Homework #5, Choice #1

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Homicide Data

Read in the data.

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

## Parsed with 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()
## )
```
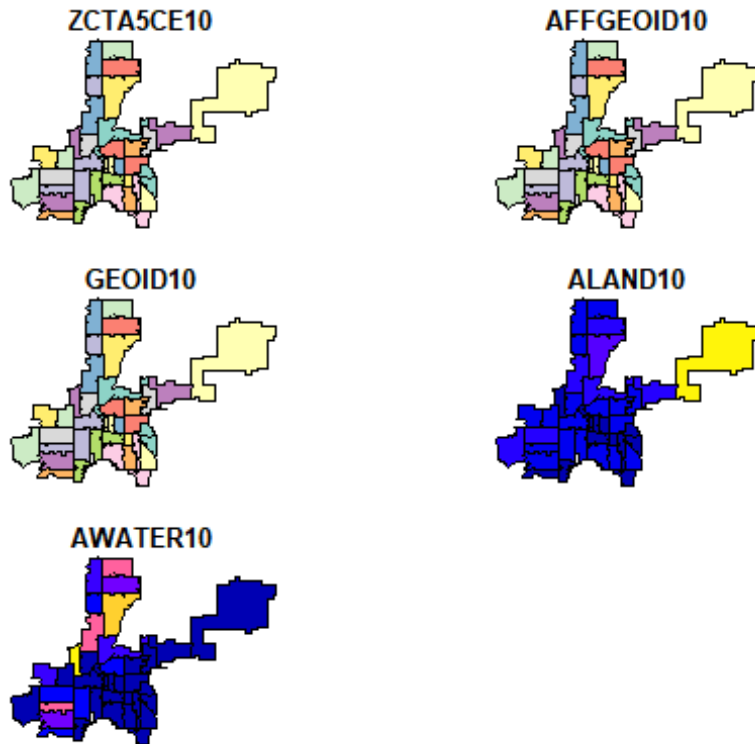
Clean Data

Filter the data for the city of Denver and select the categories that will be used.

```
denver <- homicide_raw %>%
  filter(city == "Denver") %>%
  select(lat, lon, disposition, victim_race)
```

Map Boundaries

In this section, I used the zip codes for the Denver area to create boundaries for my base map.

```
denver_zips <- zctas(cb = TRUE, starts_with = c("802"), class = "sf")
plot(denver_zips)
```

Number of Homicides by Victim Race

Here, I determined the three race groups (balck, white, hispanic) with the highest number of victim homicides.

```
race <- denver %>%
  group_by(victim_race) %>%
  mutate(count=n()) %>%
  arrange(desc(count)) %>%
  ungroup()

denver2 <- denver %>%
  filter(victim_race == c("Black", "White", "Hispanic")) %>%
  mutate(disposition = factor(disposition, levels = c("Closed without arrest"
, "Closed by arrest", "Open/No arrest"),
                      labels = c("solved", "solved", "unsolved")))
```

Create the Map

I created a map to show where the homicides in Denver have occured for the three race groups with the highest number of victims. Then, I faceted by the disposition of the case in order to create two stacked maps.

```
denver_crs <- denver2 %>%
  filter(!is.na(lat)) %>%
  st_as_sf(coords = c("lon", "lat")) %>%
```

```
    st_set_crs(4269)

map <- ggplot() +
  geom_sf(data = denver_zips, color = "lightgray") +
  geom_sf(data = denver_crs, aes(color = factor(victim_race)), show.legend =
'point') +
  ggtitle("Homicides in Denver, CO") +
  scale_color_manual(values = c("Black" = "black", "Hispanic" = "red", "White
" = "yellow"),
                     labels = c("Black", "Hispanic", "White"),
                     name = "Victim Race") +
  labs(x = "Longitude", y = "Latitude") +
  facet_wrap(~ disposition, ncol = 1) +
  theme(plot.title = element_text(hjust = 0.5), axis.text.x = element_text(an
gle = 90, hjust = 1))

map
```