Assignment_1

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Introduction

This is an R Markdown document for the data that can be found in the following link.

https://projects.fivethirtyeight.com/2020-general-data/presidential_national_toplines_2020.csv

This data gives the forecast for the elections conducted in the year 2020.

Data

```
D <- read.csv('https://projects.fivethirtyeight.com/2020-general-data/presidential_national_toplines_20:
print(D)
```

```
##    cycle    branch       model modeldate candidate_inc candidate_chal
## 1   2020 President polls-plus 8/29/2020         Trump          Biden
## 2   2020 President polls-plus 8/28/2020         Trump          Biden
## 3   2020 President polls-plus 8/27/2020         Trump          Biden
## 4   2020 President polls-plus 8/26/2020         Trump          Biden
## 5   2020 President polls-plus 8/25/2020         Trump          Biden
## 6   2020 President polls-plus 8/24/2020         Trump          Biden
## 7   2020 President polls-plus 8/23/2020         Trump          Biden
## 8   2020 President polls-plus 8/22/2020         Trump          Biden
## 9   2020 President polls-plus 8/21/2020         Trump          Biden
## 10  2020 President polls-plus 8/20/2020         Trump          Biden
## 11  2020 President polls-plus 8/19/2020         Trump          Biden
## 12  2020 President polls-plus 8/18/2020         Trump          Biden
## 13  2020 President polls-plus 8/17/2020         Trump          Biden
## 14  2020 President polls-plus 8/16/2020         Trump          Biden
## 15  2020 President polls-plus 8/15/2020         Trump          Biden
## 16  2020 President polls-plus 8/14/2020         Trump          Biden
## 17  2020 President polls-plus 8/13/2020         Trump          Biden
## 18  2020 President polls-plus 8/12/2020         Trump          Biden
## 19  2020 President polls-plus 8/11/2020         Trump          Biden
## 20  2020 President polls-plus 8/10/2020         Trump          Biden
## 21  2020 President polls-plus  8/9/2020         Trump          Biden
## 22  2020 President polls-plus  8/8/2020         Trump          Biden
## 23  2020 President polls-plus  8/7/2020         Trump          Biden
## 24  2020 President polls-plus  8/6/2020         Trump          Biden
## 25  2020 President polls-plus  8/5/2020         Trump          Biden
## 26  2020 President polls-plus  8/4/2020         Trump          Biden
## 27  2020 President polls-plus  8/3/2020         Trump          Biden
## 28  2020 President polls-plus  8/2/2020         Trump          Biden
## 29  2020 President polls-plus  8/1/2020         Trump          Biden
```

```
## 30   2020 President polls-plus 7/31/2020           Trump        Biden
## 31   2020 President polls-plus 7/30/2020           Trump        Biden
## 32   2020 President polls-plus 7/29/2020           Trump        Biden
## 33   2020 President polls-plus 7/28/2020           Trump        Biden
## 34   2020 President polls-plus 7/27/2020           Trump        Biden
## 35   2020 President polls-plus 7/26/2020           Trump        Biden
## 36   2020 President polls-plus 7/25/2020           Trump        Biden
## 37   2020 President polls-plus 7/24/2020           Trump        Biden
## 38   2020 President polls-plus 7/23/2020           Trump        Biden
## 39   2020 President polls-plus 7/22/2020           Trump        Biden
## 40   2020 President polls-plus 7/21/2020           Trump        Biden
## 41   2020 President polls-plus 7/20/2020           Trump        Biden
## 42   2020 President polls-plus 7/19/2020           Trump        Biden
## 43   2020 President polls-plus 7/18/2020           Trump        Biden
## 44   2020 President polls-plus 7/17/2020           Trump        Biden
## 45   2020 President polls-plus 7/16/2020           Trump        Biden
## 46   2020 President polls-plus 7/15/2020           Trump        Biden
## 47   2020 President polls-plus 7/14/2020           Trump        Biden
## 48   2020 President polls-plus 7/13/2020           Trump        Biden
## 49   2020 President polls-plus 7/12/2020           Trump        Biden
## 50   2020 President polls-plus 7/11/2020           Trump        Biden
## 51   2020 President polls-plus 7/10/2020           Trump        Biden
## 52   2020 President polls-plus  7/9/2020           Trump        Biden
## 53   2020 President polls-plus  7/8/2020           Trump        Biden
## 54   2020 President polls-plus  7/7/2020           Trump        Biden
## 55   2020 President polls-plus  7/6/2020           Trump        Biden
## 56   2020 President polls-plus  7/5/2020           Trump        Biden
## 57   2020 President polls-plus  7/4/2020           Trump        Biden
## 58   2020 President polls-plus  7/3/2020           Trump        Biden
## 59   2020 President polls-plus  7/2/2020           Trump        Biden
## 60   2020 President polls-plus  7/1/2020           Trump        Biden
## 61   2020 President polls-plus 6/30/2020           Trump        Biden
## 62   2020 President polls-plus 6/29/2020           Trump        Biden
## 63   2020 President polls-plus 6/28/2020           Trump        Biden
## 64   2020 President polls-plus 6/27/2020           Trump        Biden
## 65   2020 President polls-plus 6/26/2020           Trump        Biden
## 66   2020 President polls-plus 6/25/2020           Trump        Biden
## 67   2020 President polls-plus 6/24/2020           Trump        Biden
## 68   2020 President polls-plus 6/23/2020           Trump        Biden
## 69   2020 President polls-plus 6/22/2020           Trump        Biden
## 70   2020 President polls-plus 6/21/2020           Trump        Biden
## 71   2020 President polls-plus 6/20/2020           Trump        Biden
## 72   2020 President polls-plus 6/19/2020           Trump        Biden
## 73   2020 President polls-plus 6/18/2020           Trump        Biden
## 74   2020 President polls-plus 6/17/2020           Trump        Biden
## 75   2020 President polls-plus 6/16/2020           Trump        Biden
## 76   2020 President polls-plus 6/15/2020           Trump        Biden
## 77   2020 President polls-plus 6/14/2020           Trump        Biden
## 78   2020 President polls-plus 6/13/2020           Trump        Biden
## 79   2020 President polls-plus 6/12/2020           Trump        Biden
## 80   2020 President polls-plus 6/11/2020           Trump        Biden
## 81   2020 President polls-plus 6/10/2020           Trump        Biden
## 82   2020 President polls-plus  6/9/2020           Trump        Biden
## 83   2020 President polls-plus  6/8/2020           Trump        Biden
```

```
