Zoher Ghadyali & Isaac Getto
Data Science Spring 2016
CTW Project Proposal

Project Team
Isaac Getto and Zoher Ghadyali are on this project team.

Overview
Our main idea for this project is that Congress today has an approval rating of 9% among the American people so we want to look at the state Congress is in today, from campaign finance, lobbyist, and political efficacy and influence perspectives. We are not sure yet the story we want to tell which will be driven by our explorations with the data but ultimately, we want to educate the average voter on what Congress is like now and what avenues they have to change it, if they wish.

Our MVP is
to tell a cohesive story about the Congress we have elected today. We will not be creating visualizations in isolation but making the insights from them explicit to the viewer in order to weave them together to tell a story. Below are some examples of visualizations we would like to make over the course of this project that may or may not make their way into our infographic:

- bubble plot of how influential congressmen are (which committees are they on, how many bills they have sponsored, how many of those have passed)
- relationship between congressmen, voting record, special interests/lobbies, and campaign finances during that congressman's reelection
- with more of a machine-learning bend, looking at the voting record of an individual and like-minded individuals in Congress, predict how they would vote on another issue
- compare voting record to party principles and determine whether or not individuals in Congress have become more polarized by party

Stretch Goals
One major stretch goal would be to create visualizations for Congress today and for Congresses in the past and see how they change over time. This could help us answer the question of why Congress's approval rating is as low as it is today and whether or not any of the factors we explored above are correlated or the cause of this.

Change the World

We are among the most politically apathetic generation America has ever seen. Our project will shed light on the influences on the process of how a bill becomes a law and motivate people to become more engaged with their representatives and the policies they support. We want people, especially the young voter who is statistically likely to not vote in a Congressional election, to be aware of the problems in Congress today and their ability to change them.

Individual Learning Goals
- Zoher:
  - creating interactive and easy to understand visualizations
  - working with multiple uncleaned data sources and formatting them in such a way that they can be merged and used easily
- Isaac:
  - Clustering, unsupervised learning
  - Data visualization techniques

Data Sources
- https://legiscan.com/US/datasets
- https://www.govtrack.us/congress/votes
- http://www.fec.gov/finance/disclosure/ftpdet.shtml#a2015_2016

Final Deliverable

Our final deliverable is to create a well-designed and persuasive infographic telling a story about Congress using various visualizations.

Workflow and Schedule
- What will your workflow be while working on this project? How will this workflow support successful collaboration with your teammate?
  - use separate iPython notebooks to understand and interpret the data, mock up visualizations
  - iteratively show the visualizations in our infographic to people, get feedback on the design and our storytelling in weaving the visualizations togethers

- Where are you planning to be with this project by the mid-project checkin? (Think about this carefully, I'm going to ask you to report on how this went).
  - We will have a strong idea of what the story we are telling is and we will know which visualizations will be included in the final deliverable
  - Around half of the necessary visualizations will be complete

Assessment

Our final deliverable should be assessed from a design perspective, a visualization perspective, and a persuasion perspective. We want to provide a look at the current state of Congress and we want to incite in our viewer the purpose of Congress, the influence it wields, and their ability as a voter in a democracy to change it. We don't want to show a bias for a particular party, but portray a data-driven perspective on the role campaign finance, lobbyists, party alignment, and voting record play in Congress for individual congressmen.