Homework\_5\_Kyle\_Hancock

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# Set Global Options

knitr::opts\_chunk$set(warning = FALSE, message = FALSE, error = FALSE)

# Read Data In

library(readr)  
homicides <- read\_csv(file = "homicide-data.csv")

# Cleaning Data

library(lubridate)  
library(tidyverse)  
library(forcats)  
baltimore <- homicides %>%   
 filter(city == "Baltimore") %>%   
 mutate(reported\_date = ymd(reported\_date)) %>%   
 mutate\_at(vars(reported\_date), funs(year, month, day)) %>%   
 group\_by(year, month) %>%   
 summarize(total = n()) %>%   
 mutate(date = paste(month, year, sep = "-15-"),  
 date = mdy(date)) %>%   
 mutate(winter\_vs\_summer = month(date) %in% c("11", "12", "1", "2", "3", "4"),   
 winter\_vs\_summer = factor(winter\_vs\_summer,  
 levels = c(FALSE, TRUE),  
 labels = c("Summer", "Winter")))

# Recreating the Figure

library(ggplot2)  
baltimore %>%   
 ggplot(aes(x = date, y = total)) +  
 geom\_col(aes(fill = winter\_vs\_summer)) +  
 geom\_vline(xintercept = ymd("2015-4-12"), color = "red", linetype = 2, size = 1.2) +  
 geom\_text(aes(x = ymd("2015-4-12"), label = "Arrest of \n Freddie Gray", y = 40), color = "gray80",  
 hjust = "right") +  
 geom\_smooth(span = .1, se = FALSE) +  
 labs(x = "Date", y = "Monthly homicides", fill = "", title = "Homicides in Baltimore, MD") +  
 scale\_fill\_manual(values = c("gray80", "lightblue")) +  
 theme\_dark() +  
 theme(legend.position = "bottom")

