Political_Parties.R

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```
setwd("~/Documents/Analytics 501 Fall 2015/50-percent-Chance-of-Awesome/")
political_data = read.csv("part2_exploratory_analysis/Datasets/PoldataSPIndustries.csv")

political_data_short = political_data[!duplicated(political_data[, c("YEAR", "STATE", "FIRST", "LAST",


t.test(political_data_short$CANDTOTAL[political_data_short$PARTY=="R"],
       political_data_short$CANDTOTAL[political_data_short$PARTY=="D"])
```

```
##
##  Welch Two Sample t-test
##
## data:  political_data_short$CANDTOTAL[political_data_short$PARTY ==  and political_data_short$CANDTO
## t = -0.28912, df = 4983.9, p-value = 0.7725
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -87342.30  64891.36
## sample estimates:
## mean of x mean of y
##  842332.5  853558.0
```

```
t.test(political_data_short$CANDTOTAL[political_data_short$PARTY=="R" & political_data_short$INCUMBENT =
       political_data_short$CANDTOTAL[political_data_short$PARTY=="D" & political_data_short$INCUMBENT =
```

```
##
##  Welch Two Sample t-test
##
## data:  political_data_short$CANDTOTAL[political_data_short$PARTY ==  and political_data_short$CANDTO
## t = -0.96069, df = 2453.1, p-value = 0.3368
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -178472.20   61101.67
## sample estimates:
## mean of x mean of y
##   1119215   1177900
```

```
t.test(political_data_short$CANDTOTAL[political_data_short$INCUMBENT == 1],
       political_data_short$CANDTOTAL[political_data_short$INCUMBENT == 0])
```

```
##
##  Welch Two Sample t-test
##
## data:  political_data_short$CANDTOTAL[political_data_short$INCUMBENT ==  and political_data_short$CA
## t = 18.291, df = 4374.1, p-value < 2.2e-16
## alternative hypothesis: true difference in means is not equal to 0
```

```
## 95 percent confidence interval:
##  600677.9 744902.3
## sample estimates:
## mean of x mean of y
## 1154142.1  481351.9
```

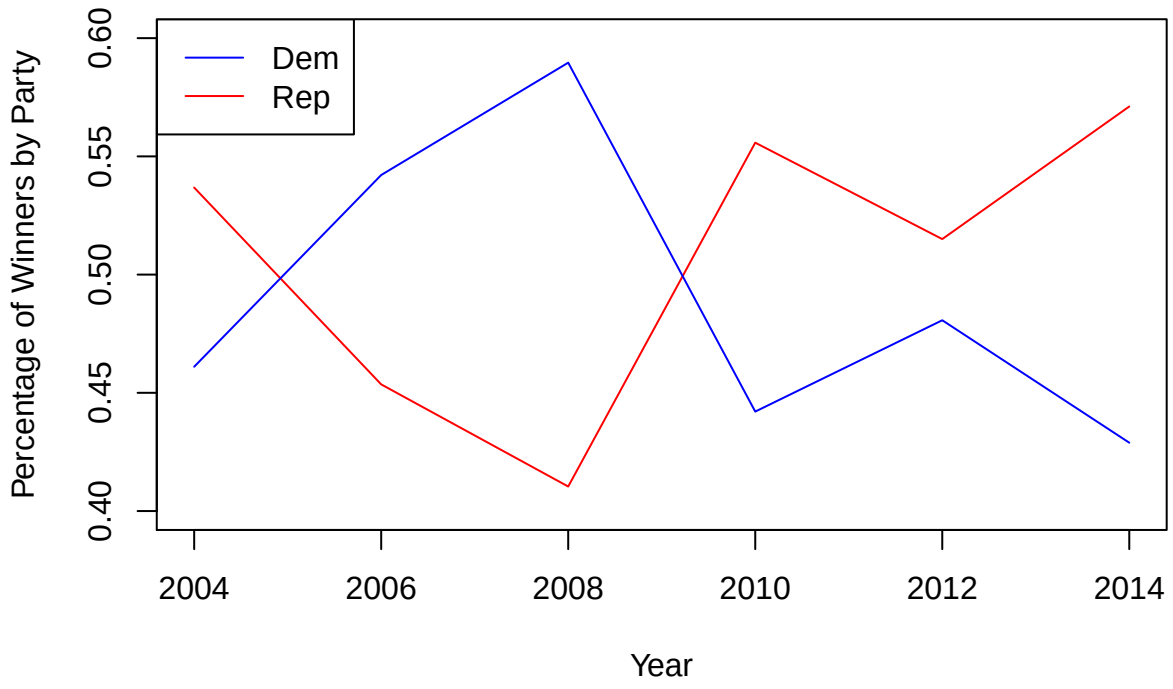
```
Republicans = c()
Democrats = c()


for(i in unique(political_data_short$YEAR)){
  Total = length(political_data_short$CANDTOTAL[political_data_short$WINNER == 1 & political_data_short$
  Republicans = c(Republicans,length(political_data_short$CANDTOTAL[political_data_short$WINNER == 1 &
                                                                    political_data_short$PARTY == "R" &
                                                                    political_data_short$YEAR == i])/Total)
  Democrats = c(Democrats, length(political_data_short$CANDTOTAL[political_data_short$WINNER == 1 &
                                                                    political_data_short$PARTY == "D" &
                                                                    political_data_short$YEAR == i])/Total)

