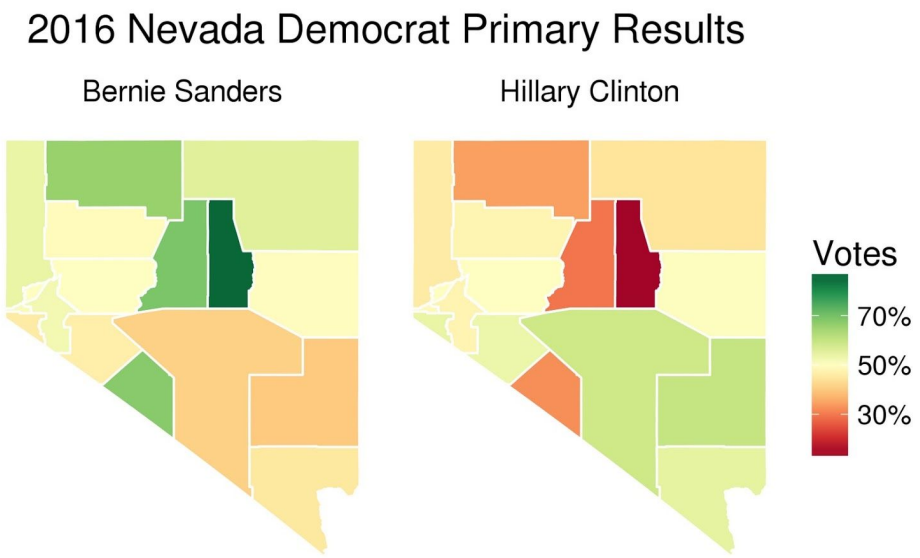
Draft on the Project Proposal v2

2016 US Election Data Vis based on Location and Time

Project Ideas:

There are a lot of data source about the ongoing 2016 US Election. For example, Kaggle has an interesting dataset:
https://www.kaggle.com/benhamner/2016-us-election



The 2016 US election data can help us answer some questions that people always talk about. For example, the Trump phenomenon. Through the location based and time based data, people can see where, when and why Trump has won so much supports from the general public. There are two more things that I am particularly interested in:

1. How the public media interacts with the polls?
2. Do opinion polls really work?

Information visualization can do a good job in answering this questions since it can give people a stronger, and more direct perception.

I choose this data is because the data has more than two dimensions. It can be locations based(x, y) as well as time based(y, t). So the visualization can be a 2d map as well as a time series visualization. It can also be a correlation diagram. This can also help me study the HCI questions that I am interested in: interact between different forms of visualization, which is discussed below.

HCI focus:

After reading the papers about semantic zooming and interaction of information visualization, I conclude the infor vis into two groups: the **complex and integrated charts** and the **simple charts**.

The complex and integrated charts are information rich, often provides an overview of the whole dataset with two or more forms of charts, such as an integrated dashboards

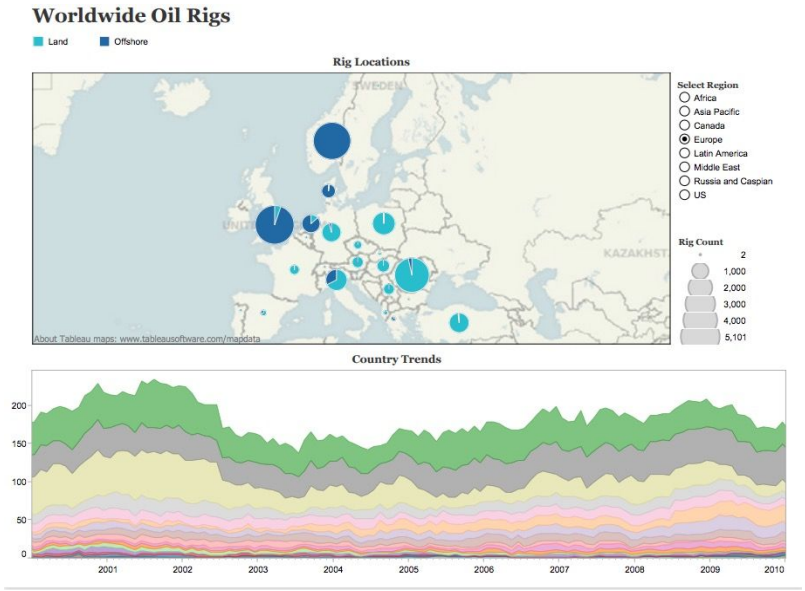


Fig 2. Integrated charts

The simple charts, on the other hands, are the simple format charts such as bar charts, line charts, and bubble charts.

My study focus is to help users interacts from the complex and integrated charts to simple charts so as to gain an insight of the information. The possible solutions includes brush and linking, fisheye and semantic zoom. I am particularly interested in using semantic zoom to interact through different forms of data visualization. There is not much study in this area. And I believe semantic zoom, when used appropriately with physical zooming effect, can encourage users to explore more effectively about the data vis.

Complex Integrated Charts	**Simple Charts**
Heat Map/Tree Map	Line / Bar Chart
3d Info Vis	2d Info Vis
Parallel/Sunburst Coordinates	Line / Bar Char

One more thing:

Even though I am from China where it is still under one party government, I have paid continuous attention to a “country” near us, Taiwan, or aka, Republic of China. Like the U.S.A., Taiwan has two-party politics, and it just has its new president voting this year. There is a huge surprise in the result and people has a lot of arguments and questions about that, which, I believe, can be answered partly by the visualization. And I think the visualization I make about US election can be applied to Taiwan as well.

Fig 3 Taiwan 2 Party Systems