HW5

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```
#load data and packages

library(readr)
library(tidyverse)
```

```
## -- Attaching packages --------------------------------------- tidyverse 1.3.1 --

## v ggplot2 3.3.3     v dplyr   1.0.7
## v tibble  3.1.1     v stringr 1.4.0
## v tidyr   1.1.3     v forcats 0.5.1
## v purrr   0.3.4

## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

```
library(lubridate)
```

```
##
## Attaching package: 'lubridate'

## The following objects are masked from 'package:base':
##
##     date, intersect, setdiff, union
```

```
library(ggthemes)

hom <- read_csv("../data/homicide-data.csv")
```

```
##
## -- Column specification --------------------------------------------------------
## cols(
##   uid = col_character(),
##   reported_date = col_double(),
##   victim_last = col_character(),
##   victim_first = col_character(),
##   victim_race = col_character(),
##   victim_age = col_character(),
##   victim_sex = col_character(),
```

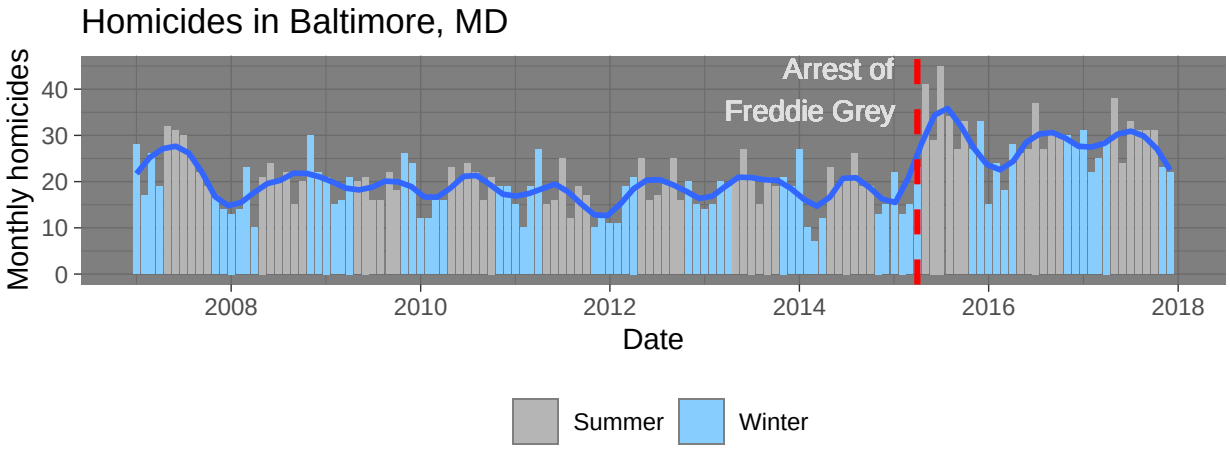
```
##   city = col_character(),
##   state = col_character(),
##   lat = col_double(),
##   lon = col_double(),
##   disposition = col_character()
## )
```

```
#make plot, choice 2

choice_2 <- hom %>%
  filter(city == "Baltimore") %>%
  mutate(reported_date = ymd(reported_date),
         year = year(reported_date),
         month = month(reported_date),
         year_month = paste(year, month),
         year_month = ym(year_month)) %>%
  group_by(year_month) %>%
  count() %>%
  ungroup() %>%
  mutate(cold = ifelse(month(year_month) %in% c(11, 12, 1, 2, 3, 4), "Winter", "Summer")) %>%
  ggplot() +
  geom_col(aes(x = year_month, y = n, fill = cold)) +
  scale_fill_manual(values = c("gray71", "skyblue1")) +
  geom_smooth(aes(x = year_month, y = n), span = .12, se = FALSE) +
  theme_dark() +
  ylab("Monthly homicides") +
  xlab("Date") +
  ggtitle("Homicides in Baltimore, MD") +
  geom_vline(xintercept = ymd("2015-04-01"), color = "red", linetype = "dashed", size = 1.1) +
  geom_text(aes(x = ymd("2014-06-01"), y = 40, label = "Arrest of\n Freddie Grey        "),
            color = "grey88") + #had to "eyeball" the position, but I imagine theres an automatic way t
  theme(legend.position = "bottom", legend.title =  element_blank(), aspect.ratio = .2)

choice_2
```

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


Homicides in Baltimore, MD
Monthly homicides
0
10
20
30
40
Arrest of
Freddie Grey
2008
2010
2012
2014
2016
2018
Date
Summer
Winter