## 84  2020 President polls-plus  6/7/2020        Trump         Biden
## 85  2020 President polls-plus  6/6/2020        Trump         Biden
## 86  2020 President polls-plus  6/5/2020        Trump         Biden
## 87  2020 President polls-plus  6/4/2020        Trump         Biden
## 88  2020 President polls-plus  6/3/2020        Trump         Biden
## 89  2020 President polls-plus  6/2/2020        Trump         Biden
## 90  2020 President polls-plus  6/1/2020        Trump         Biden
##     candidate_3rd ecwin_inc ecwin_chal ecwin_3rd ec_nomajority popwin_inc
## 1              NA  0.307525   0.688200        NA      0.004275   0.188325
## 2              NA  0.303500   0.692525        NA      0.003975   0.186225
## 3              NA  0.299400   0.696400        NA      0.004200   0.182875
## 4              NA  0.300550   0.695550        NA      0.003900   0.185375
## 5              NA  0.270450   0.725875        NA      0.003675   0.162850
## 6              NA  0.269575   0.726975        NA      0.003450   0.165475
## 7              NA  0.267300   0.729625        NA      0.003075   0.166625
## 8              NA  0.271000   0.725500        NA      0.003500   0.166700
## 9              NA  0.267575   0.728750        NA      0.003675   0.164850
## 10             NA  0.273650   0.722825        NA      0.003525   0.167700
## 11             NA  0.278625   0.717275        NA      0.004100   0.173150
## 12             NA  0.267750   0.729100        NA      0.003150   0.166375
## 13             NA  0.272400   0.723750        NA      0.003850   0.169750
## 14             NA  0.282075   0.714500        NA      0.003425   0.175925
## 15             NA  0.277450   0.719150        NA      0.003400   0.172850
## 16             NA  0.267475   0.729250        NA      0.003275   0.165700
## 17             NA  0.275200   0.721600        NA      0.003200   0.177575
## 18             NA  0.287650   0.708750        NA      0.003600   0.183050
## 19             NA  0.286600   0.710250        NA      0.003150   0.190525
## 20             NA  0.283950   0.712875        NA      0.003175   0.190750
## 21             NA  0.287175   0.709125        NA      0.003700   0.194675
## 22             NA  0.291200   0.705500        NA      0.003300   0.196425
## 23             NA  0.297150   0.699200        NA      0.003650   0.201050
## 24             NA  0.293200   0.703325        NA      0.003475   0.199275
## 25             NA  0.297725   0.698925        NA      0.003350   0.202450
## 26             NA  0.280400   0.716625        NA      0.002975   0.184400
## 27             NA  0.283250   0.712975        NA      0.003775   0.187500
## 28             NA  0.283925   0.712425        NA      0.003650   0.187975
## 29             NA  0.286075   0.710875        NA      0.003050   0.188825
## 30             NA  0.286700   0.710125        NA      0.003175   0.190775
## 31             NA  0.260900   0.735900        NA      0.003200   0.168075
## 32             NA  0.266675   0.729925        NA      0.003400   0.170825
## 33             NA  0.260625   0.736300        NA      0.003075   0.166600
## 34             NA  0.266750   0.729775        NA      0.003475   0.173875
## 35             NA  0.267475   0.729375        NA      0.003150   0.178825
## 36             NA  0.262025   0.735000        NA      0.002975   0.180675
## 37             NA  0.270275   0.726500        NA      0.003225   0.183275
## 38             NA  0.264100   0.732575        NA      0.003325   0.181825
## 39             NA  0.252225   0.745000        NA      0.002775   0.178925
## 40             NA  0.258300   0.739150        NA      0.002550   0.185725
## 41             NA  0.249550   0.747950        NA      0.002500   0.177900
## 42             NA  0.256600   0.740800        NA      0.002600   0.180875
## 43             NA  0.261350   0.735600        NA      0.003050   0.181425
## 44             NA  0.262300   0.734850        NA      0.002850   0.182225
## 45             NA  0.259350   0.737950        NA      0.002700   0.180450
## 46             NA  0.239200   0.758000        NA      0.002800   0.164800
```

```
## 47          NA  0.258525  0.738500        NA  0.002975  0.179300
## 48          NA  0.258175  0.738850        NA  0.002975  0.177825
## 49          NA  0.270000  0.726775        NA  0.003225  0.184450
## 50          NA  0.279450  0.717150        NA  0.003400  0.194600
## 51          NA  0.275200  0.721600        NA  0.003200  0.189850
## 52          NA  0.272700  0.724550        NA  0.002750  0.189925
## 53          NA  0.269625  0.727375        NA  0.003000  0.185725
## 54          NA  0.268400  0.728375        NA  0.003225  0.184825
## 55          NA  0.280850  0.715800        NA  0.003350  0.198900
## 56          NA  0.237350  0.759375        NA  0.003275  0.156425
## 57          NA  0.239875  0.756850        NA  0.003275  0.159775
## 58          NA  0.238125  0.758950        NA  0.002925  0.156225
## 59          NA  0.240025  0.756300        NA  0.003675  0.159175
## 60          NA  0.235350  0.761525        NA  0.003125  0.162675
## 61          NA  0.235475  0.761375        NA  0.003150  0.161425
## 62          NA  0.209525  0.787850        NA  0.002625  0.136775
## 63          NA  0.211325  0.785625        NA  0.003050  0.137200
## 64          NA  0.208100  0.788425        NA  0.003475  0.134900
## 65          NA  0.206375  0.790550        NA  0.003075  0.137300
## 66          NA  0.216950  0.779500        NA  0.003550  0.142750
## 67          NA  0.210325  0.786725        NA  0.002950  0.139475
## 68          NA  0.217100  0.780075        NA  0.002825  0.145800
## 69          NA  0.215400  0.781600        NA  0.003000  0.142300
## 70          NA  0.219500  0.777475        NA  0.003025  0.147625
## 71          NA  0.222000  0.775150        NA  0.002850  0.148500
## 72          NA  0.225175  0.771925        NA  0.002900  0.151700
## 73          NA  0.237500  0.759450        NA  0.003050  0.160200
## 74          NA  0.235175  0.761575        NA  0.003250  0.160625
## 75          NA  0.239600  0.756750        NA  0.003650  0.163200
## 76          NA  0.247800  0.749025        NA  0.003175  0.164850
## 77          NA  0.234775  0.762550        NA  0.002675  0.153375
## 78          NA  0.237150  0.759350        NA  0.003500  0.158700
## 79          NA  0.242350  0.754300        NA  0.003350  0.158900
## 80          NA  0.245325  0.751250        NA  0.003425  0.161850
## 81          NA  0.283950  0.711825        NA  0.004225  0.181900
## 82          NA  0.288525  0.707200        NA  0.004275  0.188000
## 83          NA  0.303425  0.692525        NA  0.004050  0.199800
## 84          NA  0.302275  0.693500        NA  0.004225  0.199750
## 85          NA  0.305250  0.690850        NA  0.003900  0.201325
## 86          NA  0.307750  0.687725        NA  0.004525  0.205150
## 87          NA  0.288350  0.707550        NA  0.004100  0.187825
## 88          NA  0.292525  0.703475        NA  0.004000  0.190275
## 89          NA  0.293975  0.702250        NA  0.003775  0.192300
## 90          NA  0.295900  0.700575        NA  0.003525  0.194300
##    popwin_chal popwin_3rd    ev_inc   ev_chal ev_3rd ev_inc_hi ev_chal_hi
## 1     0.811675         NA 220.7868 317.2131     NA       337      429.0
## 2     0.813775         NA 220.4639 317.5361     NA       337      429.0
## 3     0.817125         NA 220.3914 317.6086     NA       336      428.0
## 4     0.814625         NA 220.8551 317.1448     NA       337      428.0
## 5     0.837150         NA 213.9388 324.0612     NA       331      432.0
## 6     0.834525         NA 213.7483 324.2517     NA       332      432.0
## 7     0.833375         NA 212.5292 325.4708     NA       331      435.0
## 8     0.833300         NA 213.3921 324.6079     NA       331      433.0
## 9     0.835150         NA 213.0551 324.9449     NA       331      433.0
```

```
