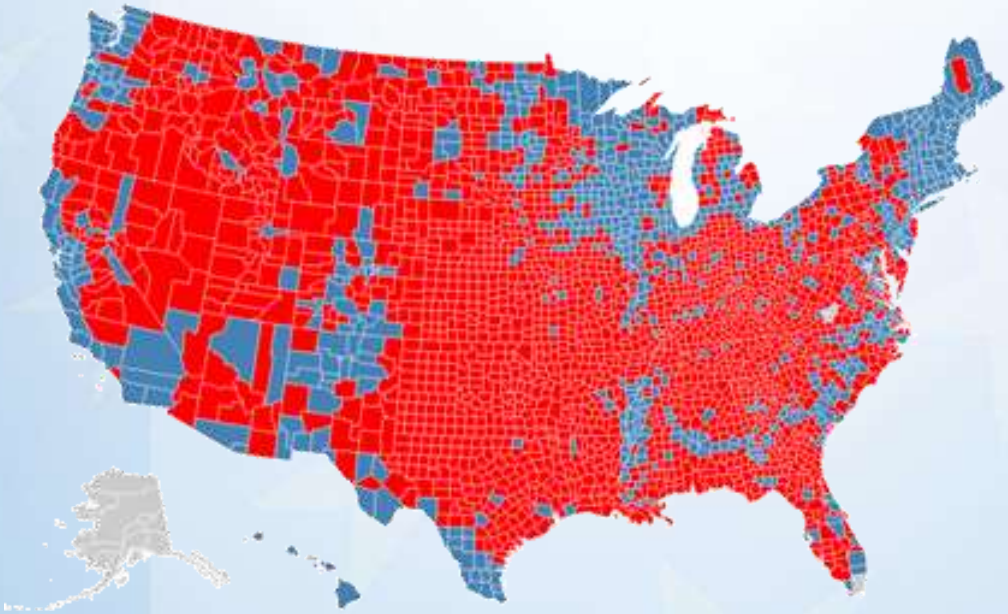
US Presidential Elections 2016

Vikram Hegde, Loris D'Acunto, Subhashini Raghunathan

1st ITERATION

Click on the county to change the party



2008	2012	**2016**

Move the sliders to the filters the counties

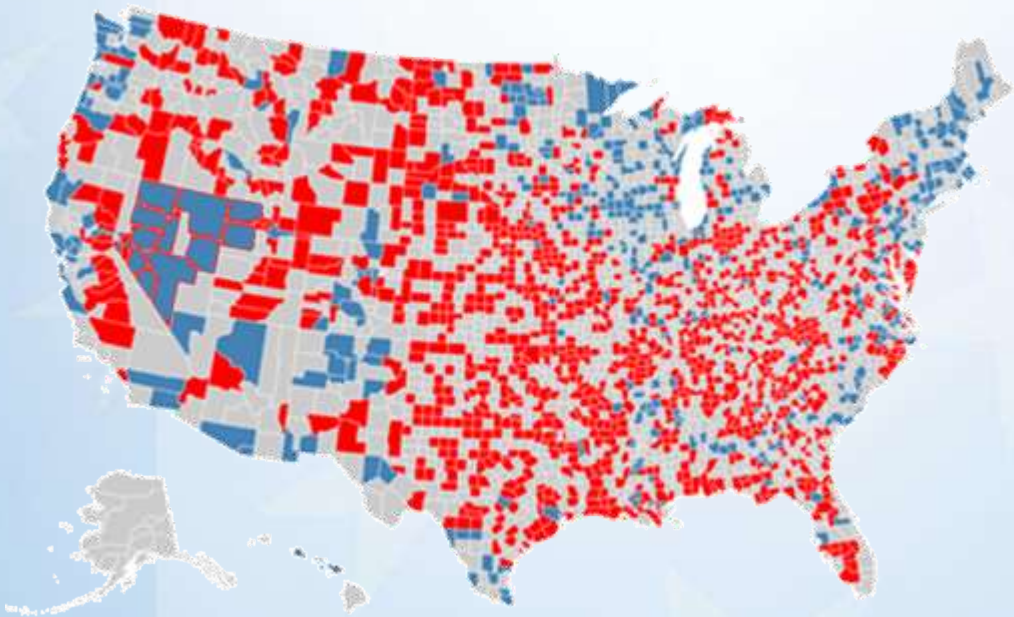
Population	% Hispanic	Avg income	Educ level
H	H	H	H
L	L	L	L

332

206

1st ITERATION (contd.)

