Homework 5

Melea Barahona

2023-11-29

```
library(ggplot2)
library(tidyverse)
```

```
## -- Attaching core tidyverse packages ------------------------ tidyverse 2.0.0 --
## v dplyr     1.1.3     v readr     2.1.4
## v forcats   1.0.0     v stringr   1.5.0
## v lubridate 1.9.3     v tibble    3.2.1
## v purrr     1.0.2     v tidyr     1.3.0
## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

```
homicides <-read.csv("/Users/meleabarahona/Library/CloudStorage/OneDrive-Colostate/Second Year 2023-2024

library(lubridate)
homicides$reported_date <- ymd(homicides$reported_date)
```

```
## Warning: 2 failed to parse.
```

```
homicides_MD <- homicides %>%
  filter(city == "Baltimore")

homicides_MD <- homicides_MD %>%
  mutate(Season = ifelse(month(reported_date) %in% c(5:10, 11:4), "Summer", "Winter"))

library(stringr)

homicides_MD <- homicides_MD %>%
  separate(reported_date, c("Year", "Month", "Day"), sep = "-")


Freddie_grey <- homicides_MD %>%
  filter(victim_first == "FREDDIE CARLOS")

homicides_counts <- homicides_MD %>%
  group_by(Month, Year, Season) %>%
  count() %>%
  ungroup()

homicides_counts <- homicides_counts %>%
  mutate(month_year = paste(Month, Year, 01, sep = "-"))

homicides_counts$month_year <- myd(homicides_counts$month_year)
```

```r
colors <- c("gray", "cadetblue1")
names(colors) <- c("Summer", "Winter")

colors
```

```
##       Summer       Winter
##       "gray" "cadetblue1"
```

```r
graph <- homicides_counts %>%
  ggplot() +
  geom_bar(aes(x = month_year, y = n, fill = Season), stat = "identity") +
  scale_fill_manual(values = colors) +
  geom_smooth(span = 0.25, se = FALSE, (aes(month_year, n))) +
  geom_vline(xintercept = ymd("2015-04-12"), linetype = "dashed", color = "red") +
  geom_text(x = ymd("2015-04-12"), y = 40, label = "Death of \n Freddie Grey", hjust = 1.08, color = "wh
  ggtitle("Homicides in Baltimore, MD") +
  labs(x = "Dates",
       y = "Monthly Homicides") +
  theme_dark()

print(graph, height = 2, width = 1000)
```

```
## `geom_smooth()` using method = 'loess' and formula = 'y ~ x'
```