## 10        0.832300        NA 215.0446 322.9554        NA        333        431.0
## 11        0.826850        NA 216.3484 321.6516        NA        335        429.0
## 12        0.833625        NA 214.7168 323.2832        NA        333        430.0
## 13        0.830250        NA 215.2729 322.7271        NA        333        431.0
## 14        0.824075        NA 215.5538 322.4463        NA        336        431.0
## 15        0.827150        NA 213.2509 324.7491        NA        335        434.0
## 16        0.834300        NA 211.6081 326.3919        NA        333        433.0
## 17        0.822425        NA 213.7498 324.2502        NA        336        434.0
## 18        0.816950        NA 215.1911 322.8088        NA        337        433.0
## 19        0.809475        NA 214.9498 323.0502        NA        337        433.0
## 20        0.809250        NA 214.5426 323.4573        NA        337        435.0
## 21        0.805325        NA 215.6911 322.3089        NA        339        433.0
## 22        0.803575        NA 216.0827 321.9173        NA        339        433.0
## 23        0.798950        NA 217.1632 320.8368        NA        340        434.0
## 24        0.800725        NA 216.8208 321.1793        NA        341        433.0
## 25        0.797550        NA 217.5150 320.4850        NA        341        433.0
## 26        0.815600        NA 212.0597 325.9403        NA        337        435.0
## 27        0.812500        NA 212.9614 325.0386        NA        337        435.0
## 28        0.812025        NA 213.0605 324.9395        NA        338        435.0
## 29        0.811175        NA 212.7638 325.2362        NA        338        436.0
## 30        0.809225        NA 213.5757 324.4243        NA        340        436.0
## 31        0.831925        NA 208.4238 329.5762        NA        334        436.0
## 32        0.829175        NA 209.0400 328.9600        NA        335        438.0
## 33        0.833400        NA 207.1326 330.8674        NA        333        440.0
## 34        0.826125        NA 208.6976 329.3023        NA        336        438.0
## 35        0.821175        NA 208.3017 329.6984        NA        336        439.0
## 36        0.819325        NA 209.0473 328.9527        NA        337        439.0
## 37        0.816725        NA 209.7756 328.2244        NA        337        440.0
## 38        0.818175        NA 207.8097 330.1903        NA        335        441.0
## 39        0.821075        NA 206.5702 331.4298        NA        335        441.0
## 40        0.814275        NA 208.3234 329.6766        NA        337        441.0
## 41        0.822100        NA 205.5820 332.4180        NA        335        444.0
## 42        0.819125        NA 206.8156 331.1844        NA        334        443.0
## 43        0.818575        NA 207.1693 330.8307        NA        335        445.0
## 44        0.817775        NA 206.6574 331.3426        NA        335        444.0
## 45        0.819550        NA 205.8413 332.1587        NA        335        445.0
## 46        0.835200        NA 202.8228 335.1772        NA        330        444.0
## 47        0.820700        NA 205.0833 332.9167        NA        335        446.0
## 48        0.822175        NA 204.7945 333.2055        NA        335        446.0
## 49        0.815550        NA 206.4143 331.5857        NA        337        446.0
## 50        0.805400        NA 208.5454 329.4546        NA        338        446.0
## 51        0.810150        NA 207.4411 330.5589        NA        338        446.0
## 52        0.810075        NA 208.0501 329.9499        NA        337        444.0
## 53        0.814275        NA 206.8318 331.1682        NA        337        446.0
## 54        0.815175        NA 206.8485 331.1515        NA        337        446.0
## 55        0.801100        NA 211.0341 326.9659        NA        339        444.0
## 56        0.843575        NA 202.7701 335.2299        NA        326        443.0
## 57        0.840225        NA 203.1415 334.8585        NA        326        444.0
## 58        0.843775        NA 201.9703 336.0297        NA        326        445.0
## 59        0.840825        NA 202.9859 335.0142        NA        327        444.0
## 60        0.837325        NA 202.0124 335.9876        NA        327        446.0
## 61        0.838575        NA 202.2096 335.7904        NA        328        446.0
## 62        0.863225        NA 196.8280 341.1720        NA        318        446.0
## 63        0.862800        NA 196.2056 341.7944        NA        318        446.0
```

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## 64     0.865100           NA 196.2634 341.7366        NA        317       446.0
## 65     0.862700           NA 195.4595 342.5405        NA        317       448.0
## 66     0.857250           NA 198.2772 339.7228        NA        320       446.0
## 67     0.860525           NA 196.5073 341.4927        NA        318       447.0
## 68     0.854200           NA 197.7610 340.2390        NA        322       447.0
## 69     0.857700           NA 198.0367 339.9633        NA        320       447.0
## 70     0.852375           NA 199.1915 338.8086        NA        322       446.0
## 71     0.851500           NA 199.5023 338.4977        NA        322       446.0
## 72     0.848300           NA 200.5645 337.4355        NA        325       446.0
## 73     0.839800           NA 201.7995 336.2005        NA        329       446.0
## 74     0.839375           NA 202.0645 335.9355        NA        327       446.0
## 75     0.836800           NA 203.4893 334.5107        NA        328       444.0
## 76     0.835150           NA 205.0138 332.9862        NA        328       442.5
## 77     0.846625           NA 201.9950 336.0050        NA        326       443.0
## 78     0.841300           NA 203.3475 334.6525        NA        326       443.0
## 79     0.841100           NA 203.9240 334.0760        NA        326       442.0
## 80     0.838150           NA 204.4158 333.5842        NA        328       442.0
## 81     0.818100           NA 211.3559 326.6442        NA        333       438.0
## 82     0.812000           NA 213.6465 324.3535        NA        334       435.0
## 83     0.800200           NA 216.1307 321.8693        NA        337       434.0
## 84     0.800250           NA 216.4880 321.5120        NA        337       434.0
## 85     0.798675           NA 217.2131 320.7869        NA        338       433.0
## 86     0.794850           NA 218.2592 319.7408        NA        339       432.0
## 87     0.812175           NA 213.6946 324.3054        NA        335       434.0
## 88     0.809725           NA 214.5781 323.4219        NA        335       433.0
## 89     0.807700           NA 214.0240 323.9760        NA        337       435.0
## 90     0.805700           NA 215.0013 322.9987        NA        337       435.0
##     ev_3rd_hi ev_inc_lo ev_chal_lo ev_3rd_lo national_voteshare_inc
## 1         NA     109.0        201        NA               46.26345
## 2         NA     109.0        201        NA               46.25870
## 3         NA     110.0        202        NA               46.28278
## 4         NA     110.0        201        NA               46.30215
## 5         NA     106.0        207        NA               46.02112
## 6         NA     106.0        206        NA               46.02100
## 7         NA     103.0        207        NA               45.96653
## 8         NA     105.0        207        NA               46.01094
## 9         NA     105.0        207        NA               45.99585
## 10        NA     107.0        205        NA               46.07849
## 11        NA     109.0        203        NA               46.13017
## 12        NA     108.0        205        NA               46.08685
## 13        NA     107.0        205        NA               46.10958
## 14        NA     107.0        202        NA               46.16774
## 15        NA     104.0        203        NA               46.05632
## 16        NA     105.0        205        NA               45.98938
## 17        NA     104.0        202        NA               46.11533
## 18        NA     105.0        201        NA               46.17112
## 19        NA     105.0        201        NA               46.20192
## 20        NA     103.0        201        NA               46.19029
## 21        NA     105.0        199        NA               46.24909
## 22        NA     105.0        199        NA               46.26159
## 23        NA     104.0        198        NA               46.29543
## 24        NA     105.0        197        NA               46.28619
## 25        NA     105.0        197        NA               46.31205
## 26        NA     103.0        201        NA               46.10718
```

