Polling Data - Project 1

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MATH 567 - Winter 2016

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Polling data is one of the most important applications of data analytics. A number of different polls are daily commissioned to analyze possible voting trends. An important website which collates and displays this data is the Huffington Post (`http://elections.huffingtonpost.com/pollster`). Different polling results are presented, and it allows the reader to manipulate the data and display different trends.

1   R Package

Huffington post has a R client for the HuffPost Pollster API (`http://elections.huffingtonpost.com/pollster/api`), with the description given in (`https://cran.r-project.org/web/packages/pollstR/pollstR.pdf`) and an overview in (`https://cran.r-project.org/web/packages/pollstR/vignettes/introduction.html`)

Install the package using the command:

```
> install.packages("pollstR")
```

Load the package using the following command:

```
> library(pollstR)
```

There are four attributes to the package, whose description is given in (`https://cran.r-project.org/web/packages/pollstR/pollstR.pdf`)

- pollstR
- pollstr_chart
- pollstr_charts
- pollstr_polls

2   Assignment

Using the `pollstR` package and its different attributes, extract and plot the following polls using the `ggplot2` package.

2016 National Republican Primary - Plot the data from **all** polls for the 2016 Republican Primary for all candidates. The timeline for the data should be from February 2015 to current.

2016 National Democratic Primary - Plot the data from **all** polls for the 2016 Democratic Primary for all candidates. The timeline for the data should be from February 2015 to current.

2016 South Carolina Republican Presidential Primary - Plot the data from **all** polls of **"likely voters"** for the 2016 South Carolina Republican Presidential Primary for all candidates. The timeline for the data should be from July 1, 2015 to current.

President Obama's Job Approval - Plot the job approval rating of President Obama since the start of his presidency. Plot only **"Approve"** and **"Disapprove"**.

Congress Job Approval - Plot the job approval rating of the American Congress since the start of President Obama's presidency.

3   Submission

The submission is a report of approximately half a page for each part. The student should submit the R code in a separate script file for each part, and the report should describe the code, show the plotted function and a description of the plot and its analysis based on the data without any bias.

For bonus marks, a student can divide up the plot between "registered" and "likely voters" and different polls.

The deadline for submission is February 11, 2016 at 5PM. The student is allowed to use any (online) materials, however, they should make proper citation in the report to their sources. Any submission found to be (even partially) **plagiarized** will receive a 0.