

CS 416 Final Project: Narrative Visualization

Topic: Covid-19 Pandemic Trends

The covid-19 pandemic impacted everyone on the planet for several years, and still to this date. This narrative visualization was created to help people understand and learn about the different trends of the pandemic, specifically confirmed cases, death count and recovery count, that occurred during the first six months of the pandemic. For this narrative visualization, I will briefly go over what is included in this visualization, including the messaging, the narrative structure, visual structure, scenes, annotations, parameters and triggers.

Using this narrative visualization the goal is to portray the trends in confirmed cases, death and recovery counts over the first six months of the pandemic from different regions on the planet. In addition, being able to compare trends between different regions in all three different count types.

The narrative structure used in the narrative visualization is the interactive slide show. Each scene is a single chart representing one of the three categories (confirmed, death and recovery count), within each slide, you can view the chart and interact with it by clicking the key to filter regions and hovering over the points on the line chart for a pop up for more information. To view the next category, you can click the “click to view ...” to load the next slide. Given the following, this follows the slide show format as each slide is independent of each other, but allows to interact within the slide itself within limitations predetermined by the author. And overall represent a single goal/message for the user.

The visual structures used in each scene follows the flow of how people think about disease, in this case specific to the covid-19 trends. The narrative starts with a initial page letting the user know what to click to begin the slide show with a brief message on what they will explore. The moving from confirmed cases, deaths and finally recovery count. This order was picked as during the pandemic the first two numbers that were brought up in news, research, and data collection were one, the number of people with confirmed cases of covid-19 and two, the number of people that died due to the illness. Later, the recovery count was added, when adequate testing and global spread increase. Overall, the order is meant to

represent the thought process in what information people expect when trying to understand trends of the covid-19 pandemic during its first six months. To ensure users are aware what data they are seeing, the count type is labeled on the page near the top. Additionally, different regions are denoted as different color. But region filtering also allows to view one or a selection of regions at a time. for users to know how to transition to the next scene, there is a clickable message saying to click to view the next scene. Overall, the information the user requires to understand how to navigate the narrative is written on the page to avoid confusion and ease of use.

The scenes are denoted as a single line chart, each representing a different type of case count. There are three scenes, confirmed cases count, death count and recovery count; each on its own line chart, and each line chart contains several lines representing the data from different regions. The scenes are ordered in terms of how data for the covid-19 pandemic and shared with the population. The confirmed case count was the most viewed and discussed item, followed by the death count later, the recovery count was added. Given this flow, this is also the order of the scenes in this narrative visualization.

The annotation template that was used was short messages to point out specific dates and the associated events that were relevant globally during the first six months of the covid - 19 pandemic. A total of three annotations were used, each pointing out events that were significant to the global population, and also known to general population. During each of the scenes, the annotations remained consistent and the same as they were used to indicate the date, which was a axis that was consistent though each of the scenes.

There are three main parameters visible on the chart, the count (count type determined by the scene), the date, and the region. In addition, other parameters included slide number, filter selection and mouse location. The date parameter was consistent though each scene, used to show a timeline for the first six months of the pandemic. The count (determined by the scene, which was determined by the slide number), varied from the case type, but was used to show the case count per day for the first six months of the covid-19 pandemic. The region was shown as different colors, each representing a different region's data. Filtering was denoted by the clicking of the different regions on the key, dependent on what was clicked the filtered

regions showed or hide different lines, to allow for different comparisons of trends; this was available on all three scenes. The slide number determined what chart to display (which data to use), it also cleared any previous filtered values, mouse movement over the dots on the line chart allowed for additional pop-ups to show the exact value of the data point. Overall, these were the main parameters consistent of each scene, aka each slide.

There were three main triggers on the narrative. The first trigger was the “click to view...” text button that was used to move from slide to slide (scene to scene). Affordance was provided by the text saying to click as well as the text being blue with an underline, like how other in line links work for other sites (for example Wikipedia). The next trigger was the key, which you could click the different region names to show and hide their lines on the map. The affordance for this was a written message to the user on the page, telling them that they could click those values. The last trigger was the mouse over to open a pop-up with more information, this too had the same affordance that was given to the users in the form of a message on the screen.

Overall, the narrative visualization in the format of a slide show, was to represent and showcase the trends present during the first six months of the covid-19 pandemic. Each scene represented one category (confirmed, deaths and recover), allowing users to interact with each chart by filtering the different region lines, and hovering over the points for more details. The goal was to allow for users to explore the data using the author’s configured explorations.