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## 27          NA    103.0      201        NA         46.13739
## 28          NA    103.0      200        NA         46.13912
## 29          NA    102.0      200        NA         46.11985
## 30          NA    102.0      198        NA         46.14778
## 31          NA    102.0      204        NA         45.93544
## 32          NA    100.0      203        NA         45.92358
## 33          NA     98.0      205        NA         45.85881
## 34          NA    100.0      202        NA         45.91749
## 35          NA     99.0      202        NA         45.97368
## 36          NA     99.0      201        NA         45.99001
## 37          NA     98.0      201        NA         45.99775
## 38          NA     97.0      203        NA         45.94709
## 39          NA     97.0      203        NA         45.89418
## 40          NA     97.0      201        NA         45.95774
## 41          NA     94.0      203        NA         45.83913
## 42          NA     95.0      204        NA         45.89302
## 43          NA     93.0      203        NA         45.88900
## 44          NA     94.0      203        NA         45.89483
## 45          NA     93.0      203        NA         45.83747
## 46          NA     94.0      208        NA         45.71204
## 47          NA     92.0      203        NA         45.80495
## 48          NA     92.0      203        NA         45.78563
## 49          NA     92.0      201        NA         45.85665
## 50          NA     92.0      200        NA         45.93150
## 51          NA     92.0      200        NA         45.90247
## 52          NA     94.0      201        NA         45.90316
## 53          NA     92.0      201        NA         45.85991
## 54          NA     92.0      201        NA         45.85553
## 55          NA     94.0      199        NA         46.00682
## 56          NA     95.0      212        NA         45.65043
## 57          NA     94.0      212        NA         45.65899
## 58          NA     93.0      212        NA         45.59909
## 59          NA     94.0      211        NA         45.64618
## 60          NA     92.0      211        NA         45.62083
## 61          NA     92.0      210        NA         45.61910
## 62          NA     92.0      220        NA         45.39993
## 63          NA     92.0      220        NA         45.40212
## 64          NA     92.0      221        NA         45.40378
## 65          NA     90.0      221        NA         45.36304
## 66          NA     92.0      218        NA         45.47114
## 67          NA     91.0      220        NA         45.38713
## 68          NA     91.0      216        NA         45.44068
## 69          NA     91.0      218        NA         45.40881
## 70          NA     92.0      216        NA         45.48504
## 71          NA     92.0      216        NA         45.49785
## 72          NA     92.0      213        NA         45.53778
## 73          NA     92.0      209        NA         45.61443
## 74          NA     92.0      211        NA         45.61938
## 75          NA     94.0      210        NA         45.68271
## 76          NA     95.5      210        NA         45.75811
## 77          NA     95.0      212        NA         45.60586
## 78          NA     95.0      212        NA         45.68189
## 79          NA     96.0      212        NA         45.73086
## 80          NA     96.0      210        NA         45.76586
```

```
## 81          NA     100.0        205          NA              46.01114
## 82          NA     103.0        204          NA              46.13130
## 83          NA     104.0        201          NA              46.24477
## 84          NA     104.0        201          NA              46.27370
## 85          NA     105.0        200          NA              46.31012
## 86          NA     106.0        199          NA              46.36461
## 87          NA     104.0        203          NA              46.17122
## 88          NA     105.0        203          NA              46.22312
## 89          NA     103.0        201          NA              46.17807
## 90          NA     103.0        201          NA              46.20322
##     national_voteshare_chal national_voteshare_3rd nat_voteshare_other
## 1                  52.40189                     NA            1.334657
## 2                  52.40611                     NA            1.335190
## 3                  52.39348                     NA            1.323738
## 4                  52.37099                     NA            1.326856
## 5                  52.67421                     NA            1.304669
## 6                  52.67212                     NA            1.306889
## 7                  52.73164                     NA            1.301827
## 8                  52.69307                     NA            1.296000
## 9                  52.71219                     NA            1.291965
## 10                 52.63926                     NA            1.282259
## 11                 52.58604                     NA            1.283783
## 12                 52.63010                     NA            1.283045
## 13                 52.61044                     NA            1.279983
## 14                 52.54878                     NA            1.283478
## 15                 52.65100                     NA            1.292678
## 16                 52.71326                     NA            1.297362
## 17                 52.59297                     NA            1.291699
## 18                 52.52475                     NA            1.304139
## 19                 52.49453                     NA            1.303546
## 20                 52.49098                     NA            1.318731
## 21                 52.43238                     NA            1.318526
## 22                 52.41681                     NA            1.321599
## 23                 52.38504                     NA            1.319530
## 24                 52.39062                     NA            1.323194
## 25                 52.36253                     NA            1.325420
## 26                 52.57859                     NA            1.314234
## 27                 52.54492                     NA            1.317685
## 28                 52.54113                     NA            1.319745
## 29                 52.56147                     NA            1.318686
## 30                 52.53598                     NA            1.316235
## 31                 52.74822                     NA            1.316337
## 32                 52.74941                     NA            1.327006
## 33                 52.81291                     NA            1.328276
## 34                 52.74271                     NA            1.339798
## 35                 52.68783                     NA            1.338491
## 36                 52.67056                     NA            1.339427
## 37                 52.66726                     NA            1.334995
## 38                 52.71225                     NA            1.340660
## 39                 52.77857                     NA            1.327248
## 40                 52.70412                     NA            1.338143
## 41                 52.83022                     NA            1.330654
## 42                 52.79765                     NA            1.309328
## 43                 52.79903                     NA            1.311972
```

