535 HW5

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Homicide Data for 50 U.S. Cities

```
## Packages to be installed for this assignment
library(tidyverse)
library(forcats)
library(broom)
library(purrr)
library(ggplot2)
library(ggthemes)
library(scales)
library(tigris)
```

Read in the Data

```
homicides <- read.csv("C:/Users/k_deb/OneDrive - Colostate/ERHS 535/homicide-data.csv")
homicides$city_name <- paste(homicides$city, homicides$state, sep=",")
```

Add variable for unsolved homicides

```
homicides$disp_unsolved = (homicides$disposition != "Closed by arrest")
head(homicides)
```

```
##          uid reported_date victim_last victim_first victim_race victim_age
## 1 Alb-000001      20100504     GARCIA         JUAN    Hispanic         78
## 2 Alb-000002      20100216    MONTOYA      CAMERON    Hispanic         17
## 3 Alb-000003      20100601 SATTERFIELD     VIVIANA       White         15
## 4 Alb-000004      20100101    MENDIOLA       CARLOS    Hispanic         32
## 5 Alb-000005      20100102        MULA       VIVIAN       White         72
## 6 Alb-000006      20100126        BOOK    GERALDINE       White         91
##   victim_sex        city state      lat       lon          disposition
## 1       Male Albuquerque    NM 35.09579 -106.5386 Closed without arrest
## 2       Male Albuquerque    NM 35.05681 -106.7153      Closed by arrest
## 3     Female Albuquerque    NM 35.08609 -106.6956 Closed without arrest
## 4       Male Albuquerque    NM 35.07849 -106.5561      Closed by arrest
## 5     Female Albuquerque    NM 35.13036 -106.5810 Closed without arrest
## 6     Female Albuquerque    NM 35.15111 -106.5378        Open/No arrest
##       city_name disp_unsolved
## 1 Albuquerque,NM          TRUE
## 2 Albuquerque,NM         FALSE
## 3 Albuquerque,NM          TRUE
```

```
## 4 Albuquerque,NM         FALSE
## 5 Albuquerque,NM          TRUE
## 6 Albuquerque,NM          TRUE
```

```r
denver_map<- tracts("CO", "Denver")
```

```
## Retrieving data for the year 2020
```

```
##   |                                                      |
```

```r
denver_homicides <-
  filter(homicides, city_name=="Denver,CO")

head(denver_homicides)
```

```
##          uid reported_date      victim_last victim_first victim_race
## 1 Den-000001      20100101 HOWARD-CROSTHWAIT      ANTHONY       White
## 2 Den-000002      20100103            DURAN         ELOY    Hispanic
## 3 Den-000003      20100105         SINGLETON     DOUGLASS       Other
## 4 Den-000004      20100111              LEE       DESHON       Black
## 5 Den-000005      20100111         FRANKLIN       LONELL       Black
## 6 Den-000006      20100207           GARCIA     GERRARDO    Hispanic
##   victim_age victim_sex   city state     lat      lon          disposition
## 1         38       Male Denver    CO 39.73915 -105.0012 Closed without arrest
## 2         25       Male Denver    CO 39.72231 -105.0448      Closed by arrest
## 3         59       Male Denver    CO 39.75592 -104.9148      Closed by arrest
## 4         19       Male Denver    CO 39.76179 -104.9499         Open/No arrest
## 5         21       Male Denver    CO 39.76179 -104.9499         Open/No arrest
## 6         21       Male Denver    CO 39.70540 -105.0423      Closed by arrest
##   city_name disp_unsolved
## 1 Denver,CO          TRUE
## 2 Denver,CO         FALSE
## 3 Denver,CO         FALSE
## 4 Denver,CO          TRUE
## 5 Denver,CO          TRUE
## 6 Denver,CO         FALSE
```

```r
denver <- ggplot() +
  geom_sf(data=denver_map) +
  geom_point(data=denver_homicides, aes(x=lon, y=lat, col=fct_lump(victim_race, n=3))) +
  labs(x= "Longitude", y="Latitude", title= "Homicides in Denver, Colorado", col= "Victim Race") +
  theme_few()
den_labels <- as_labeller(c('FALSE' = "Solved",
              'TRUE' = "Unsolved"))
denver + facet_wrap(~disp_unsolved, ncol=1, labeller=den_labels)
```

Homicides in Denver, Colorado