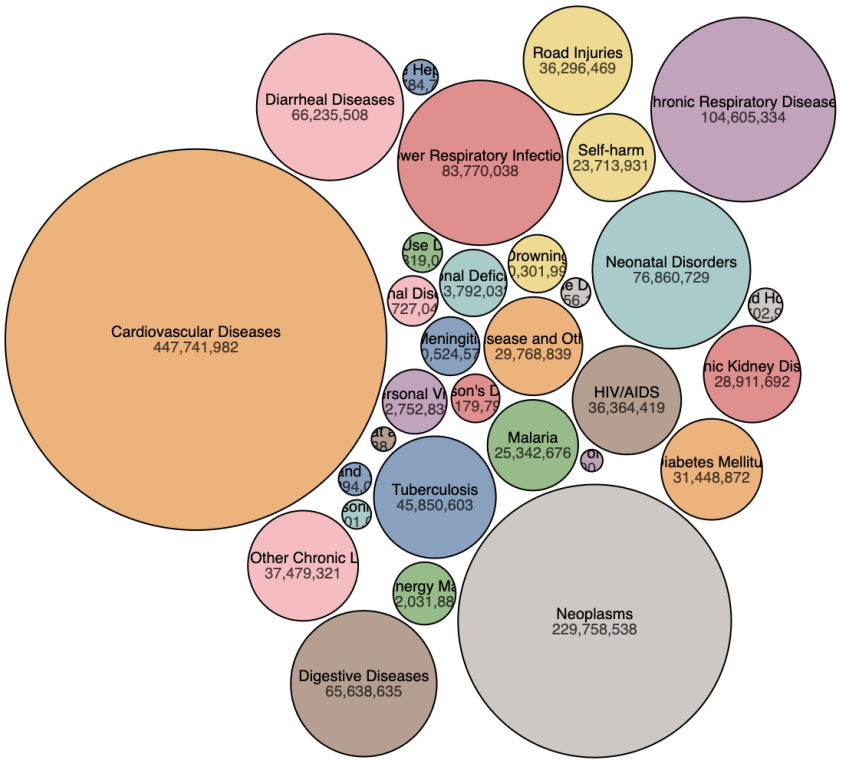
# Project Mid Submission

## Plots Made So Far

1. Total Deaths by Cause - Akshit

   This circle-packing, bubble chart visualises the total deaths recorded in the world from 1990-2019. The reason for picking a bubble chart is- since this is a standalone metric where we are just visualising the count of deaths for each cause, a bubble chart is a more aesthetic and organic alternative to a bar chart. In a circle packing, it is also easier to visualise the number of deaths as the size of a circle. Thus, just by looking at the size of a circle, we can quite easily see how deadly a cause has been: the bigger, the deadlier. This is a simple yet effective chart in visualising the overview of the burden of disease faced by humans.