Click on the county to change the party



2008	2012	**2016**

Move the sliders to the filters the counties

Population	% Hispanic	Avg income	Educ level
H	H	H	H
L	L	L	L

337 √

201

ISSUES WITH 1st VERSION

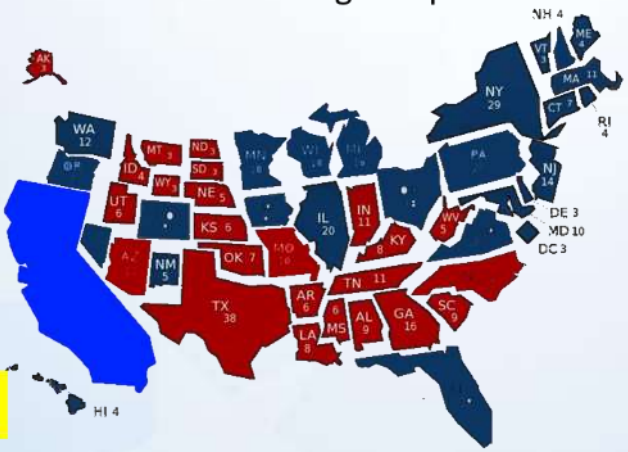
- Required users to change results of one county at a time – laborious and lot of county changes needed
- County level not aligned with electoral college – state level is better
- Size of county misleading
- Focus the viz on one dimension like race – too many degrees of freedom
- Not clear who is the winner – red color more evident than the blue
- Required lots of text to explain the visualization
- Instructors feedback to include supporting viz - bar charts

2nd ITERATION

2016

Historical

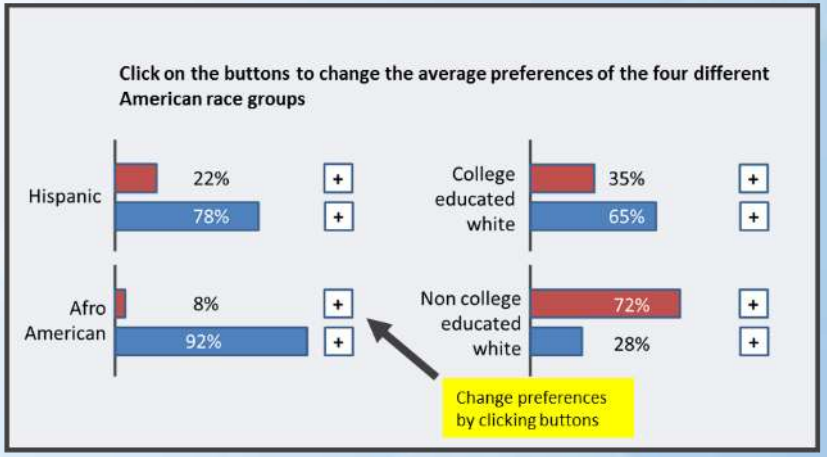
2016 Electoral College Map



Click on the state to see the details

Republicans vote: 2,232,656
Democrats vote: 4,727,234
White college educated: 1,232,122
... ...

History



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ISSUES WITH 2nd Version

- Instructor feedback - Impossible to scale states in proportion to their EC tally without states that are too small (Idaho, North Dakota) and states that are too large (California).

- Proportional symbol map:
  - https://bl.ocks.org/mbostock/4342045
  - Issues: Some symbols (circles) overlap (on the east coast)

- Cartogram heat-map: https://github.com/hrbrmstr/statebins
  - Issues: Too abstract, we wanted something more map like.

- Finally decided on proportional symbol map with symbol jittering

3rd ITERATION (Pre-Usability)

