under R version 4.3.2
```

```
library(ggmap)   # Making google maps
```

```
ℹ Google's Terms of Service: <https://mapsplatform.google.com>
ℹ Please cite ggmap if you use it! Use `citation("ggmap")` for details.
```

```
city_boundry <- st_read(dsn = "~/DST 234 Files/City_Boundary-shp", layer = "16cdbbfa-ad10-493c-af
```

```
Reading layer `16cdbbfa-ad10-493c-afaf-52b61f2e76e42020329-1-180h9ap.whbo' from data source
`C:\Users\kramb\Documents\DST 234 Files\City_Boundary-shp'
  using driver `ESRI Shapefile'
```

```
Simple feature collection with 1 feature and 4 fields
Geometry type: POLYGON
Dimension:     XY
Bounding box:  xmin: -93.32911 ymin: 44.89059 xmax: -93.19433 ymax: 45.05125
Geodetic CRS:  WGS 84
```

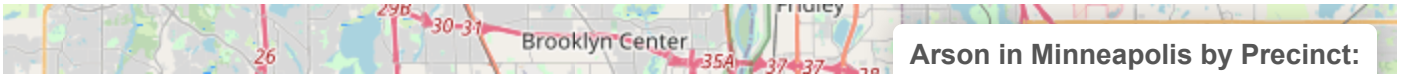
```
police_data <- mn_1937 <- st_read(dsn = "~/DST 234 Files/Police_Incidents_2023", layer = "Police_
```

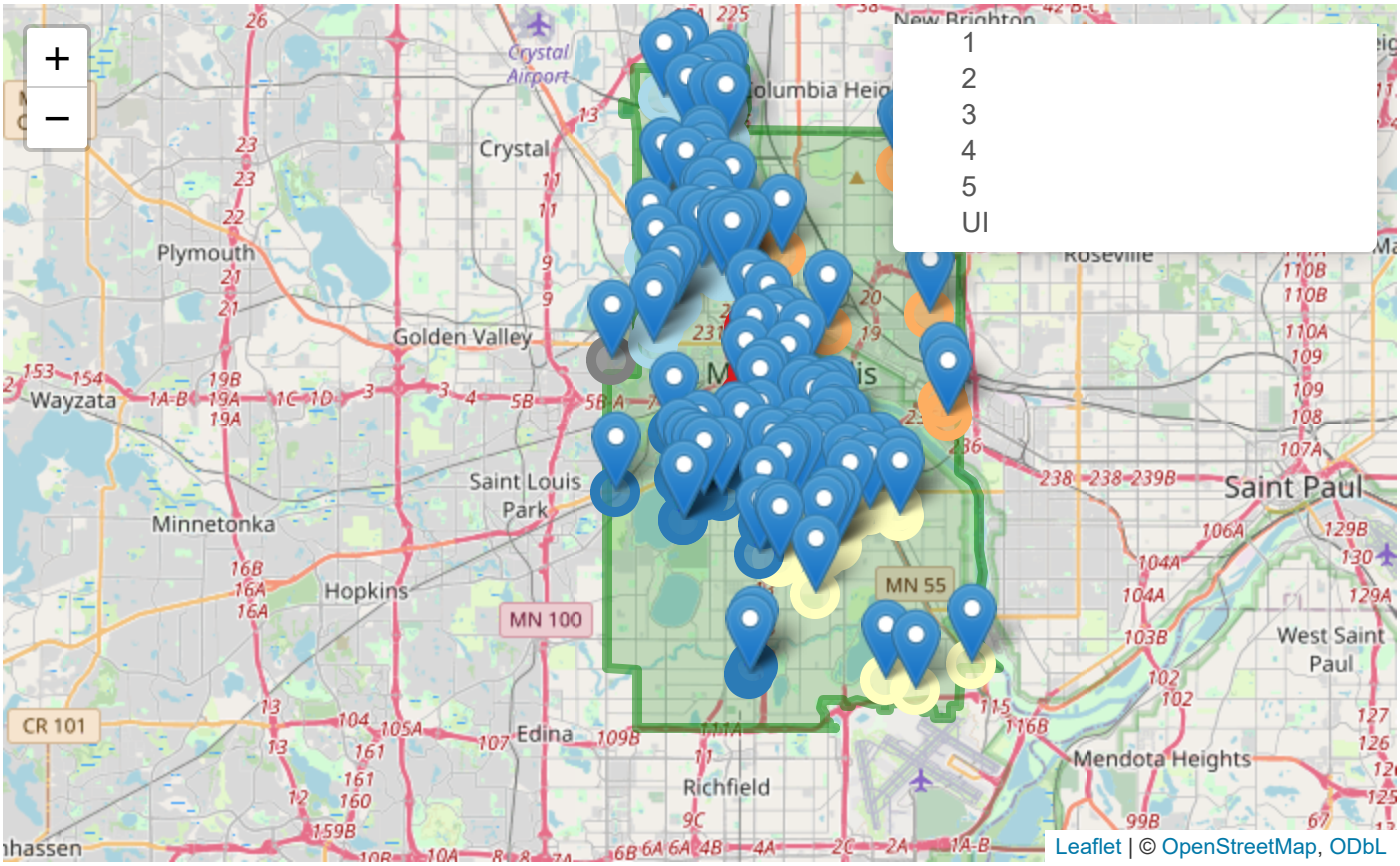
```
Reading layer `Police_Incidents_2023' from data source
  `C:\Users\kramb\Documents\DST 234 Files\Police_Incidents_2023'
  using driver `ESRI Shapefile'
Simple feature collection with 22841 features and 21 fields
Geometry type: POINT
Dimension:     XY
Bounding box:  xmin: -93.32911 ymin: 44.89063 xmax: -93.19915 ymax: 45.05112
Geodetic CRS:  WGS 84
```

```
police_data <- police_data |>
  filter(offense == "ARSON")

police_pal <-colorFactor(palette = "RdYlBu",
                         domain = c(1,2,3,4,5)
)
#glimpse(police_data)

police_map <- police_data |>
  leaflet() |>
  addTiles() |>
  addPolygons(data=city_boundry,weight=5,color = "green") |>
  addMarkers(lng = ~centerLong, lat = ~centerLat)|>
  addCircleMarkers(lng = ~centerLong, lat = ~centerLat, color = ~police_pal(precinct), fillColor =
  addLegend(pal = police_pal,
            values = ~precinct,
            opacity = 0.6, title = "Arson in Minneapolis by Precinct:")
```

```
Warning in police_pal(precinct): Some values were outside the color scale and
will be treated as NA

Warning in police_pal(precinct): Some values were outside the color scale and
will be treated as NA

Warning in pal(v): Some values were outside the color scale and will be treated
as NA
```

```
police_map
```




1
2
3
4
5
UI
Crystal
Plymouth
Golden Valley
Wayzata
Minnetonka
Saint Louis Park
Hopkins
Edina
Richfield
Saint Paul
West Saint Paul
Mendota Heights
MN 55
MN 100
CR 101
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