UC Berkeley Python class AY250

## Homework 6 Data(de)basing the 2012 Election

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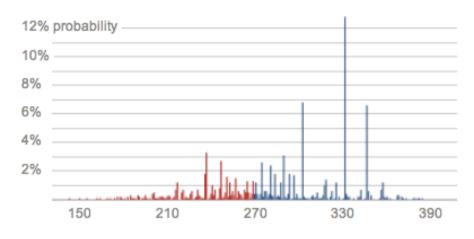
In this assignment we will create a database to analyze prediction data for the **2012 Presidential Election** 

The goal is to pull all of the prediction data for each state and the general election itself into a local database to determine:

- a) how closely does the general election price match a prediction calculated from the individual state prices?
  - b) how closely do the intrade predictions match Nate Silver's?

## **Electoral Vote Distribution**

The probability that President Obama receives a given number of Electoral College votes.



http://fivethirtyeight.blogs.nytimes.com/



## Democratic nominee to win Colorado

Last prediction was: \$4.74 / share

Today's Change: A +\$0.24 (+5.3%)

Contract Type: 0-100 ②

47.4%

CHANCE



Interpret price as probability in percent



Obama Electoral votes

**28**1

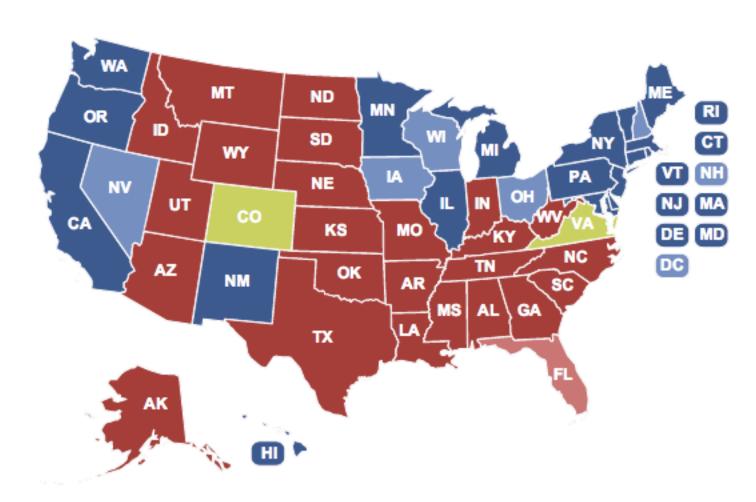
Solid: 234 Leaning: 4 Needs to win 0 35

Solid: 206 Leaning: 29 235

Romney Electoral votes



Tossup (22)



http://www.intrade.com/v4/misc/electoral-map/#

a) create a table called "election" and populate it with state name, electoral votes, and intrade contract id

State	contractID	electoral
Colorado	745726	9
California	745723	55
•••	•••	•••
general	743474	

see <a href="http://en.wikipedia.org/wiki/Electoral\_College\_(United\_States)#Current\_electoral\_vote\_distribution">http://en.wikipedia.org/wiki/Electoral\_College\_(United\_States)#Current\_electoral\_vote\_distribution</a>

b) create a table called "prediction" and populate it with all of the intrade closing data for each state and for the general election itself

http://api.intrade.com/jsp/XML/MarketData/ClosingPrice.jsp?conID=745726

see <a href="http://www.intrade.com/v4/misc/help/api/">http://www.intrade.com/v4/misc/help/api/</a>

```
view-source:api.intrade.com/jsp/XML/MarketData/ClosingPrice.jsp?conID=745726
Click to go back, hold to see history ncoding="UTF-8"?>
   <ClosingPrice timestamp="1350280611465">
       <cp date="8:02AM 02/07/12 GMT" dt="1328601727000" openInterest="2" price="50.0"</pre>
            sessionHi="53.0"
           sessionLo="50.0"/>
 5
       <cp date="8:02AM 02/08/12 GMT" dt="1328688126000" openInterest="12" price="67.0"</pre>
 6
            sessionHi="67.0"
 7
            sessionLo="67.0"/>
 8
       <cp date="8:02AM 02/09/12 GMT" dt="1328774520000" openInterest="12" price="67.0"</pre>
 9
            sessionHi=""
 10
           sessionLo=""/>
 11
       <cp date="8:02AM 02/10/12 GMT" dt="1328860920000" openInterest="12" price="67.0"</pre>
 12
            sessionHi=""
 13
           sessionLo=""/>
 14
       <cp date="8:01AM 02/11/12 GMT" dt="1328947305000" openInterest="12" price="67.0"</pre>
 15
            sessionHi=""
 16
           sessionLo=""/>
 17
       <cp date="8:01AM 02/12/12 GMT" dt="1329033707000" openInterest="12" price="67.0"
sessionHi=""
Use beautifulsoup to</pre>
 18
            sessionHi=""
 19
           sessionLo=""/>
 20
       sessionLo=""/>
cp date="8:01AM 02/13/12 GMT" dt="1329120119000" openInterest="12" price="67.0"
 21
            sessionHi=""
 22
           sessionLo=""/>
 23
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 24
            sessionHi="70.0"
 25
           sessionLo="70.0"/>
 26
       <cp date="8:01AM 02/15/12 GMT" dt="1329292915000" openInterest="13" price="70.0"</pre>
 27
            sessionHi=""
 28
           sessionLo=""/>
 29
       <cp date="8:01AM 02/16/12 GMT" dt="1329379317000" openInterest="13" price="70.0"</pre>
 30
           sessionHi=""
 31
           sessionLo=""/>
 32
       <cp date="8:01AM 02/17/12 GMT" dt="1329465714000" openInterest="13" price="70.0"</pre>
 33
           sessionHi=""
 34
           sessionLo=""/>
 35
       <cp date="8:01AM 02/18/12 GMT" dt="1329552096000" openInterest="13" price="70.0"</pre>
 36
```

c) simulate 10,000 elections using the prediction probabilities today. Plot the histogram of electoral college votes for Obama. Compare the fraction of elections won by Obama to today's general election probability in intrade and at fivethirtyeight.

Repeat this for predictions on July 1, Sept 1, and Oct 1. You should store your simulation results in another db table.

- d) discuss why your simulated predictions from the electoral college might be different than the general election/538 predictions.
- e) try to alter the simulations in c) such that any state where p<40% or p>60% is fixed for the current favorite. Try weighting by trade volume.