```
## 44                 52.78936                          NA             1.315802
## 45                 52.84692                          NA             1.315601
## 46                 52.97364                          NA             1.314317
## 47                 52.87408                          NA             1.320971
## 48                 52.89586                          NA             1.318501
## 49                 52.81900                          NA             1.324355
## 50                 52.73925                          NA             1.329244
## 51                 52.77518                          NA             1.322349
## 52                 52.77600                          NA             1.320845
## 53                 52.81811                          NA             1.321982
## 54                 52.82038                          NA             1.324095
## 55                 52.66445                          NA             1.328738
## 56                 53.03101                          NA             1.318557
## 57                 53.02658                          NA             1.314429
## 58                 53.08897                          NA             1.311937
## 59                 53.04318                          NA             1.310638
## 60                 53.07158                          NA             1.307595
## 61                 53.07162                          NA             1.309282
## 62                 53.29433                          NA             1.305736
## 63                 53.29407                          NA             1.303815
## 64                 53.29099                          NA             1.305233
## 65                 53.33689                          NA             1.300071
## 66                 53.23003                          NA             1.298833
## 67                 53.31142                          NA             1.301456
## 68                 53.24420                          NA             1.315118
## 69                 53.28255                          NA             1.308633
## 70                 53.20727                          NA             1.307690
## 71                 53.19890                          NA             1.303245
## 72                 53.14845                          NA             1.313769
## 73                 53.07222                          NA             1.313351
## 74                 53.05688                          NA             1.323733
## 75                 52.99614                          NA             1.321142
## 76                 52.92667                          NA             1.315226
## 77                 53.07205                          NA             1.322089
## 78                 53.00398                          NA             1.314134
## 79                 52.94989                          NA             1.319247
## 80                 52.91450                          NA             1.319637
## 81                 52.67278                          NA             1.316082
## 82                 52.55380                          NA             1.314901
## 83                 52.43583                          NA             1.319401
## 84                 52.41333                          NA             1.312971
## 85                 52.37800                          NA             1.311875
## 86                 52.32565                          NA             1.309747
## 87                 52.52184                          NA             1.306939
## 88                 52.47629                          NA             1.300588
## 89                 52.50252                          NA             1.319418
## 90                 52.47558                          NA             1.321204
##     national_voteshare_inc_hi national_voteshare_chal_hi
## 1                   50.76155                   56.91839
## 2                   50.75557                   56.87645
## 3                   50.70728                   56.78292
## 4                   50.74532                   56.80884
## 5                   50.43880                   57.08401
## 6                   50.49995                   57.11697
```

```
## 7                      50.48808                   57.27232
## 8                      50.45963                   57.18472
## 9                      50.45788                   57.17679
## 10                     50.51525                   57.06075
## 11                     50.59136                   57.03696
## 12                     50.46551                   57.04149
## 13                     50.53724                   57.08716
## 14                     50.68077                   57.06306
## 15                     50.63273                   57.21465
## 16                     50.49768                   57.17666
## 17                     50.64245                   57.13207
## 18                     50.70852                   57.11084
## 19                     50.83683                   57.10124
## 20                     50.86157                   57.14674
## 21                     50.95182                   57.08838
## 22                     50.90287                   57.07491
## 23                     51.01738                   57.09568
## 24                     51.04249                   57.13195
## 25                     51.07544                   57.09853
## 26                     50.79708                   57.24018
## 27                     50.85131                   57.25592
## 28                     50.89564                   57.26371
## 29                     50.86026                   57.29603
## 30                     50.89336                   57.31334
## 31                     50.53705                   57.31424
## 32                     50.57730                   57.41732
## 33                     50.51357                   57.47815
## 34                     50.67381                   57.51265
## 35                     50.72295                   57.42074
## 36                     50.81696                   57.41073
## 37                     50.81271                   57.48201
## 38                     50.77929                   57.56994
## 39                     50.78386                   57.56590
## 40                     50.84897                   57.62970
## 41                     50.79581                   57.76260
## 42                     50.81057                   57.69178
## 43                     50.83132                   57.75053
## 44                     50.84206                   57.76880
## 45                     50.77852                   57.80231
## 46                     50.58324                   57.78214
## 47                     50.81122                   57.86454
## 48                     50.83285                   57.92501
## 49                     50.96870                   57.89326
## 50                     51.06208                   57.84136
## 51                     51.00501                   57.90038
## 52                     51.00532                   57.83777
## 53                     50.98801                   57.89178
## 54                     50.93465                   57.89341
## 55                     51.19341                   57.79437
## 56                     50.38384                   57.78221
## 57                     50.45331                   57.82705
## 58                     50.39472                   57.87640
## 59                     50.45094                   57.82728
## 60                     50.48866                   57.95334
```

