

DATA 607 Homework 1

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Overview

Presidential approval ratings can serve as a proxy measure for public support for a president's affiliated political party. FiveThirtyEight compiled a dataset of President Donald Trump's approval rating since his 2017 inauguration from 66 polling companies. The data offers insights into historical approval trends for President Trump that potentially may offer predictive insights into the Republican party's performance in future elections.

```
library(RCurl)
library(plyr)
library(ggplot2)
library(ggfortify)
x <- getURL("https://raw.githubusercontent.com/jambawilliams/TrumpApprovalRatings/master/approval_poll11.csv")
trump_ratings <- read.csv(text = x)
```

Identify columns

Creates a listing of all the column headers.

```
colnames(trump_ratings)
```

```
## [1] "president"      "subgroup"        "modeldate"
## [4] "startdate"      "enddate"         "pollster"
## [7] "grade"          "samplesize"      "population"
## [10] "weight"         "influence"        "approve"
## [13] "disapprove"     "adjusted_approve" "adjusted_disapprove"
## [16] "multiversions"  "tracking"         "url"
## [19] "poll_id"        "question_id"      "createddate"
## [22] "timestamp"
```

Clean data

Creates a new data frame that includes only the most relevant columns.

```
data <- trump_ratings[,c("enddate", "pollster", "samplesize", "approve", "disapprove")]
data <- rename(data, c("enddate"="date", "pollster"="polling_company", "samplesize"="respondent_count",
```

Data exploration

Displays the first few rows of the conditioned data set.

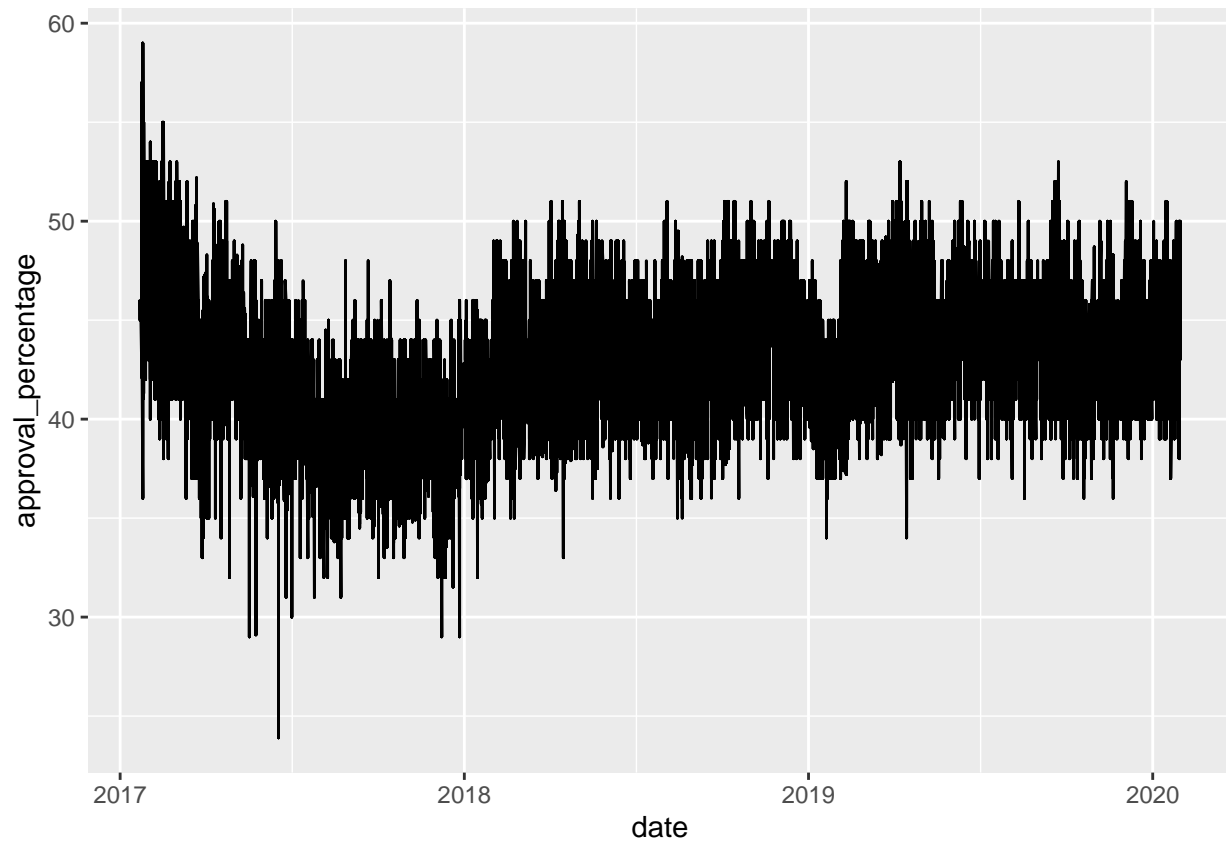
```
head(data)
```

```
##      date                polling_company respondent_count
## 1 1/22/2017             Morning Consult             1992
## 2 1/22/2017                Gallup             1500
## 3 1/23/2017                Gallup             1500
## 4 1/24/2017                Ipsos             1632
## 5 1/24/2017 Rasmussen Reports/Pulse Opinion Research 1500
## 6 1/25/2017      Quinnipiac University             1190
## approval_percentage disapproval_percentage
## 1                46.0                37.0
## 2                45.0                45.0
## 3                45.0                46.0
## 4                42.1                45.2
## 5                57.0                43.0
## 6                36.0                44.0
```

Plot

Converts dates from integer into datetime type. Plots approval ratings over time.

```
data$date <- as.Date(data$date, "%m/%d/%Y")
ggplot(data, aes(date, approval_percentage)) + geom_line()
```



Conclusions

There is regular variation in President Trump's approval rating on a day to day basis. Overall his ratings showed a general decline between 2017 and 2018 and since have remained between 40% and 50%.