}

winnings = data.frame(Democrats, Republicans, Year = unique(political_data_short$YEAR))

plot(Republicans~Year, data=winnings, type = "l", ylim = c(0.4,0.6), col = "red", ylab = "Percentage of
lines(Democrats~Year, data=winnings, type = "l", col = "blue")
legend(x = "topleft", legend = c("Dem", "Rep"), col = c("blue", "red"), lty = 1)
```



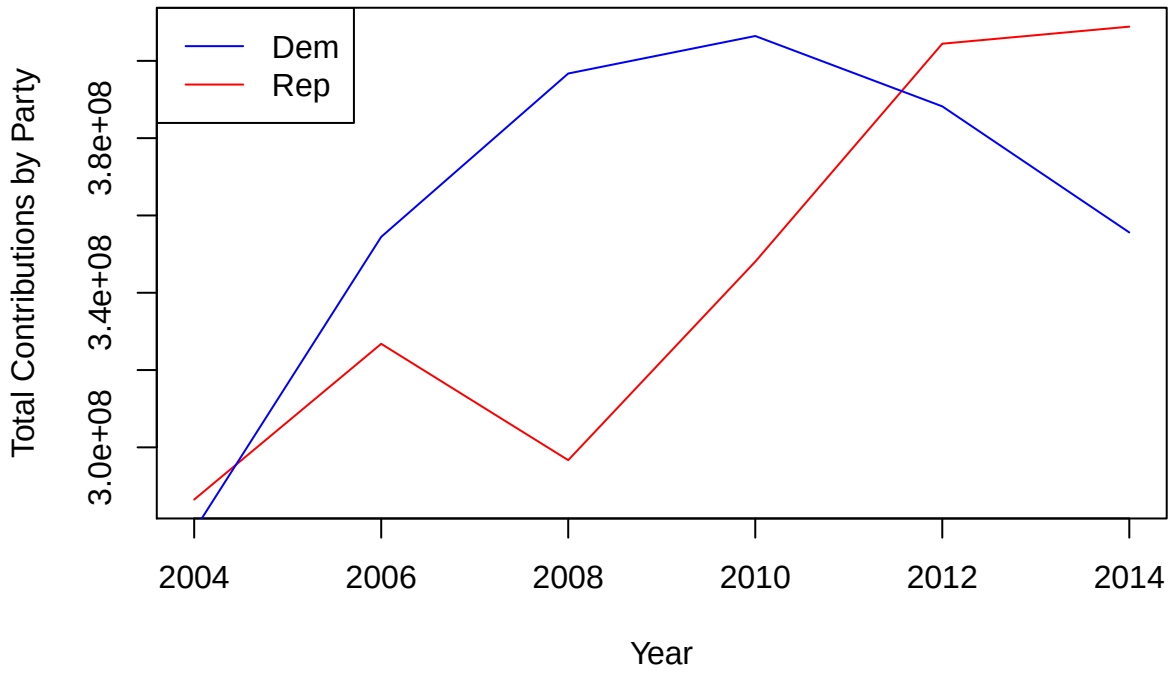

```
Republicans.finance = c()
Democrats.finance = c()
```

```
for(i in unique(political_data_short$YEAR)){
  #Total = length(political_data_short$CANDTOTAL[political_data_short$WINNER == 1 & political_data_shor
  Republicans.finance = c(Republicans.finance,sum(political_data_short$CANDTOTAL[
                                                    political_data_short$PARTY == "R"
                                                    political_data_short$YEAR == i]))
  Democrats.finance = c(Democrats.finance, sum(political_data_short$CANDTOTAL[
                                                 political_data_short$PARTY == "D" &
                                                 political_data_short$YEAR == i]))

}

winnings.finance = data.frame(Democrats.finance, Republicans.finance, Year = unique(political_data_shor

plot(Republicans.finance~Year, data =winnings.finance, type = "l", col = "red", ylab = "Total Contributi
lines(Democrats.finance~Year,data =winnings.finance, type = "l", col = "blue")
legend(x = "topleft", legend = c("Dem", "Rep"), col = c("blue", "red"), lty = 1)
```




```
cor(c(Republicans, Democrats), c(Republicans.finance, Democrats.finance))
```

```
## [1] 0.3504491
```