ERHS535 HW5

Eric Wendt

11/22/2019

```
library(magrittr)
```

```
hom_data <-
  readr::read_csv("../data/homicide-data.csv")
```

```
# choose top homicide city
top_hom_city <- hom_data %>%
  dplyr::group_by(city) %>%
  dplyr::count() %>%
  dplyr::arrange(desc(n)) %>%
  dplyr::ungroup()
```

```
# cities with most homicides
top_hom_city %>%
  dplyr::slice(1:10)
```

```
## # A tibble: 10 x 2
##    city             n
##    <chr>        <int>
##  1 Chicago       5535
##  2 Philadelphia  3037
##  3 Houston       2942
##  4 Baltimore     2827
##  5 Detroit       2519
##  6 Los Angeles   2257
##  7 St. Louis     1677
##  8 Dallas        1567
##  9 Memphis       1514
## 10 New Orleans   1434
```

```
# homicides in New Orleans
no_hom <- hom_data %>%
  dplyr::filter(city == "New Orleans") %>%
  dplyr::mutate(unsolved =
                  disposition %in% c("Open/No arrest", "Closed without arrest"),
                unsolved_label = dplyr::if_else(unsolved == FALSE, "solved",
                                                "unsolved" ),
                victim_race_3 = forcats::fct_lump(victim_race, n = 3))
```

```
# sf object
no_hom_sf <- sf::st_as_sf(no_hom, coords = c("lon", "lat"), crs = 4269)
```

```
# Orleans Parish code: 22 071
no_blocks <- tigris::block_groups(state = 22, county = 071, cb = TRUE, class = "sf", progress_bar = FALS
```

```
no_hom_plot <-
  ggplot2::ggplot() +
  ggplot2::geom_sf(data = no_blocks, color = "black") +
  ggplot2::geom_sf(data = no_hom_sf, ggplot2::aes(color = victim_race_3,
                                                  fill = victim_race_3))+
```

```
  ggplot2::facet_grid(.~ unsolved_label) +
  viridis::scale_fill_viridis(discrete = TRUE, name = "Victim Race") +
  viridis::scale_color_viridis(discrete = TRUE, name = "Victim Race") +
  ggplot2::labs(title = "Homicides in New Orleans", subtitle = "Parish County") +
  ggplot2::theme_bw()
no_hom_plot
```