

WebDB Project Plan

Phineas Callahan, Yuping Huang

January 26, 2016

1 The Data

The datasets we are planning to use contain the results of all American congressional, gubernatorial and presidential elections. The data comes from CQ Press Voting and Elections Collection (<http://library.cqpress.com/elections/index.php>) in the form of CSV files. On the “Download Data” page (<http://library.cqpress.com/elections/download-data.php>), one has to agree to the condition “these data are to be used for scholarly, educational, or personal use only” before proceeding to download. Henceforth academic use of the data should be permitted.

2 The Audience

The intended audience of this project (the data and the query interface) are those who are interested in electoral politics, especially its evolution over time. Possible examples include researchers who want to understand historical voting trends in different regions, students who are studying the change of voters’ behaviors over time, political campaign managers who seek to optimize their campaign strategy, and voters who are interested in the performances of different parties and politicians in the past.

3 Functional& Non-functional Requirements

The WebDB project is conceived to have the following functional requirements:

1. The system must store all the available congressional, gubernatorial and presidential data by county and congressional district from CQPress.
2. The system must allow the users to select data based on locations and/or years.
3. The system must provide appropriate visualizations for the selected dataset.
4. The system must provide appropriate analytics for the selected dataset.
5. The system must give users the option to retrieve selected data (might be hard in terms of generating csv and the link to download)

Besides, to support its functional requirements, we have specified the following non-functional requirements:

1. The system must be accessible to users who are not able to manipulate a mouse.
2. The UI must run cleanly and smoothly.
3. The system must be accessible to users with restricted color vision.

4 Key Features

The WebDB project should have the following features. The list is ordered in decsending priority. Time and resources permitting, we aim to implement all of them.

1. Navigation through a series of click-able maps.
2. The ability to manually type in a query.
3. Time series plotted, demonstrating how the nation, or its respective states and counties have changed their voting patterns over time.
4. Pie charts breaking down election results for a requested year.
5. The ability to download data visualizations.

5 UI Mockup

This project will be a single page web app that contains a landing page and the actual app itself. Two pdf's detailing the layout of these pages shown below.

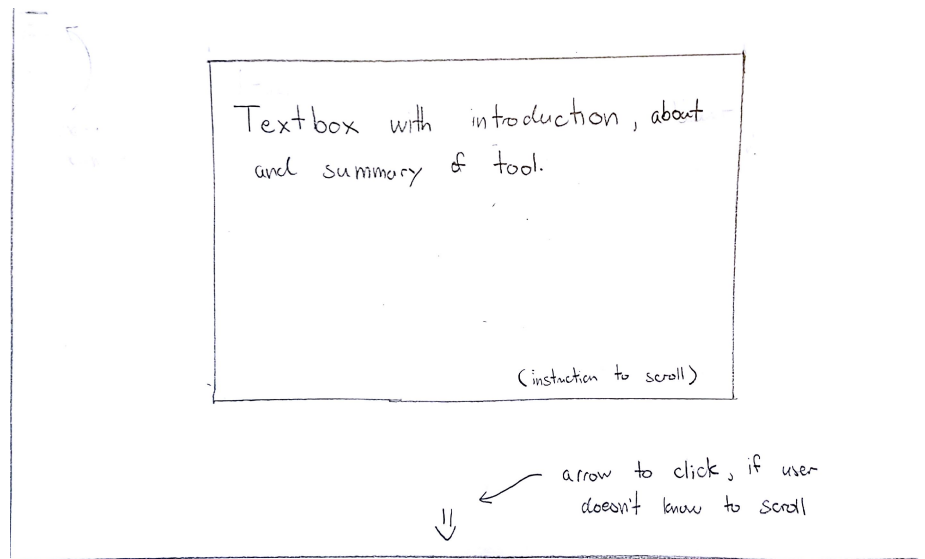


Figure 1: The landing page of the web app, containing information about the app. User can either scroll down or click on the arrow to get to the app interface.

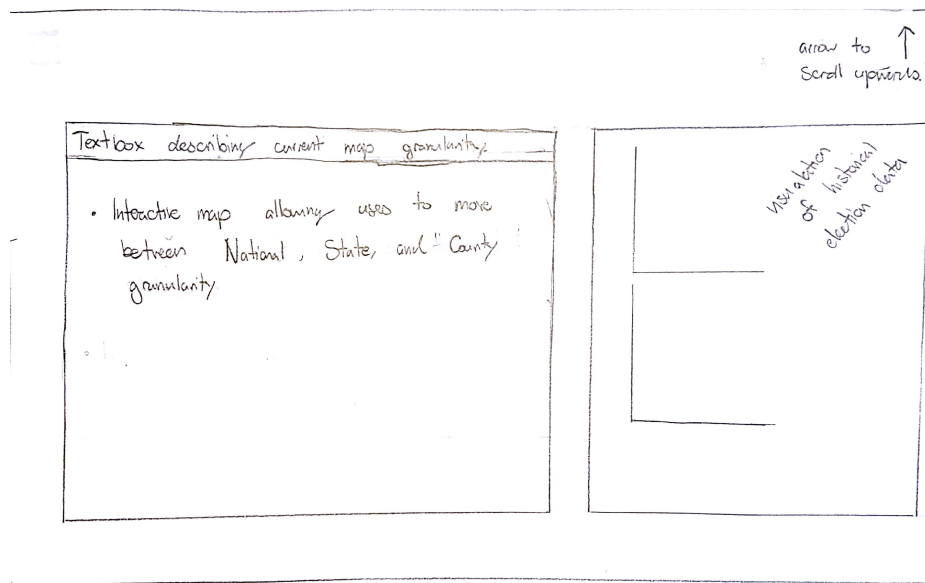


Figure 2: The actual app interface. The main interface will be an interactive map. The textbox above the map will double as a keyboard accessible interface and a way to display the regions current region and year. The charts and analytics shows up in the right panel.