```
## 61                     50.48285                       57.91264
## 62                     50.07216                       57.93801
## 63                     50.07193                       57.91077
## 64                     50.05018                       57.91059
## 65                     50.07875                       58.02941
## 66                     50.17564                       57.90521
## 67                     50.10804                       58.01170
## 68                     50.26096                       57.99630
## 69                     50.19436                       58.07500
## 70                     50.30505                       57.97070
## 71                     50.29456                       57.98159
## 72                     50.37589                       57.97366
## 73                     50.51035                       57.92015
## 74                     50.49227                       57.91314
## 75                     50.54545                       57.88606
## 76                     50.55040                       57.72252
## 77                     50.35146                       57.85870
## 78                     50.44640                       57.77147
## 79                     50.44556                       57.68588
## 80                     50.50735                       57.66437
## 81                     50.75439                       57.43367
## 82                     50.85634                       57.30523
## 83                     50.99332                       57.17598
## 84                     51.05724                       57.18650
## 85                     51.04198                       57.07314
## 86                     51.10926                       57.06739
## 87                     50.82633                       57.19538
## 88                     50.83650                       57.11295
## 89                     50.94933                       57.25562
## 90                     50.93565                       57.19166
##    national_voteshare_3rd_hi nat_voteshare_other_hi national_voteshare_inc_lo
## 1                        NA               2.051201                  41.77486
## 2                        NA               2.055656                  41.81157
## 3                        NA               2.031385                  41.89773
## 4                        NA               2.043283                  41.88205
## 5                        NA               2.018928                  41.62480
## 6                        NA               2.018909                  41.58252
## 7                        NA               2.018991                  41.44489
## 8                        NA               2.007976                  41.51054
## 9                        NA               2.007226                  41.53521
## 10                       NA               1.995835                  41.65974
## 11                       NA               2.001753                  41.68420
## 12                       NA               1.993258                  41.67652
## 13                       NA               1.995751                  41.63440
## 14                       NA               2.005195                  41.68126
## 15                       NA               2.011152                  41.49172
## 16                       NA               2.015094                  41.51923
## 17                       NA               2.010199                  41.58178
## 18                       NA               2.027544                  41.56429
## 19                       NA               2.028735                  41.59494
## 20                       NA               2.034930                  41.55241
## 21                       NA               2.041819                  41.57322
## 22                       NA               2.040766                  41.58996
## 23                       NA               2.049613                  41.58004
```

```
## 24                  NA              2.040946              41.55771
## 25                  NA              2.043509              41.55804
## 26                  NA              2.051642              41.43733
## 27                  NA              2.043417              41.45840
## 28                  NA              2.046737              41.42797
## 29                  NA              2.046081              41.35671
## 30                  NA              2.039262              41.40097
## 31                  NA              2.040273              41.39065
## 32                  NA              2.056378              41.25378
## 33                  NA              2.047201              41.19240
## 34                  NA              2.069063              41.17569
## 35                  NA              2.060007              41.26720
## 36                  NA              2.067447              41.24988
## 37                  NA              2.060524              41.15303
## 38                  NA              2.080228              41.13475
## 39                  NA              2.062582              41.08658
## 40                  NA              2.074060              41.06457
## 41                  NA              2.062026              40.92534
## 42                  NA              2.041990              40.96729
## 43                  NA              2.044307              40.94530
## 44                  NA              2.055070              40.93320
## 45                  NA              2.064911              40.86111
## 46                  NA              2.057694              40.90490
## 47                  NA              2.058922              40.81569
## 48                  NA              2.064288              40.74932
## 49                  NA              2.064648              40.79765
## 50                  NA              2.071240              40.82366
## 51                  NA              2.069298              40.77045
## 52                  NA              2.061967              40.85560
## 53                  NA              2.067130              40.75243
## 54                  NA              2.085074              40.77628
## 55                  NA              2.070406              40.84578
## 56                  NA              2.045832              40.91089
## 57                  NA              2.047497              40.84191
## 58                  NA              2.047345              40.80989
## 59                  NA              2.046242              40.84299
## 60                  NA              2.040026              40.74539
## 61                  NA              2.045883              