Homework_5_R

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```
library(tidyverse)
library(stringr)
library(purrr)
library(broom)
library(scales)
library(ggthemes)
library(sf)
library(tigris)
library(lubridate)
library(flexdashboard)
library(shiny)
library(jsonlite)
library(maptools)
library(leaflet)
library(plotly)
library(DT)
library(viridis)
library(rgdal)

homicides <- read_csv("https://raw.githubusercontent.com/washingtonpost/data-homicides/master/homicide-

homicides <- homicides %>%
  unite(city_name, city, state, sep = ", ")

homicides %>%
  group_by(city_name) %>%
  summarize(total = n()) %>%
  arrange(desc(total)) %>%
  slice(-51)
```

```
## # A tibble: 50 x 2
##    city_name        total
##    <chr>            <int>
##  1 Chicago, IL       5535
##  2 Philadelphia, PA  3037
##  3 Houston, TX       2942
##  4 Baltimore, MD     2827
##  5 Detroit, MI       2519
##  6 Los Angeles, CA   2257
##  7 St. Louis, MO     1677
##  8 Dallas, TX        1567
##  9 Memphis, TN       1514
## 10 New Orleans, LA   1434
```

```
## # ... with 40 more rows
```

```
## This was how I decided which city I wanted to use

dc_homicides <- homicides %>%
  filter(city_name == "Washington, DC") %>%
  mutate(reported_date = ymd(reported_date))
```

```
dc_districts <- state_legislative_districts(state = "DC", cb = TRUE, class = "sf")
```

```
##   |                                                                              |
```

```
unique(dc_homicides$victim_race)
```

```
## [1] "Black"    "Hispanic" "White"    "Asian"    "Other"
```

```
dc_race <- dc_homicides %>%
  mutate(unsolved = disposition != "Closed by arrest") %>%
  group_by(victim_race) %>%
  arrange(desc(victim_race)) %>%
  mutate(victim_race = fct_lump(victim_race)) %>%
  filter(!victim_race == c("Other", "Asian")) %>%
  ungroup() %>%
  slice(-c(43:45),
        -c(1328:1334))

dc_race$unsolved <- as.numeric(dc_race$unsolved)
```

```
EPSG <- make_EPSG()

dc_race_crs <- st_as_sf(dc_race, coords = c("lon", "lat")) %>%
  st_set_crs(2248)

dc_districts_crs <- st_as_sf(dc_districts, coords = c("lon", "lat")) %>%
  st_set_crs(2248)

unsolved_names <- c(`0` = "Solved", `1` = "Unsolved")

ggplot() +
  geom_sf(data = dc_districts_crs, fill = "gray87", color = "gray57",
          alpha = 0.5) +
  geom_sf(data = dc_race_crs, aes(color = victim_race),
          size = 1.5, alpha = 0.5) +
  facet_wrap(~ unsolved, labeller = labeller(.cols = unsolved_names)) +
  ggtitle("Locations of Homicides in DC by Race and Solved Status") +
  guides(color = guide_legend(title = "Victim Race")) +
  scale_color_manual(values = c("Black" = "dodgerblue4", "Hispanic" = "deeppink2",
                                "White" = "darkorchid1")) +
  theme_map()
```

Locations of Homicides in DC by Race and Solved Status