Homework 5

Danara flores

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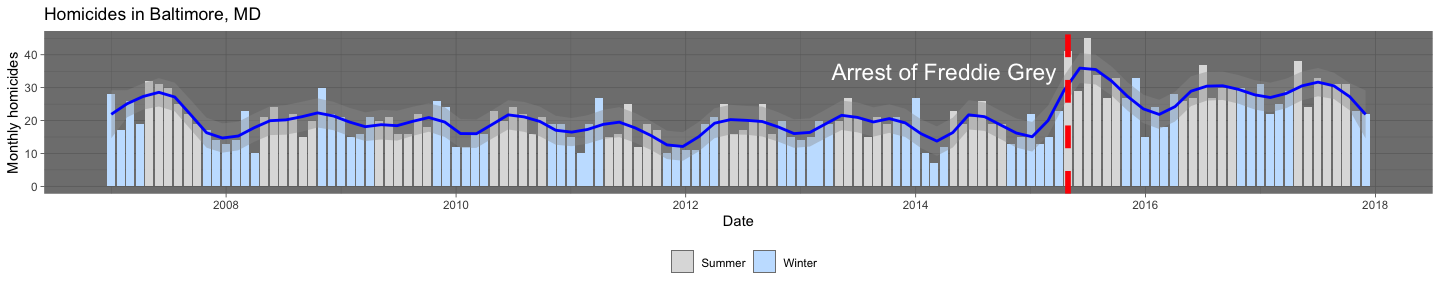
homicides<- read.csv("/Users/danaraflores/Desktop/R programing 535/Homework 5/hw 5/data/homicide-data.csv")  
city\_homicides <- homicides %>%  
 filter(city == "Baltimore")%>%  
 mutate( reported\_date = ymd(reported\_date),  
 month = month(reported\_date),  
 year = year(reported\_date),  
 year\_mon = paste(year,month, sep = "-"))

MD\_homs<- city\_homicides %>%   
 group\_by(year,month, year\_mon) %>%  
 summarize(total = n(), .groups = "drop") %>%   
 mutate(year\_mon = ym(year\_mon),   
 season = if\_else(month >= 5 & month <= 10, "Summer", "Winter"),   
 season = fct\_relevel(season, c("Summer", "Winter")))

#work with Plot  
plot1<- ggplot( data = MD\_homs)+  
 geom\_bar(aes(x= year\_mon, weight = total, fill= season))+   
 geom\_smooth(aes(x = year\_mon, y = total), color = "blue")+  
 scale\_fill\_manual(name = " ", values = c("Winter" = "slategray1",  
 "Summer" = "gray87"))+  
 theme\_dark()+  
 ggtitle("Homicides in Baltimore, MD")+  
 xlab("Date")+  
 ylab("Monthly homicides")

freddie<-city\_homicides %>%   
 filter(victim\_last == "GREY") %>% #all the grays with an A are not freddie, has to use grey with E  
 mutate(date\_arrest = as.Date(reported\_date))  
  
#helped find the arrest date or reported date to be 2015- 04 -30. ymd

Freddie\_plot<- ggplot( data = MD\_homs)+  
 geom\_bar(aes(x= year\_mon, weight = total, fill= season))+   
 geom\_smooth(aes(x = year\_mon, y = total), color = "blue",span = 0.1)+   
 scale\_fill\_manual(name = " ", values = c("Winter" = "slategray1",  
 "Summer" = "gray87"))+   
 theme\_dark()+  
 ggtitle("Homicides in Baltimore, MD")+  
 xlab("Date")+  
 ylab("Monthly homicides")+  
 geom\_vline(xintercept = as.Date(freddie$date\_arrest), color = "red", linetype = 2, size = 2)+  
 annotate("text",x = as.Date(freddie$date\_arrest), y = 35, label = "Arrest of Freddie Grey", color = "white", hjust =1.05, size = 6) +  
 theme(legend.position = "bottom")  
  
print(Freddie\_plot)



ggsave(filename = "HW\_Homicides in Baltimore, MD.pdf", plot = Freddie\_plot, path = "/Users/danaraflores/Desktop/R programing 535/Homework 5/hw 5/writing", width = 15, height = 4)