UIUC CS 416 Data Visualization

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URL: https://eliash0913.github.io/

* Messaging. What is the message you are trying to communicate with the narrative visualization?

- Purchasing a house is a rite of passage for a person to experience in their lifetime. When I was in the military, I did not have to move a lot like other soldiers however, I have seen many people debating between renting vs purchasing because most people move every 3 years. Currently, I am in the situation of possibly needing to relocate due to my company’s request to move closer to their office regardless of the COVID-19 pandemic. I am in a dilemma of deciding whether I should lease my current home and purchase a new home in the new location or to sell my current home and buy a new home in the new location. Only telling people the numbers of the average price of property over time does not really help people see the pattern of the changes during the timeframe. For a few years, the price of property dropped however, we can see that property price all over the United States have dramatically increased in the last year. I wanted to share and show this pattern to people who think property prices will drop enough to be less than their initial loan amount.

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

- I used the martini glass structure with five scenes. Each scene has a chart that show the average price of property over time. Also, the last scene is a user controllable scene which allows users to select and see the chart of the particular state the user selected.

* Visual Structure. What visual structure is used for each scene? How does it ensure the viewer can understand the data and navigate the scene? How does it highlight to urge the viewer to focus on the important parts of the data in each scene? How does it help the viewer transition to other scenes, to understand how the data connects to the data in other scenes?

- All of the scene used the same structure and color scheme. The header  
shows what the chart is related to. The Previous and Next Page buttons are  
located in a natural direction. Also, the dot navigator indicate the page the user is at and  
top left corner allows the user to know what numerical page they are on.

* Scenes. What are the scenes of your narrative visualization? How are the scenes ordered, and why

- The first scene shows the national wide change in prices whereas the second to  
forth scene shows three states which is from the highest to lowest price. The  
last scene allows users to choose other states. Thus, the user can see  
from the biggest changes to the smallest changes, and user can check  
other states if they doubt the pattern.

* Annotations. What template was followed for the annotations, and why that template? How are the annotations used to support the messaging? Do the annotations change within a single scene, and if so, how and why

- I used a tooltip to display the exact date and price on each  
point circle, so when a user wants to see the detail values, the user  
can simply move the mouse cursor to the point where the user want to  
check.

* Parameters. What are the parameters of the narrative visualization? What are the states of the narrative visualization? How are the parameters used to define the state and each scene?

- The parameter of this narrative visualization is US or state.  
The implementation of this visualization starts from taking a state  
code as a parameter. If it is ‘US’, it draws the average property price  
of United States. Otherwise, it takes a state code, and select the  
state column from the dataset, and draw the line and circles.

* Triggers. What are the triggers that connect user actions to changes of state in the narrative visualization? What affordances are provided to the user to communicate to them what options are available to them in the narrative visualization?

- Users can navigate by clicking the previous or the next button or the dot  
 navigator. Also, the user can select any state from drop-down menu on  
 the last page to view the information of the state the user chose.