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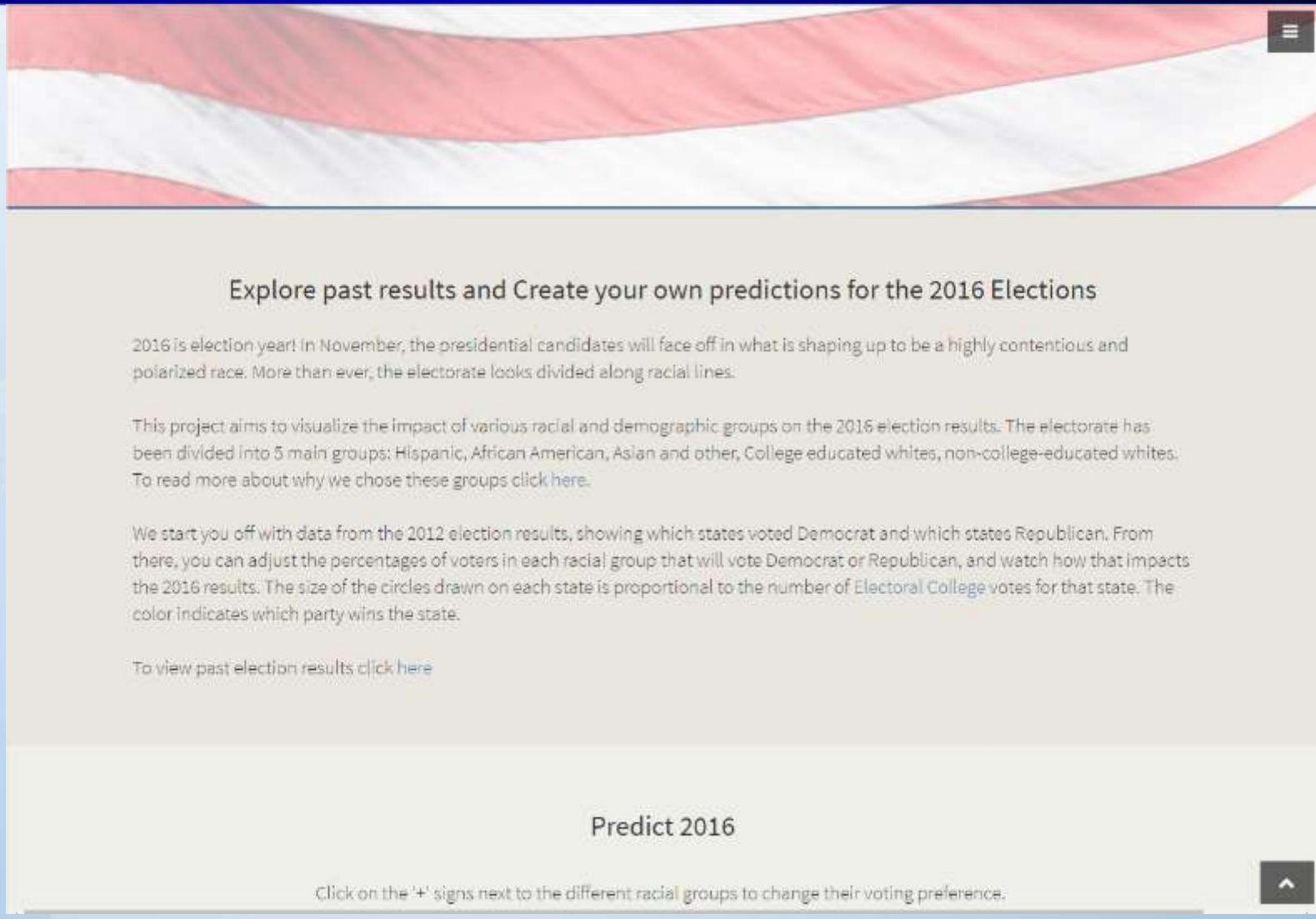
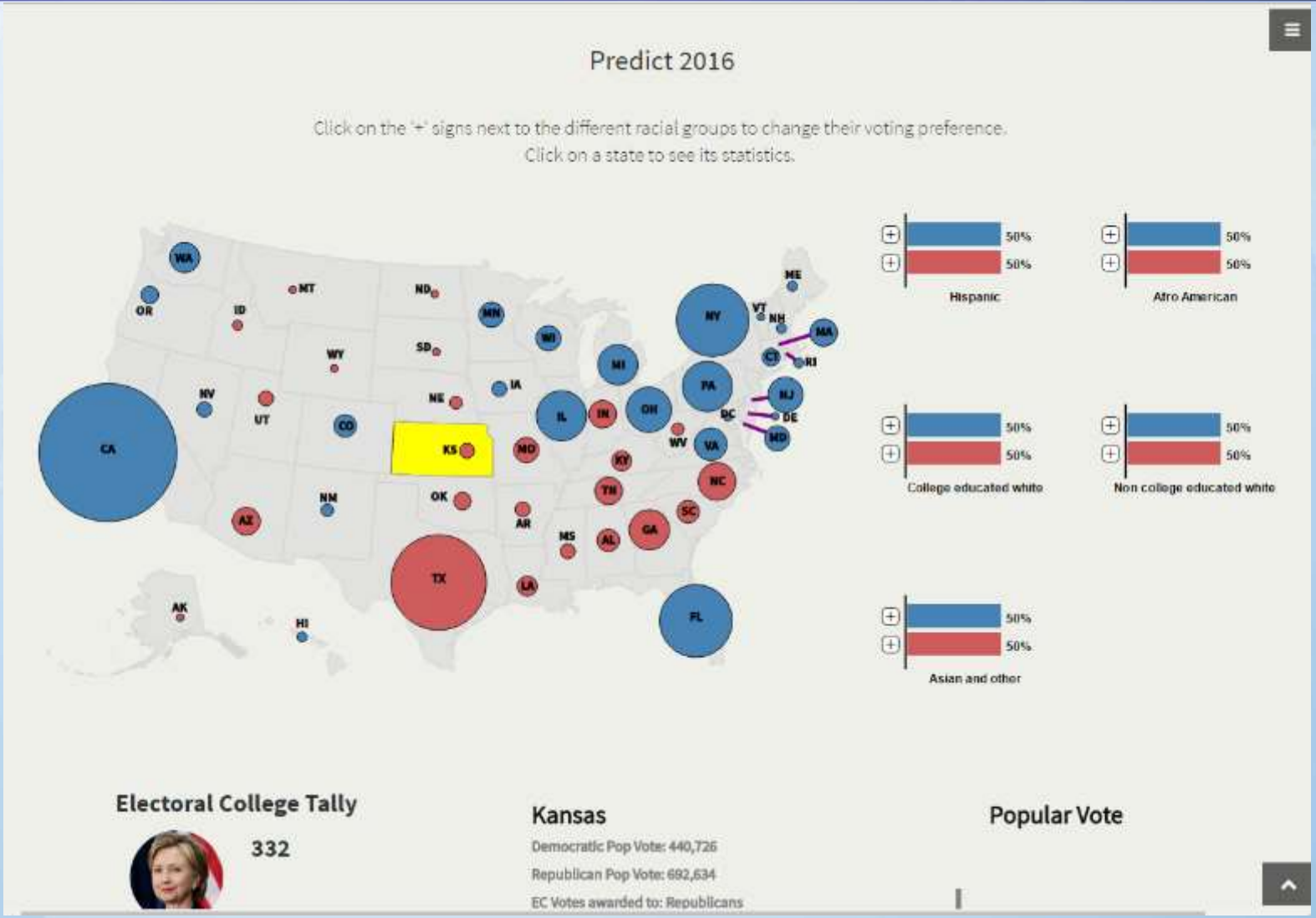