# Total Deaths by Cause, 1990-2019



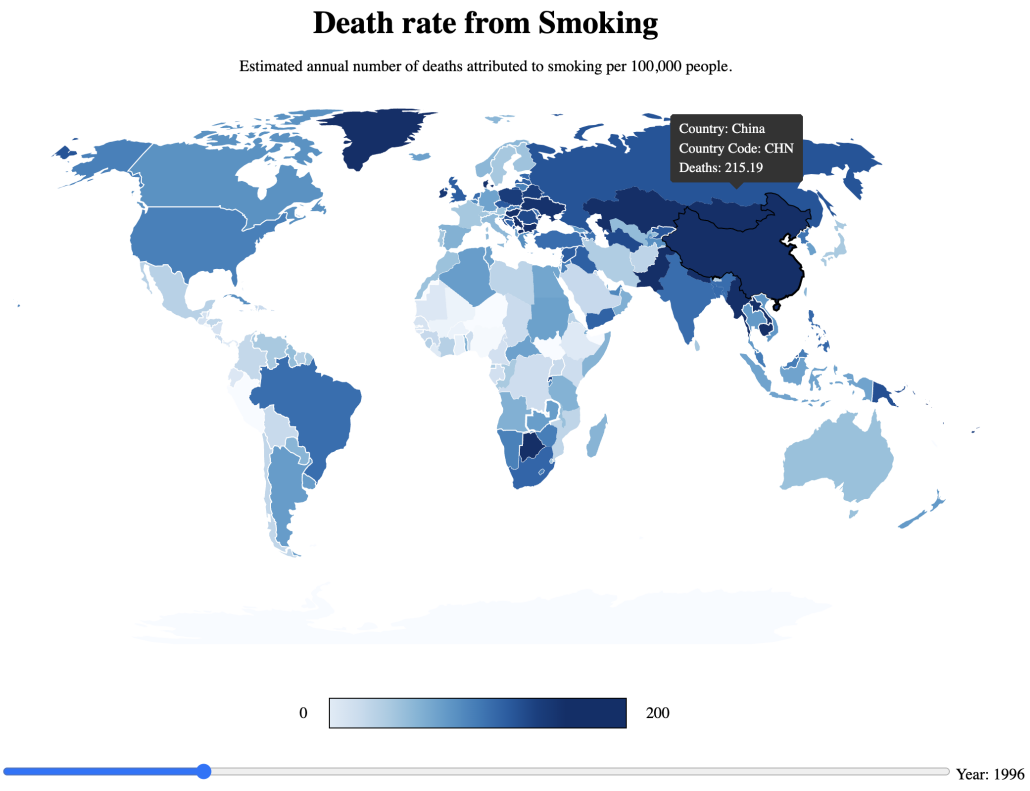

2. Deaths caused due to Smoking: over the years - Himani

This visualisation is an extremely useful tool in understanding the global trends in smoking-related deaths. It captures and displays the number of deaths due to smoking **per 100,000** people on a **world map.** The world map makes it easy to comprehend the overall picture at once and identify the countries and continents that are most affected by smoking-related deaths. The **color-coding** of the countries also helps to quickly differentiate between the countries that have a higher number of smoking-related deaths and those that have a lower number.

Another principle used is that the visualisation is **interactive and dynamic**, as it allows users to change the year and see the trend of smoking-related deaths over 30 years.

This makes it easier to identify any changes or trends in smoking patterns across different countries and continents. The **slider** at the bottom of the visualisation makes it easy to navigate through the different years and understand the changes that have occurred over time.

Furthermore, hovering over a specific country highlights its **borders** and displays a **tooltip** that contains relevant information about the country, such as its name and the number of smoking-related deaths that occurred in the year that the slider is on. This makes it easy to get a quick summary of the relevant information without having to navigate to a separate page or data source.

