Essay

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

  The story presented is an overview of the Covid-19 pandemic depicting key information related to rapid increase in number of infections, probable lack of awareness/precautions/preparations & top 5 countries having most infections. The story is depicting the rapid increase of deaths and infections through a span of 5 months and 3 out of 5 developed countries having most number of infections. The story wants the user to understand the importance of awareness/precautions/preparations and reduce risk to self. This maybe be due to varies reasons as described above which I will leave for user's viewpoint.

- **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 have developed an interactive slide show with 3 different slides which can be navigated using the buttons. An interactive slideshow must have

  An author directed path -> as developed using the navigation buttons which follows the below path

  1st slide: Increase in the No. of confirmed cases per month (accessed through homepage index.html)

  2nd slide: Increase in the No. of confirmed deaths per month

  3rd slide: Confirmed cases per month/per country

  User cannot move beyond slide 3.

  Provides drill down capabilities in slides with some exploratory info : All 3 slides provide charts with some drill down capabilities through the use of tool tips, transitions and triggers.

  User is easily able to investigate further as one moves ahead to the next slide.

- **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?

  Visual structure for the first 2 slides are similar and depicting facts i.e. rapid increase in the infection count and then the death count through an annotated bar graph for user to gather information and navigate more through the story. This also presents the user with a sense to navigate further and explore more regarding possible countries to understand the risk involved for them and possibly take necessary actions/precautions and preparedness. This information can be easily gathered through the last slide depicting top 5 countries and their monthly stats. Finally, a link at the footer of each slide sends them to the WHO link with the latest updated information.

  Annotation and simple graphs highlight key information for user to easily gauge & focus:-

1) Use of bar graph with annotated values to depict most confirmed cases and rapid increase.
2) Use of selected pie graph to gauge information for particular months.
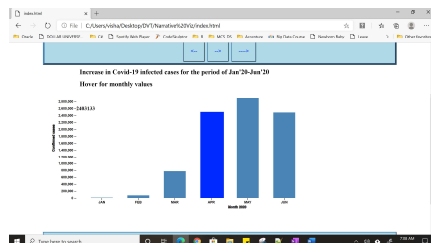3) Use of bar graph for country to guage country wise monthly information.

Other visual aids such as descriptions, legends do as well provide quick information for the user to focus.All 3 slides transition the user from little to more details information as they navigate further. Also, since the information is integrated with other graphs it also keeps the user oriented between scenes not to the point so as to navigate back as further detailed information still can be gauged through the focuses graphs. For example to know the exact values if total death counts/confirmed cases per month for all countries the user would still have to navigate back vice versa in order to navigate forward i.e. get more country specific values.

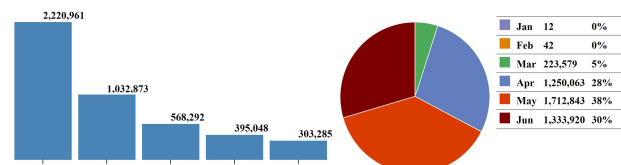- **Scenes.** What are the scenes of your narrative visualization? How are the scenes ordered, and why

There are 3 main scenes which can be navigated through forward and back buttons :-

   a. 1st scene: Increase in the No. of confirmed cases per month
   b. 2nd scene: Increase in the No. of confirmed deaths per month
   c. 3rd scene: Confirmed cases per month/per country

Each scene provides different parameter settings and annotations such as shown below :-

Annotation provided on each page helps user navigate and focus. Buttons follow a timeline approach from less to more granular information as we move forward.

Scenes are ordered from providing basic information to more granular information as user moves forward and works on the country widget. Ordering is kept this way to gather user attention and highlight the important details for the story to serve its purpose which is to make the user more aware and continue exploration and analysis.

- **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

Basic as well as custom reusable templates were followed in order to provide similar look and feel as user navigates further in the timeline. Basic annotations provide user with great messaging of the content as well as navigation. This has been done through tooltips and legends. Reusable template for interactive bar graph providing tooltips was used in order for user to focus quickly on information being messaged. Yes, tooltips change as the user hovers over a graph and details. Similarly, information from the widget changes based on user selections. Both textual and graphical annotations are used to highlight important information and draw users' attention.

- **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?

  Parameters are name-value pairs that define the visualization state and provide a means for control. Parameter values can include constants, variables, or encoding functions. When a parameter value changes the visualization is re-drawn as in slide 3 when different values are selected for the widget parameter different visualizations are re-drawn and are bound to widgets. Manipulating a corresponding parameter value,triggers redraw. Parameters can also be used to trigger the display of annotations or scene transitions as done by back and forward buttons which changes different annotations based on navigation. By manipulating parameter values, a narrative can coordinate a visualization directly or delegate coordination to the reader through controls for exploration.

- **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?

  Triggers advance a narrative in response to parameter changes or user input. When a trigger fires, it can cause an annotation to appear, such as different annotations for confirmed and death scenes or a scene transition to occur such as clicking on next button. Our model includes three trigger types: parameter, timer, and event triggers. A parameter trigger is bound to a visualization parameter and defines a predicate that must be met in order for the trigger to fire as used in slide 3 control widget. Event triggers map to browser events such as click or hover and allow authors to make their stories respond to user input as done in slides 1 & 2.I have used both event and parameter triggers to communicate to the user. A timer trigger is also available such an automated slideshow or timeline that fires after a designated amount of time has elapsed, and is useful for simple animation and narratives.