3rd ITERATION (Pre-Usability)



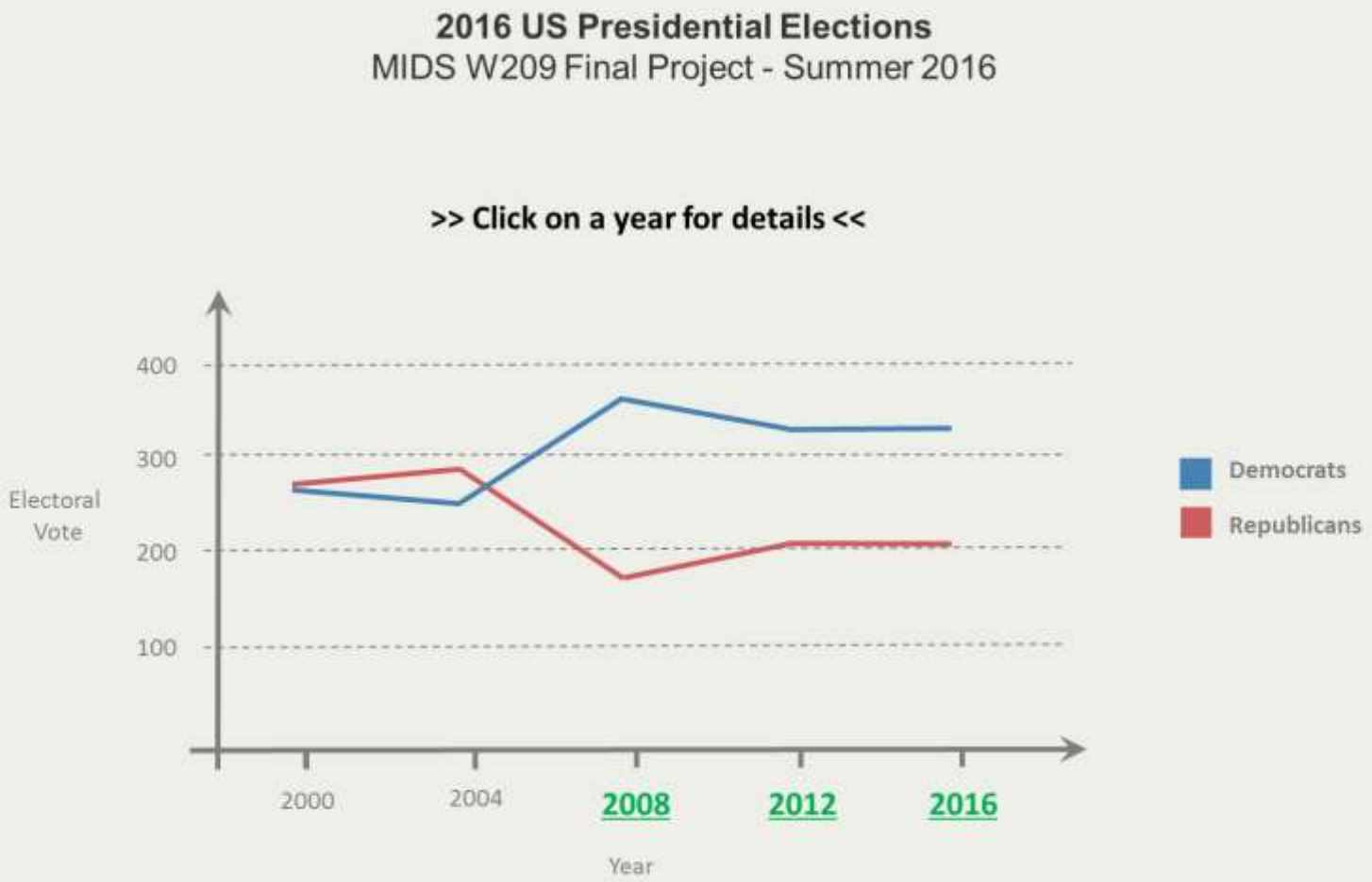
USABILITY TEST

