Homework_5

Molly Hischke

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Read in Homicide Data

```
library(readr)
library(dplyr)
homicides <- read_csv("../data/homicide-data.csv")

homicides <- homicides %>%
  mutate(city_name = paste(city, state, sep = ", "))
```

Cleaning the data

```
library(tidyr)
library(forcats)
library(lubridate)


baltimore_homicides <- homicides %>%
  filter(city_name == "Baltimore, MD") %>%
  mutate(reported_date = ymd(reported_date)) %>%
  mutate(month_data = month(reported_date),
         year_data = year(reported_date)) %>%
  group_by(month_data, year_data) %>%
  summarize(total = n()) %>%
  mutate(date = paste(month_data, year_data, sep = "-15-"),
         date = mdy(date)) %>%
  mutate(colder_vs_warmer_months = month(date) %in% c("11", "12", "1",
                                                      "2", "3", "4"),
         colder_vs_warmer_months = factor(colder_vs_warmer_months,
                                          levels = c(FALSE, TRUE),
                                          labels = c("Summer", "Winter")))
```

Homicides in Baltimore, MD Graph

```
library(ggplot2)

baltimore_homicides %>%
  ggplot(aes(x = date, y = total)) +
  geom_col(aes(fill = colder_vs_warmer_months)) +
  geom_vline(xintercept = ymd("2015-4-12"), color = "red", linetype = 2,
             size = 1.3) +
  geom_text(aes(x = ymd("2015-4-12"), label = "Arrest of \nFreddie Gray",
```

```
              y = 40), colour = "gray80", hjust = "right") +
geom_smooth(span = 0.1 , se = FALSE) +
labs(x = "Date",
     y = "Monthly homicides",
     title = "Homicides in Baltimore, MD",
     fill = "") +
scale_fill_manual(values = c("gray80", "lightblue")) +
theme_dark() +
theme(legend.position = "bottom")
```