VIS-URL: <https://amishmishra27.github.io/FIT3179_A2/>

5DS-URL: <https://amishmishra27.github.io/FIT3179_A2/Amish%20Mishra%20-%205DS.pdf>

**Domain:**

Natural Disasters in Australia

**Why:**

The goal of the visualization is to provide an overview and history of Natural Disaster occurrences in Australia and to tell a story about critically impacted regions, trends and projections, safety measures and how Australia can prepare for future Disaster events.

The visualization first provides an overview, then the users can interactively explore each Disaster Category or Region to compare impact through time and understand trends such as which Disaster Types caused the most damage, where they typically occur and how are people impacted.

**Who:**

The target users are the Natural Disaster Agency who can use the shown trends and story in my visualization to determine best strategies to combat future natural disasters and accurately predict damage a disaster will have.

Another target user is government decision makers, as I have a section detailing how New South Wales is quite prone to Disasters, yet its disaster recovery metrics are quite poor and thus NSW would benefit from more resources and funding in this area.

**What:**

The data comes from the Natural Disaster Agency data. It was created through a collection of historical records describing these events as well as Hospital numbers (Deaths and Injuries). This data was then joined onto another dataset containing latitude longitude values to obtain a geographic formulation of the data which could be plotted on a map.

The data is very reliable as it is official government data and highly relevant as it contains important metrics of many disasters (injuries, deaths, damage cost, area impacted)

The data is mainly quantitative, showing various attributes and aggregates regarding natural disasters. All data is categorized by region and disaster type, and the datasets are of tabular and spatial type.

**How:**

The bubble chart idiom is used to provide an overview because it can support many different channels (size, colour, axis) so I can describe all information about Natural disasters. Users can apply multiple filters to view data of interest and they can zoom/pan to get details on demand.

Next, I showed a geographic Australian map and plotted Disaster events via a proportional symbol map. This adds geographic context to my initial overview so that the user basically has 2 POVs to compare and contrast. I have a time brush filter so that users can query and view items of interest or compare time-periods.

After the overview, I dive into examining NSW by showing a line-chart with NSW highlighted in Red (to draw attention to it). This allows the user to understand the story quickly as their attention is drawn to NSW.

I then use a Radial chart so that users can see both the damage caused, and the recovery capability of regions which allows the user to quickly understand strengths and weaknesses of each region

Special Features:

* Almost every visualization has interactivity to give the user control on what they want to see
* Cards highlight when hovered on, so the foreground is what the user sees first