

535 Homework 5

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Baltimore Homicides

```
library(tidyverse)
library(lubridate)
library(dplyr)
library(scales)
library(ggthemes)
library(readr)
```

```
homicides <- read_csv("homicide-data.csv")
homicides <- homicides %>%
  unite("city_name", c("city", "state"), sep = ", ", remove = FALSE)
```

```
Baltimore <- homicides %>%
  filter(city == "Baltimore") %>%
  mutate(date = ymd(reported_date)) %>%
  mutate(month = ym(paste0(year(date), month(date)))) %>%
  group_by(month) %>%
  summarise(count = n()) %>%
  ungroup()
```

```
fig_df <- Baltimore %>%
  mutate(month_name = month(month, label = TRUE)) %>%
  mutate(weather = case_when(month_name == "Jan" | month_name == "Feb" |
    month_name == "Mar" | month_name == "Apr" |
    month_name == "Nov" | month_name == "Dec"
    ~ "Winter",
    month_name == "Jun" | month_name == "Jul" |
    month_name == "Aug" | month_name == "Sep" |
    month_name == "May" | month_name == "Oct"
    ~ "Summer"))
```

```
grey <- homicides %>%
  filter(victim_last == "GREY" & victim_first == "FREDDIE CARLOS") %>%
  mutate(date = ymd(reported_date)) %>%
  select(victim_last, victim_first, date)
```

```
fig_df %>%
  ggplot(aes(x=month, y=count)) +
  geom_col(aes(fill = weather)) +
  geom_smooth(span = 0.2, se = FALSE) +
```

```

scale_fill_manual(values = c("grey88", "lightblue")) +
ggtitle("Homicides in Baltimore, MD") +
xlab("Date") +
ylab("Monthly homicides") +
theme_dark() +
annotate("text", x = as.Date("2013-08-30"), y = 44,
        label = "Arrest of Freddie Grey", color = 'white') +
geom_vline(xintercept = grey$date, linetype='dashed', color='red', size=2) +
theme(legend.position= "bottom",
      legend.spacing.x = unit(0.2, 'cm'),
      legend.title = element_blank())

```