15 users tested the visualization

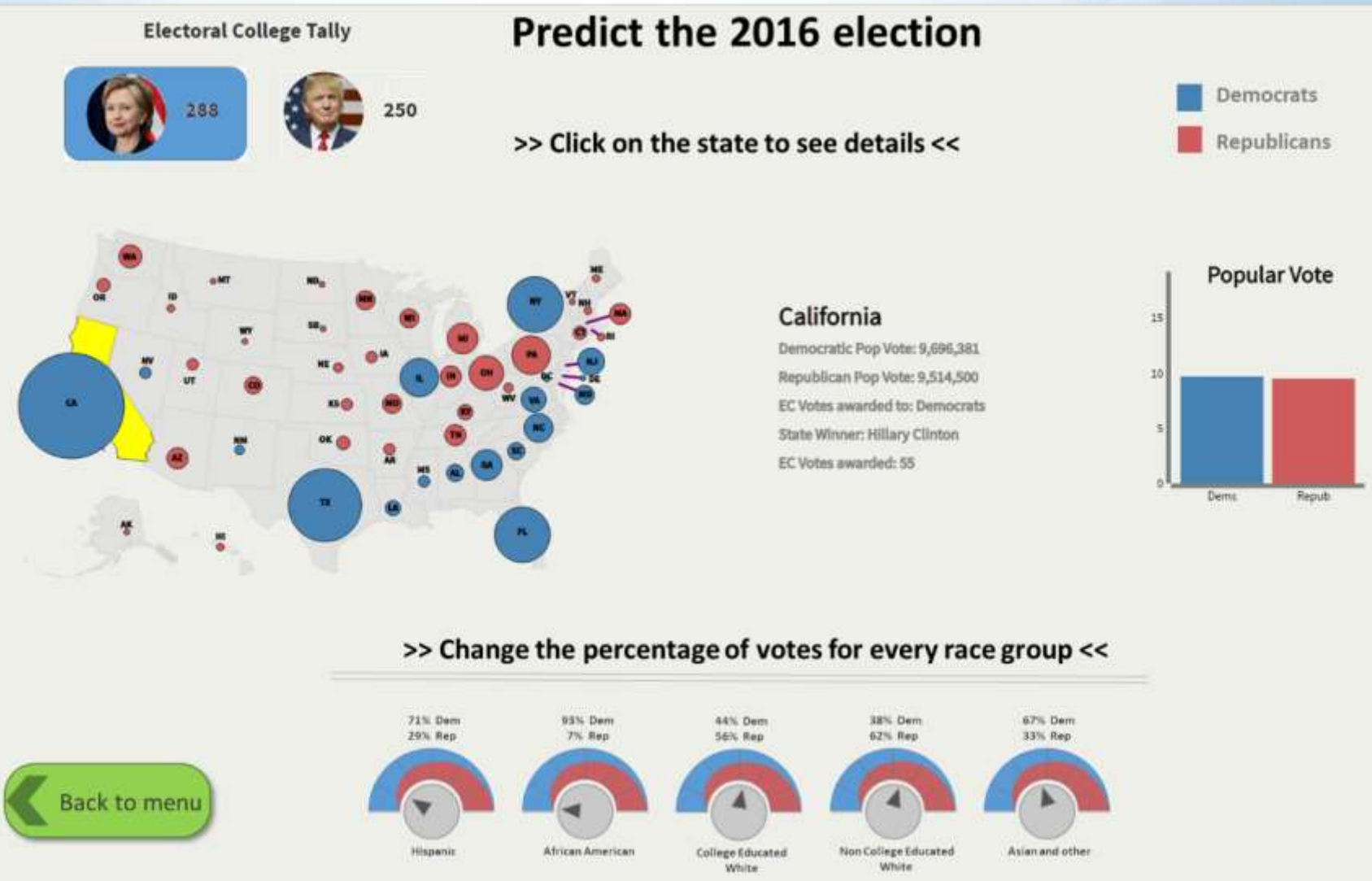
Major Findings:

