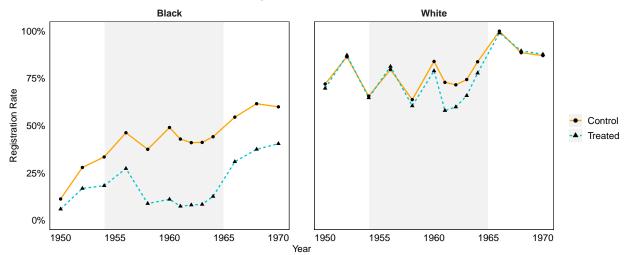# Exemplary Code Chunk

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2024-04-30

I wrote this code as part of a problem set for my data analysis class (SIS 750) at the School of International Service at American University. The assignment was to replicate and then improve on Figure 2 from a paper by Keele et al. (2021). In this paper, Keele et al. (2021) evaluate the impact of efforts to disenfranchise African American voters in Louisiana in the 1950s and 1960s. They focus specifically on the Understanding Clause, which some parishes administered and others did not.

See the code and output for my improved plot below.

```r
# Create plot
df %>%
  ggplot(aes(x = year, y = reg_rate, # identify independent and dependent variables
             color = status, shape = status, linetype = status)) + # create visual elements based on tr
  facet_wrap(~ race) + # separate plots by race
  geom_rect(aes(xmin=1954, xmax=1965, ymin=-Inf, ymax=Inf), # highlight years that the Understanding Cl
            color = 'white', fill = 'grey95') +
  geom_line(lwd = .7) + # add line to plot
  geom_point(color = 'black') + # add points to plot
  scale_shape_manual(values = c(16, 17)) + # choose shape type for points
  scale_color_manual(values = c('orange', 'turquoise3')) + # choose line color for lines
  scale_y_continuous(limits = c(0, 1), # scale plot from 0% to 100%
                     labels = scales::label_percent()) + # display y-axis as percentages rather than pr
  guides(color = guide_legend(override.aes = list(size = 2))) + # increase size of legend elements
  labs(x = 'Year', y = 'Registration Rate', # add labels
       title = 'FIGURE 2.   Proportion of Registered Voters by Race and by Understanding Clause Status.
       caption = 'Note: Treated parishes enforced the Understanding Clause and control parishes did not
  theme_minimal() + # add theme
  theme(legend.title = element_blank(), # remove legend title
        panel.grid = element_blank(), # remove gridlines
        panel.border = element_rect(color = 'black', fill = NA), # format panel border
        panel.spacing = unit(2, "lines"), # add spacing between facets
        axis.text = element_text(size = 11, color = 'black'), # format axis text
        axis.title = element_text(size = 11), # format axis title
        legend.text = element_text(size = 11), # format legend text
        strip.text.x = element_text(size = 11, face = 'bold'), # format titles of facets
        plot.title = element_text(face = 'bold', size = 14, hjust = 0), # format title of plot
        plot.caption = element_text(size = 11, hjust = 0, face = 'italic')) # format caption of plot
```

FIGURE 2. Proportion of Registered Voters by Race and by Understanding Clause Status. Treated Parishes Enforced the Understanding Clause and Control Parishes Did Not

Note: Treated parishes enforced the Understanding Clause and control parishes did not. Gray shading indicates years when the Understanding Clause was potentially enforced in treated parishes.