Project Proposal

Basic Information:

Title: Discovering your Family

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Repository Link: https://github.com/devcom15/dataviscourse-pr-family_exploration

Background and Motivation:

Families and genealogy are very important to many peoples, cultures and religions. Several studies show that there are many benefits associated with getting to know our families and its history better. For example, a study conducted at Emory University and published in 2010 involved asking children a range of questions about their parents or other family history. The authors found that the more children knew about their family history, the higher their self-esteem and the better able they were to deal with the effects of stress.
(http://shared.web.emory.edu/emory/news/releases/2010/03/children-benefit-if-they-know-about-their-relatives-study-finds.html#.WfKU-mhSwUF) .

Another problem families may face is that it may be difficult to keep track of who everyone is (particularly extended family), what they're doing and where they live. In my (Clint's) case, there are already over 300 descendents from my four grandparents.

Facebook and Family Trees are two tools that might be helpful in staying connected with and being aware of family relations and activities. Facebook, however, typically focuses on what's happening now. It's also cluttered with many other features, and it doesn't focus on just families. Family Trees are also typically used with more of a research-oriented perspective, and might not always be ideal if the user simply wants a quick and immersive way to review details about relatives, particularly those still living.

Project Objectives:

Our goal is to provide a visualization that will allow users to explore their families in a way that's immersive, enjoyable and informative. We intend make use of some of the advantages that are found in Family Tree tools and Facebook while avoiding some of the extra clutter from Facebook, but adding a more immersive way to navigate than a typical family tree. While we intend to include information about both deceased and living relatives, the emphasis will be on the living.

Some example questions or problems we hope the visualization might help with:

1) I'm about to go to a family reunion, but I've forgotten the names of so many relatives. I'd like a quick way to review their names, faces and relation to me.
2) I haven't seen my cousins in Washington for a while. I'd like to know where they're currently living, who all of their kids are, and what they like to do.
3) Which relatives were born between year x and y?

Data:

We will collect data from Clint's family history. For several generations back we will at least collect basic information about individuals such as birth, location, a hobby, and death (if applicable). For at least three generations we will also collect family pictures and individual pictures. We will likely go through iterations of what kind of data we will add or change. Some possible inclusions may be a timeline of important events for each individual, places lived in the past, and additional photos.

Data Processing:

All of the data for Clint's family history is available through either Family Tree tools, family pictures on storage or personal knowledge. This will still need to be extracted into meaningful data for a visualization. We will likely have JSON objects for each individual and specify several fields to provide the data, including a list of children and a link to an individual and family photo stored in a separate folder.

Some additional processing will need to take place in javascript as well, such as a map from name (and possibly birthdate) to the full individual object, and possibly other maps to quickly retrieve data such as children.

Visualization Design

This visualization will consist of either 2 or 3 views, depending on what we decide.

1. **Family View** - This view allows the user to explore families and navigate to other families through pictures. We believe that the arrangement of family and individual pictures, as well as the transitions that take place when selecting an image will be a more immersive and hopefully fun experience for a casual user interested in getting to know families better.

2. **Tree View** - This view is more familiar to the typical family tree tools that are commonly used. However, in this case, one of the main purposes of this view will be to conveniently navigate to the person or family for which we want to see in the family view. This view will therefore provide a more 'zoomed out' view than what is possible in the family view. For this reason, we may use more of a minimalist approach when deciding on our marks, such as small circles without even showing names unless you hover over the area (except perhaps the root node). Another possible inclusion in this view might be a slider and brush based on birthdate. This can then give us a list of every relative that was born between these dates and list all of the names. These could then be selected to become the root of the tree, or to go into the family view.

3. **Individual View** - This view will tell us more about the individual. Here we will see a picture of the individual and discover information such as birthdate, location, hobbbies, and death (if applicable). We plan to inject a map, such as google's API, to display the location of living people. An optional inclusion might be a simple timeline containing important dates and events that occurred in that person's life.

One alternative to the individual view is to not have it as a separate view but instead display the information somehow in the other two views. For example, hovering or clicking in either the family view or tree view could display a popup containing all of the information that would have been in the separate individual view.

Another alternative is to combine the tree and family views. This may simplify the visualization, but may also compromise the advantages of either the broader view of the tree or the more immersive style of the family view.

Must-Have Features:

- Family view with images of families and individuals.
- Clicking Any image (except for main family) will transition to either a different family view or individual view.
- Buttons or some sliding tool to see all of the children (Particularly when there are too many children to view on the page at the same time)
- Another button in Family View that allows one to zoom out to the Tree view.
- Tree view that allows one to navigate quickly through ancestors or descendents.
- A place to click for each node to become the root node.
- A place to click to zoom into the family view.
- A place to click to go to the family view (or display a popup)

- An individual view (or popup) containing detailed information about the person.
- A map insert (such as Google API) for the location of living individuals

Optional Features:

- Smooth transitions when clicking on images in the family view.
- Smooth transitions when changing the root node or making transitions to other views from the Tree view.
- Search bar to search for relatives. Clicking will make them the root node.
- A brush on birthdate in the Tree view in order to provide a list of relatives that were born between selected dates.
- Selecting a name from the result list will make that person the root node (or switch to individual or family view)
- A timeline on the individual view containing important dates or events that took place in that person's life.
- An additional view that gives a heat map or pins showing where all relatives are living.
- Add a feature to allow for multiple spouses in the family view (as a result of death or divorce) and separate children displayed from each.

(While beyond the scope of this project, a possible next step would be to link the project to a database and allow users to create an account and add their own family history and pictures or edit existing ones. We could also add a mild social media element for families that could allow people to make family plans or add updates on important events of individuals)

Project Schedule:

Oct 28 - Nov 3:

- Get a significant portion of data into a JSON (or CSV) format, as well as a folder containing all of the photos.
- Write code to process the data, such as extracting hashmaps, into a format that can be used for displaying data in the visualization.

Nov 4 - Nov 10:

- Have working but incomplete mockups of all three visualizations.
- Make sure all transitions work correctly

Nov 11 - Nov 17:

- Make sure all positioning looks that it should in the final product
- Make sure transitions work correctly and are positioned how we want them to.
- Add maps API to individual view.

Nov 18 - Nov 24

- Fix any issues that arise from previous iterations.
- Add some of the optional but important features such as smooth transitions and the birthdate brush selection.

Nov 25 - Dec 1:

- Fix bugs, evaluate and refine any final design decisions. Implement.