**Documentation For Disaster Data Visualization**

**Schedule:**

2/20 – Refined my research questions. There are too many subtypes to analyze all at once. I will have to narrow down into certain groups. I am thinking of four groups: continent, country, subgroup, and type. From one of these I can analyze the others. For example, “in Asia, which are the most common disasters?” or “where do floods happen the most?”

I also want to do something analyzing the seasons. Perhaps an animation of a bar chart showing disaster distribution by subgroup or subtype, continent, and season.

I want to analyze *one* continent or country and *one* disaster type in depth.

Finally, I want to work with a numeric variable besides year and total deaths. This could be richter scale for earthquakes or wildfire coverage.

2/27

Since last week I have worked on understanding and utilizing the summarize() function in R. I have experimented with this to work on transforming data to isolate some of my questions. For example, I would like to see how disasters occur throughout the year and whether there is a pattern of arising for this depending on season.

3/5

So far looking at Europe has been pretty successful in terms of isolating disasters by season, Europe has clear seasonal trends which are all correlated: for example, wildfires, temperature events, floods are all connected.

* Built out visualizations of Europe, including top disasters and seasonal data
* Started to manipulate the data in order to make my animations

3/8

Although I already have overview visualizations that show aspects of all the data, I also want to include for example the top 10 disaster-prone countries etc.

* Built the summary visualizations to add to the overview
* Manipulated data in order to grab top countries by disasters and disaster deaths
* Worked on the shiny dashboard

3/11

The sidebar menu is very difficult to work with. Although I have made progress, it is very buggy and a lot of times doesn’t work. For example, there is a “geophysical” tab which will not go away even though I deleted the code for it.

* Got the basic framework of the shiny dashboard fully functional
* Finished all my basic ggplot visualizations
* Worked on sidebar menu but still has bugs currently

3/12

* Worked on animations, specifically ordering the data to be suitable and learning about plotly animations

3/13

* Continued to work on animations, had to do a lot of debugging and error checking
* Worked on menuItems/tabItems and did a lot of debugging for the sidebar menu

3/14

Rcolorbrewer was really cool because it added a lot of aesthetic value to the whole project. Instead of just the standard colors I was able to add blue aesthetic for Europe (because of the European Union I guess?) and switch things up a bit to add variety. Although this was a last minute change I am glad to have made it.

* Cleaned up animations, separated the overview and summary into two separate tabs
* Added different color palettes to the data using rcolorbrewer

Sources:

<https://rstudio.github.io/shinydashboard/structure.html#sidebar>

<https://rstudio.github.io/shinydashboard/structure.html#sidebar-menu-items-and-tabs>

<https://community.rstudio.com/t/menu-item-click-is-not-triggering-in-r-shiny-dashboard/20773>

<https://plotly.com/python/animations/>

<https://stackoverflow.com/questions/64769605/plotting-a-ggplot-world-map-with-countries-colored-according-to-number-ranges>

<https://stackoverflow.com/questions/11225343/how-to-create-a-world-map-in-r-with-specific-countries-filled-in>

<https://datavizpyr.com/how-to-make-world-map-with-ggplot2-in-r/>

<https://www.youtube.com/watch?v=WmofiOklux8>

<https://shiny.rstudio.com/articles/server-function-testing.html>

<https://rstudio.github.io/shinydashboard/appearance.html>

<https://stackoverflow.com/questions/51620860/error-in-tagassert-creating-a-shiny-dashboard>

<https://stackoverflow.com/questions/38128098/shiny-dashboard-menu-item>

<https://www.rdocumentation.org/packages/shinydashboard/versions/0.7.2/topics/sidebarMenu>

https://rstudio.github.io/shinydashboard/get\_started.html

<http://applied-r.com/rcolorbrewer-palettes/>

<https://www.r-graph-gallery.com/38-rcolorbrewers-palettes.html>

<https://statisticsglobe.com/scale-colour-fill-brewer-rcolorbrewer-package-r>