40.79374
## 62                  NA              2.030914              40.73306
## 63                  NA              2.031408              40.79256
## 64                  NA              2.030622              40.77088
## 65                  NA              2.029991              40.67146
## 66                  NA              2.029225              40.78851
## 67                  NA              2.035001              40.65841
## 68                  NA              2.056763              40.67317
## 69                  NA              2.048503              40.59536
## 70                  NA              2.031235              40.70179
## 71                  NA              2.028631              40.72705
## 72                  NA              2.045823              40.72630
## 73                  NA              2.051174              40.76797
## 74                  NA              2.059546              40.75835
## 75                  NA              2.061718              40.80315
## 76                  NA              2.055342              40.92510
## 77                  NA              2.051385              40.85883
```

```
## 78                       NA              2.051785                  40.89159
## 79                       NA              2.043238                  40.99991
## 80                       NA              2.038496                  41.04717
## 81                       NA              2.049852                  41.27679
## 82                       NA              2.047077                  41.38594
## 83                       NA              2.051627                  41.52457
## 84                       NA              2.049617                  41.49504
## 85                       NA              2.050900                  41.62245
## 86                       NA              2.035725                  41.62989
## 87                       NA              2.039343                  41.49159
## 88                       NA              2.027426                  41.60196
## 89                       NA              2.049306                  41.44363
## 90                       NA              2.042146                  41.49165
##     national_voteshare_chal_lo national_voteshare_3rd_lo nat_voteshare_other_lo
## 1                     47.88276                        NA              0.7007713
## 2                     47.90101                        NA              0.7022665
## 3                     47.98074                        NA              0.6946608
## 4                     47.91171                        NA              0.6934588
## 5                     48.26421                        NA              0.6764926
## 6                     48.18879                        NA              0.6792486
## 7                     48.20748                        NA              0.6702565
## 8                     48.20979                        NA              0.6636156
## 9                     48.24926                        NA              0.6572114
## 10                    48.17797                        NA              0.6552740
## 11                    48.12635                        NA              0.6547295
## 12                    48.22936                        NA              0.6494714
## 13                    48.18307                        NA              0.6515047
## 14                    48.06044                        NA              0.6544272
## 15                    48.07320                        NA              0.6589594
## 16                    48.21701                        NA              0.6632900
## 17                    48.04206                        NA              0.6602212
## 18                    47.97743                        NA              0.6663016
## 19                    47.85249                        NA              0.6627616
## 20                    47.82245                        NA              0.6770315
## 21                    47.72408                        NA              0.6778314
## 22                    47.74853                        NA              0.6818589
## 23                    47.65911                        NA              0.6830333
## 24                    47.63836                        NA              0.6809334
## 25                    47.58785                        NA              0.6848398
## 26                    47.88954                        NA              0.6713542
## 27                    47.84332                        NA              0.6747655
## 28                    47.76087                        NA              0.6751224
## 29                    47.80448                        NA              0.6773493
## 30                    47.77644                        NA              0.6756095
## 31                    48.10459                        NA              0.6791376
## 32                    48.10526                        NA              0.6823090
## 33                    48.15805                        NA              0.6911978
## 34                    48.00462                        NA              0.6958647
## 35                    47.95403                        NA              0.6963304
## 36                    47.85799                        NA              0.6928883
## 37                    47.82852                        NA              0.6884896
## 38                    47.90079                        NA              0.6927854
## 39                    47.88440                        NA              0.6800984
## 40                    47.79524                        NA              0.6910916
```

13

```
## 41                 47.89375              NA       0.6821630
## 42                 47.88055              NA       0.6704755
## 43                 47.86944              NA       0.6680883
## 44                 47.84240              NA       0.6671382
## 45                 47.90779              NA       0.6639907
## 46                 48.11746              NA       0.6696864
## 47                 47.87369              NA       0.6724886
## 48                 47.83879              NA       0.6674164
## 49                 47.72194              NA       0.6759626
## 50                 47.59866              NA       0.6713284
## 51                 47.68229              NA       0.6659154
## 52                 47.66722              NA       0.6737902
## 53                 47.69514              NA       0.6688289
## 54                 47.73086              NA       0.6621054
## 55                 47.48414              NA       0.6696514
## 56                 48.25012              NA       0.6748977
## 57                 48.23739              NA       0.6702497
## 58                 48.28157              NA       0.6673132
## 59                 48.25150              NA       0.6632474
## 60                 48.21278              NA       0.6615871
## 61                 48.19541              NA       0.6640405
## 62                 48.61784              NA       0.6649159
## 63                 48.59251              NA       0.6616051
## 64                 48.67001              NA       0.6599336
## 65                 48.61265              NA       0.6623695
## 66                 48.51783              NA       0.6553170
## 67                 48.58786              NA       0.6588315
## 68                 48.44623              NA       0.6635910
## 69                 48.48858              NA       0.6628679
## 70                 48.40547              NA       