Project Proposal review

Problem Selection:
Overall, the problem selection looks quite decent. In recent times, when Australian bushfires have created such havoc, it appears to be a nice choice for a visualisation project. Their explanation about the trends they aim to observe to analyse its impact portrays a clear picture of the problem intended to be addressed. If the project goals are accomplished, it would be able to provide deeper insights in answering questions; such as the reason behind the worst fire season in 2020 as compared to previous years, its distribution over time and impact on people's lives, to name a few. Even though the project scope is really good, there are discrepancies between the tasks to be accomplished and the data/datasets which they currently have, So its essential those things are clarified before proceeding further.

Data selection:
The project uses 3 different datasets, MODIS / VIIRS data,Temperature and rainfall datasets. One point to be careful about is to check the distribution of data across time and location since the datasets need to be used together. Also, we noticed that the Rainfall and MODIS / VIIRS have locations as Lat,long coordinates but temperatures does not have that same and has only the station name. Another main thing to notice is that there is no data available from the previous years for the bush fires, so it will be not possible to present a comparison across previous years in terms of bushfires and impact.

Users and tasks Identification:

- **Local Residents:** One of the users identified are local residents. This seems to be a very relevant user base with important concerns. However, we feel there are few gaps in the concerns and the visualizations being used to address these concerns like:

   Periphery of fire-affected regions can be addressed but we are not sure as to how the visualizations will address the **directionality** (No component to identify)
   Air Quality Index (AQI): Not clear how this will be shown in the visualizations more attributes could be added to the line charts.

- **Environmentalists:** For Q3 I think this would be able to be answered better if the bar chart showed an average increase or decrease for the period of time being shown.

● **Disaster Management Organizations/ Government Agencies:** Not sure how the goal of Q2 can be accomplished when there is no bush fire data from previous years. Q4 seems to not be consistent with the objective of the project, since the air quality and bus fires are not studied together. Also, rate of human casualties cannot be determined in a particular region without any previous data about it.

Vis. 1: Heat Point Map
- **Pros:**
    Blue and red coloration is intuitive for communicating which fires are "safe" due to containment.
    Use of a geographical map is natural, and discrete points may indeed be simpler for many users to understand than a heat map for perceiving firm boundaries.
- **Cons:**
    For showing the expansion of fire, a bunch of points may not show very clear directionality.
    Legend currently does not explicitly show color spectrums discussed in the description, instead only showing some example points. We are particularly unclear on whether you intend to have blue exist on a spectrum to yellow and what exactly the shades there signify.

Vis. 2: Area Chart
    "Human Bushfire Casualties: This data reports the number of human deaths due to bushfires at a given Financial Year and the percentage of deaths that year contributed to the total bushfire deaths between 2010 and 2020. " - is your dataset for just Australia? The area chart is unclear where the deaths are occuring. Also, where will the data for the areas burnt in past 10 years obtained from? There are no data sources mentioned in datasets section.

Vis. 3: Line Chart
- **Pros**
    A very valid option with nice contrasting color selections to highlight the trend of rainfall and temperature along with maximum and minimum temperatures and rainfall across years.
- **Cons**
    Again, here the line charts presented does not have to do with the Bush fire problem which is being solved. Eg., Higher temperature doesn't attribute to bush fire. So these plots don't seem to satisfy the objective of the project.

    The trend can give some idea but cannot be attributed to all the bushfires. Temperature and Rainfall are valid factors and many bushfires can also be a result of man-made activity, explosions, accidents etc.

Vis. 4: Bar Chart
  ● **Pros:**
Bar chart provides a good comparison (side by side) pinpointing the count of occurrences over the years between two countries, Australia and Brazil, with distinguishing color facilitating the understanding of gradual increase/ decrease over the years.
  ● **Cons:**
It's not quite clear here, what 'number of fires' refers to precisely. Is it frequency of occurrence of fire in a country within a year or number of regions within a country it has occurred in? A clearer description would have been better.
Just curious, if the numbers mentioned on the y axis could resemble to real values(such a high number)