a. Navigation is complex with a single page scrolling
b. Users don’t like/read large block of text at beginning
c. Purpose of race controls is not obvious
d. Meaning of colors is unclear
    a. Red and blue for which party?
    b. Yellow for the selected state
e. Winner is not evident

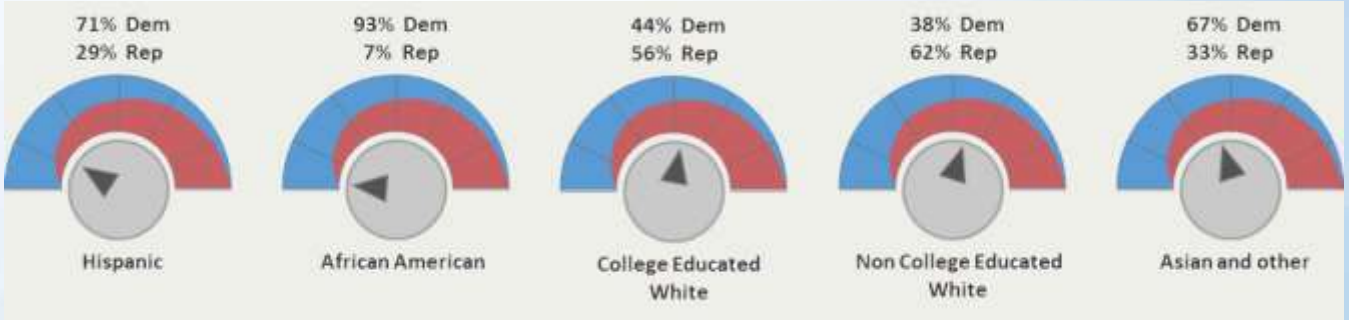
USABILITY IMPROVEMENTS - Home



USABILITY IMPROVEMENTS



USABILITY IMPROVEMENTS



USABILITY IMPROVEMENTS

- Remove the initial flag and the text
- Add an initial menu with the shape of a line chart showing Democratic vs Republican performance over the years
- For 2008, 2012 and 2016 observations – a link to the visualization
- Add explicit navigation buttons rather than scrolling
- Small snippets of text integrated with the visualization
- Legend for colors
- Change the shape of the race controllers to catch attention
- Winner is more evident with a highlighting box

Choice of Technology

- D3 + Javascript + SVG/CSS/HTML + Bootstrap
- Why ?
  1. Point and click software like Tableau too limiting - not all visualizations supported
  2. Need more flexible ways of linking data to visual elements - D3's binding data to SVG elements very natural.
  3. All three of us are programmers
     a. Prefer fine grained control over canned coarse grain
     b. Prefer programming to point and click

DEMO

LIVE DEMO

http://people.ischool.berkeley.edu/~subhashini.r/

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