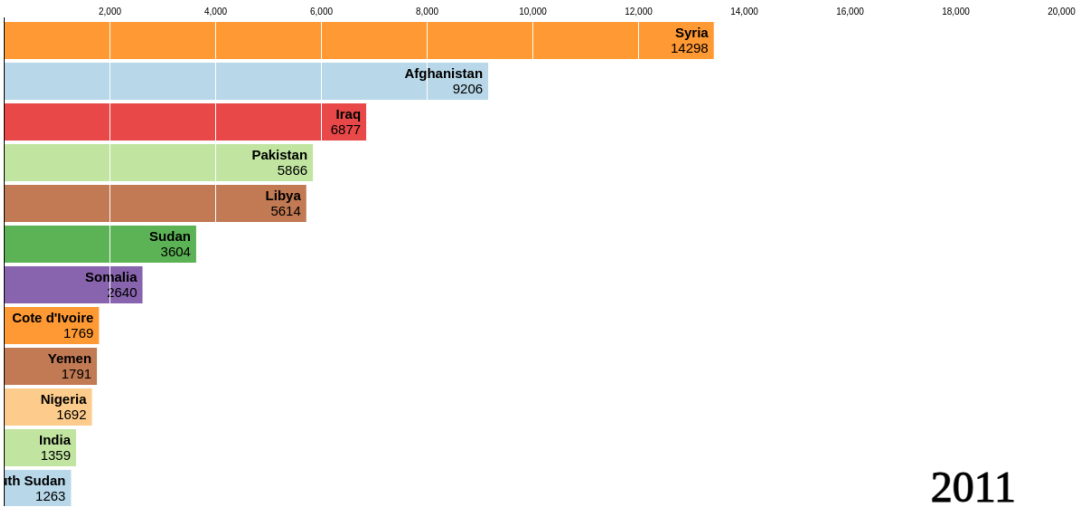


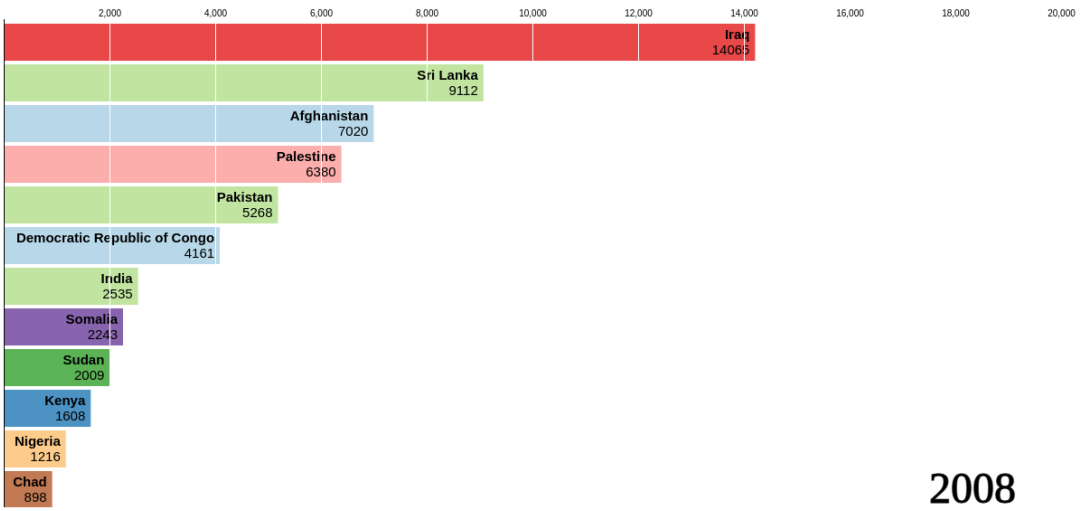

3. Bar chart race : deaths due to terrorism and conflict - Arnav Negi

The visualisation is essentially bar charts of deaths by conflict and terrorism in an year for several countries. The bar charts range from 1990 to 2019 and are animated like a bar chart race. The bars have labels with country name and number of deaths that year. Only the top 12 countries by deaths are shown as it is a bar chart race.

As the bars shift and climb above the race, it becomes clear that a civil war, or an invasion or major conflict is taking place in that country for that year. The visualisation also shows the spread and deadliness of conflict and terror attacks in countries such as Yemen, Burundi, Ethiopia, Iraq and Afghanistan.

**Conflict and Terrorism (no. of deaths for that year)**






# Work to be done

1. Adding interactivity and animations:
    a. Adding tooltips to obtain more information
    b. Adding a slider to control the year, so that we can see the changes in the distribution of deaths over time.
    c. Adding animations to the transitions between years, to create a smoother and more engaging user experience.
2. Adding input options:
    a. To change data fields.
    b. To change year.
3. Remaining Plots: While we plan to do a lot more visualisations as the burden of disease is a wide subject to cover, below is a list of a few more we plan to do. The list is not exhaustive, and may expand as we discover more visualisation possibilities within the project.

a. Disease Burden vs. Health Expenditure per capita

   This visualisation will give us insights into the correlation between disease burden a country suffers and its expenditure on health. We can derive insights on whether a more lavish spend on health leads to a lower burden of disease.

b. Disease Burden vs GDP per capita

   This visualisation will give insights about the correlation or lack thereof of the deadliness of diseases in a country with its gdp per capita. This can show some countries who do well in terms of healthcare inspite of low economic well being and vice versa.

c. Global Distribution of Disease Burden:

   This World Map visualisation will give us insight into how the burden of disease is shared between countries and which parts of the world are more affected. Using an animated graph, we can also see the historical distribution change and shift of the burden of disease worldwide

d. Communicable vs Non communicable diseases:

   This visualisation will be a scatter plot of several countries for two classes of diseases: communicable and non communicable. This will give an insight about how the two classes of diseases are correlated differently with gdp per capita of a country.

4. Scrollytelling: We will look into the implementation of scrollytelling and try to incorporate that into our visualisation website.

# Video Link

https://drive.google.com/file/d/1DpyI-7LyIlkNr_Vs0vbl7mb3i9c1DEDh/view?usp=sharing