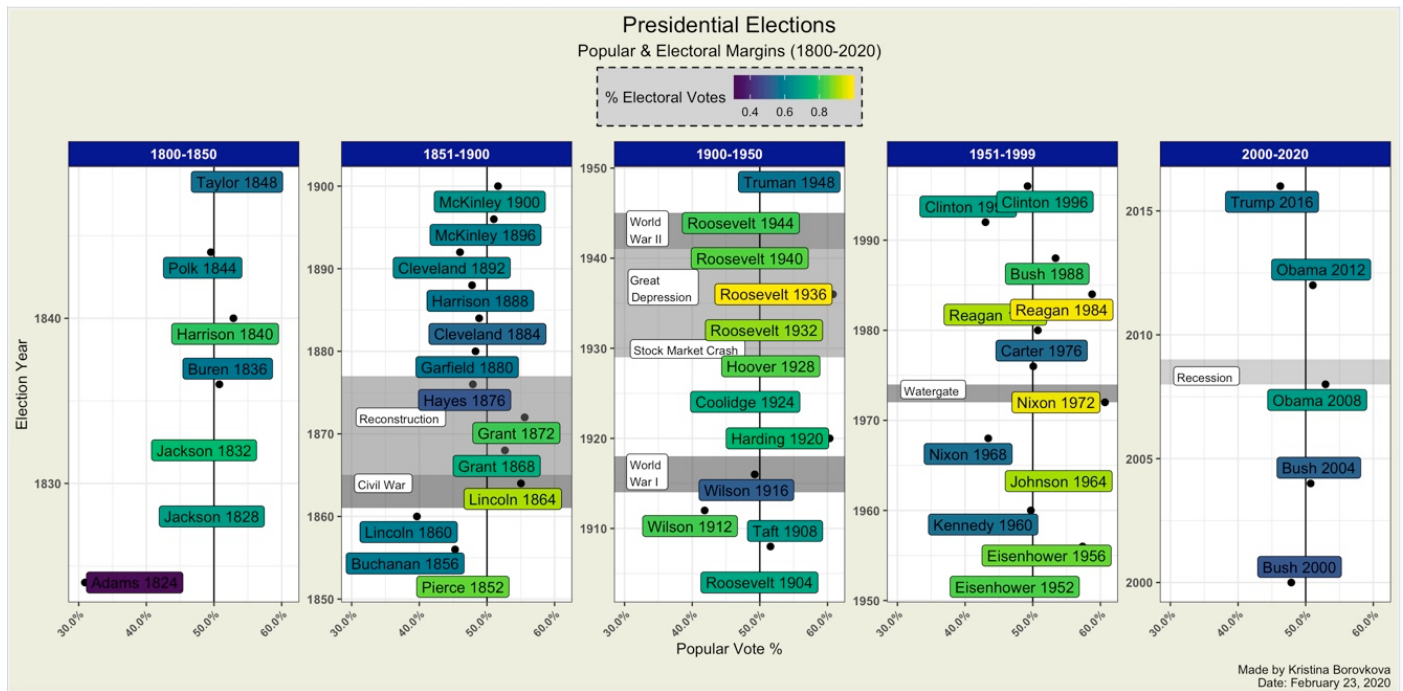


Kristina Borovkova

MSDS 5312

Visualization of the United States Historic Elections



Prepare the grouping

```
data.crash=data.frame(popular_pct=c(.3,.3),
  year=c(1929,1941.5,1945,1863,1871,1935,2008,1972.5),
  year2=c("1900-1950","1900-1950","1900-1950","1851-1900","1851-1900","1900-1950",
"2000-2020","1951-1999"),
  winner_label=c(NA,NA,NA,NA,NA,NA,NA,NA),
  event=c("Stock Market Crash",
    "World\nWar II",
    "World\nWar I",
    "Civil War",
    "Reconstruction",
    "Great\nDepression",
    "Recession",
    "Watergate"))
```

Working on visualization

```
ggplot(elections_historic,aes(popular_pct,year,label=winner_label))+
  geom_point(size=2)+
  geom_vline(xintercept=.5,linetype=1)+
  #highlighting important historic periods
  geom_rect(xmin=-Inf,xmax=Inf,ymin=1941,ymax=1945,fill="gray5",alpha=.05)+
```

```

geom_rect(xmin=-Inf,xmax=Inf,ymin=1914,ymax=1918,fill="gray5",alpha=.05)+
geom_rect(xmin=-Inf,xmax=Inf,ymin=1861,ymax=1865,fill="gray5",alpha=.05)+
geom_rect(xmin=-Inf,xmax=Inf,ymin=1865,ymax=1877,fill="gray45",alpha=.05)+
geom_rect(xmin=-Inf,xmax=Inf,ymin=1929,ymax=1941,fill="gray45",alpha=.05)+
geom_rect(xmin=-Inf,xmax=Inf,ymin=2008,ymax=2009,fill="gray5",alpha=.05)+
geom_rect(xmin=-Inf,xmax=Inf,ymin=1972,ymax=1974,fill="gray5",alpha=.05)+
geom_label(data=data.crash,aes(popular_pct,year,label=event),
           hjust=-.05,vjust=.05,col="black",size=3)+
geom_label_repel(aes(fill=ec_pct))+
scale_fill_viridis_c()+
scale_x_continuous(labels=scales::percent)+ #setting the scale by %
theme_bw()+ #setting the theme
labs(title="Presidential Elections", #text for title
     subtitle = "Popular & Electoral Margins (1800-2020)", #text for subtitle
     caption = "Made by Kristina Borovkova\n Date: February 23, 2020", #text for caption
     x="Popular Vote %", #title text for x
     y="Election Year", #title text for y
     fill="% Electoral Votes")+ #text for legend
theme(plot.title = element_text(hjust=.5,size=16), #title
      plot.subtitle = element_text(hjust=.5,size=12),#subtitle
      axis.text.y=element_text(face="bold"), #y-axis set-up
      axis.text.x = element_text(angle=45, hjust=1, face="bold",size=8),#x-axis set-up
      strip.background=element_rect(fill="dark blue"), # label box fill
      strip.text.x=element_text(color="white",face="bold",size=10), #text type on the top boxes
      legend.position = "top", #position of the legend
      legend.background=element_rect(colour = 'black',
                                     fill = 'light grey', size = 0.5, linetype='dashed'), # setting up the legend
      plot.background = element_rect(fill="ivory2"))+ #background fill
facet_wrap(~year2, scales="free_y",nrow=1)

```