A whole picture on Covid-19 Cases and Deaths in USA

AIJUN2

OVERVIEW

This document is used to supplement the narrative project in CS 416: Data Visualization. In this project, I implemented a 5-page interactive web project, via which the users may know Covid-19 status in USA since January 2020 to July 2021.

BACKGROUND

In the previous project, I told the same story via Tableau Dashboard via Tableau Dashboard, and get a 100%. As I am familiar with that data, I selected to retell this story using d3.

THIS PROJECT LINK

https://peterzhangon.github.io/aijun2.github.io/

REVIEW CRITERIA

- **Messaging.** What is the message you are trying to communicate with the narrative visualization? I would like to show the following information to the users.

  Firstly, I show the user the Covid-19 trends since January 2020 to July 2021 for the selected states.

  Secondly, I have two bar charts to show each states' cases and deaths. The user can select different options to sort the bars.

  Thirdly, I give two maps for the users to have a whole picture on which states have more cases and deaths.

- **Narrative Structure.** Which structure was your narrative visualization designed to follow (martini glass, interactive slide show or drop-down story)?

  I am using an **interactive slide** show structure.

- How does your narrative visualization follow that structure? (All of these structures can include the opportunity to "drill-down" and explore. The difference is where that opportunity happens in the structure.)

  Firstly, I provide a slide. The user can only select to go to next page or return. I disable the buttons for some pages, so the users do not need to waste time. And each page has a page number.

  Secondly, the user can drill down to know more details in page-2, 3 and 4. The users can see the tool tips if the mouse moves over a valid areas, via which the user can get more details.

  Thirdly, in page-2 and 4, I have annotations to remind the user to click to get more details.

- **Visual Structure.** What visual structure is used for each scene?

  I have 3 scenes. They are an overview of Covid-19 status using **different charts**.

  In page-2, I have
  - Two charts which have multiple-curves,
  - Multiple checkboxes.
  - A legend

  In page-3, I have
  - Two bar charts
  - A drop list for the user to select how to sort the bars.

  In page-4, I have
  - Two maps
  - Two legends;

  How does it ensure the viewer can understand the data and navigate the scene?

  Firstly, the charts are highlighted and should be noticed first after the user visits each page.

  Secondly, to easily understand data, each chart has a title and clear Axis with clear labels and scale.

  Thirdly, I have annotations and tooltips to explain charts.

  To easily navigate between scenes, I have **Home, Previous and Next** buttons on each page.

  How does it highlight to urge the viewer to focus on the important parts of the data in each scene?

  Firstly, the user can see vivid picture on charts.

Secondly, I have annotations to remind the user to click to get more details.

Thirdly, after the mouse moves over, the detailed info will be displayed via tool tips, and the selected area is changed.

How does it help the viewer transition to other scenes, to understand how the data connects to the data in other scenes?

Firstly, I list the table of contents, from which the user may be able to predict what will happen.

Secondly, I have Home, Previous and Next buttons to remind the user to move forward or backward.

Thirdly, I have clear help in Page-1 to guide the users how to navigate the pages.

- **Scenes.** What are the scenes of your narrative visualization? How are the scenes ordered

  Totally, I have 3 scenes, and they are ordered as following:

  Firstly, Page-2 shows the trends;

  Secondly, Page-3 shows the bar charts;

  Thirdly, Page-3 shows maps to help the users to have a whole picture on latest convid-19 status in USA.

  , and why

  Based on my understanding, the user wants to have a whole picture first, then the user want to know the details.

  Firstly, I use multiple curves to show trends.

  Secondly, I use bar charts and maps to show the latest status.

- **Annotations.** What template was followed for the annotations, and why that template?
  My template has a simple red text and an arrow. I selected this template, as it is simple and clean.

  How are the annotations used to support the messaging?
  From this annotation in Page-2, the users can easily know:

- A curve is a trend of a state.
- If you click any curve, you may find different details of the corresponding state.

Do the annotations change within a single scene, and if so, how and why
The annotation in the Page-2 will change.

and if so, how
It disappears after the user changes the state selection.

and why
Because this annotation is only for a reminder for the user to visit this page **for the first time**. After the user is familiar with this slide, no need to show it again.

- **Parameters.** What are the parameters of the narrative visualization?

I have two parameters.

Firstly, in Page-2, I have **multiple checkboxes** for the user to select the states. Whenever the change is made, the charts will change accordingly.

Secondly, in Page-3, the user can select **any item from a drop list**. Once the selection is made, all the bars will be sorted accordingly.

What are the states of the narrative visualization?

My project has 3 states.

Firstly, each page has a clear page number in its title like 'Page-1'.

Secondly, in Page-2, each US state has two states: selected, or non-selected. The selected states' curve will be displayed.

Thirdly, in Page-3, the bars are sorted in 3 states: Descending, Ascending and Alphabetical.

How are the parameters used to define the state and each scene?

I have two parameters.

Firstly, in Page-2, once any state's selection is changed, cures will be displayed or hidden accordingly.

Secondly, in Page-3, the drop list is a parameter to control how to sort the bars. I provide 3 options to display the bars.

- **Triggers.** What are the triggers that connect user actions to changes of state in the narrative visualization?

  I have 3 triggers in this project.

  Firstly, I have multiple checkboxes in Page-2;

  Secondly, I have a drop list in Page-3;

  Thirdly, I have 3 buttons for the users to switch between pages.

What affordances are provided to the user to communicate to them what options are available to them in the narrative visualization?

Firstly, for the **checkboxes** in Page-2, and the **drop list** in Page-3, see **previous sections**. Once the selection is changed, the charts are changed accordingly.

Secondly, I have several buttons. It is obvious that:
- If it is grey, it means they cannot be selected.
- Contrarily, if it is black, it mean the user can click it.

Thirdly, I have clear help information in Page-1 to guide the user.

At last, when the user moves over a valid place. The related area will be changed, and the tooltip is displayed.