0.6615897
## 71                 48.41396              NA       0.6607718
## 72                 48.32314              NA       0.6591908
## 73                 48.17367              NA       0.6700203
## 74                 48.17007              NA       0.6750205
## 75                 48.15334              NA       0.6680158
## 76                 48.12600              NA       0.6673417
## 77                 48.30339              NA       0.6721538
## 78                 48.24353              NA       0.6686158
## 79                 48.22766              NA       0.6726680
## 80                 48.18432              NA       0.6725276
## 81                 47.92501              NA       0.6655345
## 82                 47.83714              NA       0.6707772
## 83                 47.69545              NA       0.6739508
## 84                 47.63892              NA       0.6684470
## 85                 47.62445              NA       0.6645366
## 86                 47.55882              NA       0.6656066
## 87                 47.87417              NA       0.6616863
## 88                 47.85891              NA       0.6611356
## 89                 47.74026              NA       0.6755669
## 90                 47.73165              NA       0.6759679
##                 timestamp simulations
## 1  19:00:02 29 Aug 2020        40000
## 2  19:00:03 28 Aug 2020        40000
## 3  19:00:04 27 Aug 2020        40000
```

```
## 4   19:01:03 26 Aug 2020          40000
## 5   23:50:03 25 Aug 2020          40000
## 6   20:38:02 24 Aug 2020          40000
## 7   19:00:03 23 Aug 2020          40000
## 8   19:00:03 22 Aug 2020          40000
## 9   19:26:02 21 Aug 2020          40000
## 10  19:00:04 20 Aug 2020          40000
## 11  23:52:08 19 Aug 2020          40000
## 12  19:23:03 18 Aug 2020          40000
## 13  22:43:02 17 Aug 2020          40000
## 14  20:17:02 16 Aug 2020          40000
## 15  19:00:05 15 Aug 2020          40000
## 16  19:00:02 14 Aug 2020          40000
## 17  21:50:04 13 Aug 2020          40000
## 18  23:41:03 12 Aug 2020          40000
## 19  19:08:03 11 Aug 2020          40000
## 20  23:50:02 10 Aug 2020          40000
## 21  10:15:37 10 Aug 2020          40000
## 22  10:19:17 10 Aug 2020          40000
## 23  10:19:37 10 Aug 2020          40000
## 24  10:19:52 10 Aug 2020          40000
## 25  10:19:56 10 Aug 2020          40000
## 26  10:22:17 10 Aug 2020          40000
## 27  10:25:40 10 Aug 2020          40000
## 28  10:26:03 10 Aug 2020          40000
## 29  10:26:11 10 Aug 2020          40000
## 30  10:26:36 10 Aug 2020          40000
## 31  10:28:57 10 Aug 2020          40000
## 32  10:32:02 10 Aug 2020          40000
## 33  10:32:31 10 Aug 2020          40000
## 34  10:32:26 10 Aug 2020          40000
## 35  10:33:13 10 Aug 2020          40000
## 36  10:35:37 10 Aug 2020          40000
## 37  10:38:25 10 Aug 2020          40000
## 38  10:38:51 10 Aug 2020          40000
## 39  10:38:41 10 Aug 2020          40000
## 40  10:39:48 10 Aug 2020          40000
## 41  10:42:12 10 Aug 2020          40000
## 42  10:44:46 10 Aug 2020          40000
## 43  10:45:11 10 Aug 2020          40000
## 44  10:44:52 10 Aug 2020          40000
## 45  10:46:23 10 Aug 2020          40000
## 46  10:48:47 10 Aug 2020          40000
## 47  10:51:08 10 Aug 2020          40000
## 48  10:51:31 10 Aug 2020          40000
## 49  10:51:04 10 Aug 2020          40000
## 50  10:52:57 10 Aug 2020          40000
## 51  10:55:24 10 Aug 2020          40000
## 52  10:57:25 10 Aug 2020          40000
## 53  10:57:48 10 Aug 2020          40000
## 54  10:57:16 10 Aug 2020          40000
## 55  10:59:26 10 Aug 2020          40000
## 56  11:01:55 10 Aug 2020          40000
## 57  11:03:40 10 Aug 2020          40000
```

```
## 58 11:04:06 10 Aug 2020        40000
## 59 11:03:27 10 Aug 2020        40000
## 60 11:05:57 10 Aug 2020        40000
## 61 11:08:25 10 Aug 2020        40000
## 62 11:09:55 10 Aug 2020        40000
## 63 11:10:24 10 Aug 2020        40000
## 64 11:09:37 10 Aug 2020        40000
## 65 11:12:25 10 Aug 2020        40000
## 66 11:14:55 10 Aug 2020        40000
## 67 11:16:09 10 Aug 2020        40000
## 68 11:16:41 10 Aug 2020        40000
## 69 11:15:47 10 Aug 2020        40000
## 70 11:18:56 10 Aug 2020        40000
## 71 11:21:24 10 Aug 2020        40000
## 72 11:45:11 10 Aug 2020        40000
## 73 11:46:38 10 Aug 2020        40000
## 74 11:47:02 10 Aug 2020        40000
## 75 11:25:22 10 Aug 2020        40000
## 76 11:27:55 10 Aug 2020        40000
## 77 11:51:25 10 Aug 2020        40000
## 78 11:52:52 10 Aug 2020        40000
## 79 11:22:22 10 Aug 2020        40000
## 80 11:31:50 10 Aug 2020        40000
## 81 11:34:24 10 Aug 2020        40000
## 82 11:57:35 10 Aug 2020        40000
## 83 11:59:04 10 Aug 2020        40000
## 84 11:28:26 10 Aug 2020        40000
## 85 11:47:23 10 Aug 2020        40000
## 86 11:40:55 10 Aug 2020        40000
## 87 12:03:40 10 Aug 2020        40000
## 88 11:24:29 10 Aug 2020        40000
## 89 11:34:32 10 Aug 2020        40000
## 90 11:53:49 10 Aug 2020        40000
```

Data Frame

Here is a subset of the data available in the above mentioned link.

```
Poll <- read.csv('https://projects.fivethirtyeight.com/2020-general-data/presidential_national_toplines_
retval <- subset(Poll, ev_inc_hi>="341")
print(retval)
```

```
##    cycle    branch       model modeldate candidate_inc candidate_chal
## 24  2020 President polls-plus  8/6/2020         Trump          Biden
## 25  2020 President polls-plus  8/5/2020         Trump          Biden
##    candidate_3rd ecwin_inc ecwin_chal ecwin_3rd ec_nomajority popwin_inc
## 24            NA  0.293200   0.703325        NA      0.003475   0.199275
## 25            NA  0.297725   0.698925        NA      0.003350   0.202450
##    popwin_chal popwin_3rd   ev_inc  ev_chal ev_3rd ev_inc_hi ev_chal_hi
## 24    0.800725         NA 216.8208 321.1793     NA       341        433
## 25    0.797550         NA 217.5150 320.4850     NA       341        433
##    ev_3rd_hi ev_inc_lo ev_chal_lo ev_3rd_lo national_voteshare_inc
## 24        NA       105        197        NA               46.28619
## 25        NA       105        197        NA               46.31205
##    national_voteshare_chal national_voteshare_3rd nat_voteshare_other
```

```
## 24                   52.39062                         NA            1.323194
## 25                   52.36253                         NA            1.325420
##    national_voteshare_inc_hi national_voteshare_chal_hi
## 24                  51.04249                   57.13195
## 25                  51.07544                   57.09853
##    national_voteshare_3rd_hi nat_voteshare_other_hi national_voteshare_inc_lo
## 24                        NA               2.040946                  41.55771
## 25                        NA               2.043509                  41.55804
##    national_voteshare_chal_lo national_voteshare_3rd_lo nat_voteshare_other_lo
## 24                   47.63836                        NA              0.6809334
## 25                   47.58785                        NA              0.6848398
##             timestamp simulations
## 24 10:19:52 10 Aug 2020       40000
## 25 10:19:56 10 Aug 2020       40000
```

Conclusions

From the data collected we can conclude that Biden has more chances of winning when compared to Trump. Trump's chance of winning is 30 in 100 whereas Biden's chance of winning is 69 in 100