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Experiment	3

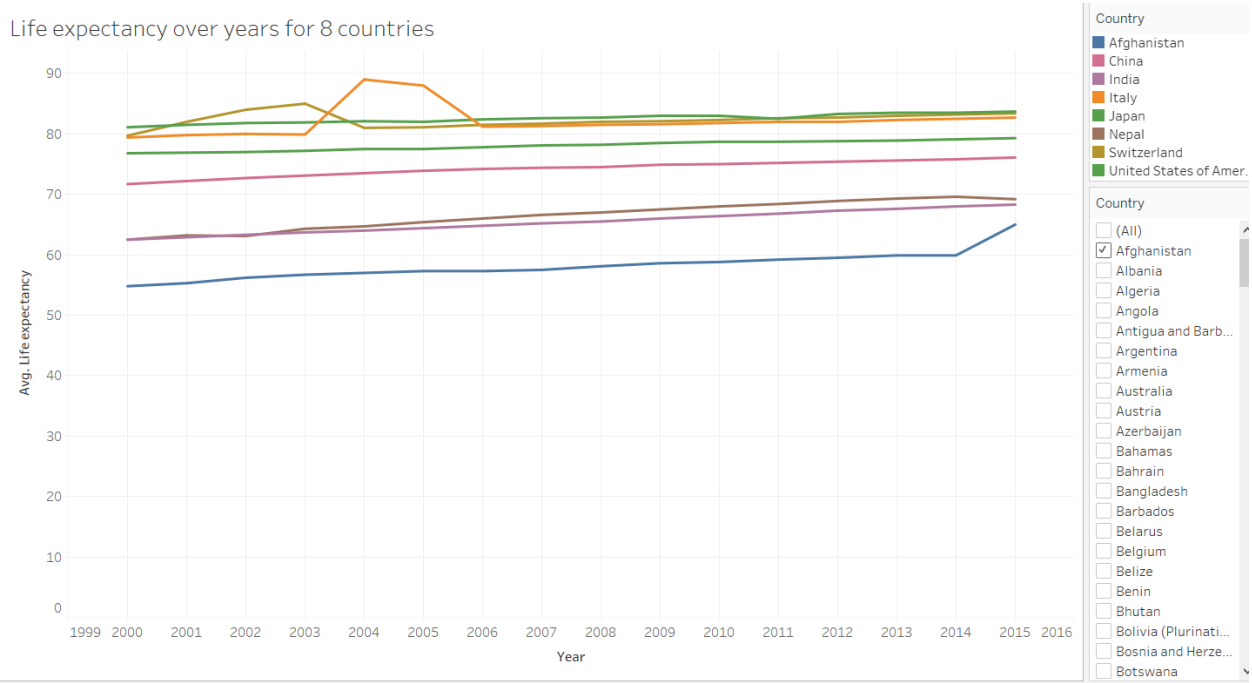
Aim : Design Interactive Dashboards and Storytelling using Tableau / Power BI / R (Shiny) / Python (Streamlit/Flask) / D3.js to be performed on the dataset - Disease spread / Healthcare

Dataset Link : https://www.kaggle.com/datasets/kumarajarshi/life-expectancy-who

Tool used for visualization : Tableau

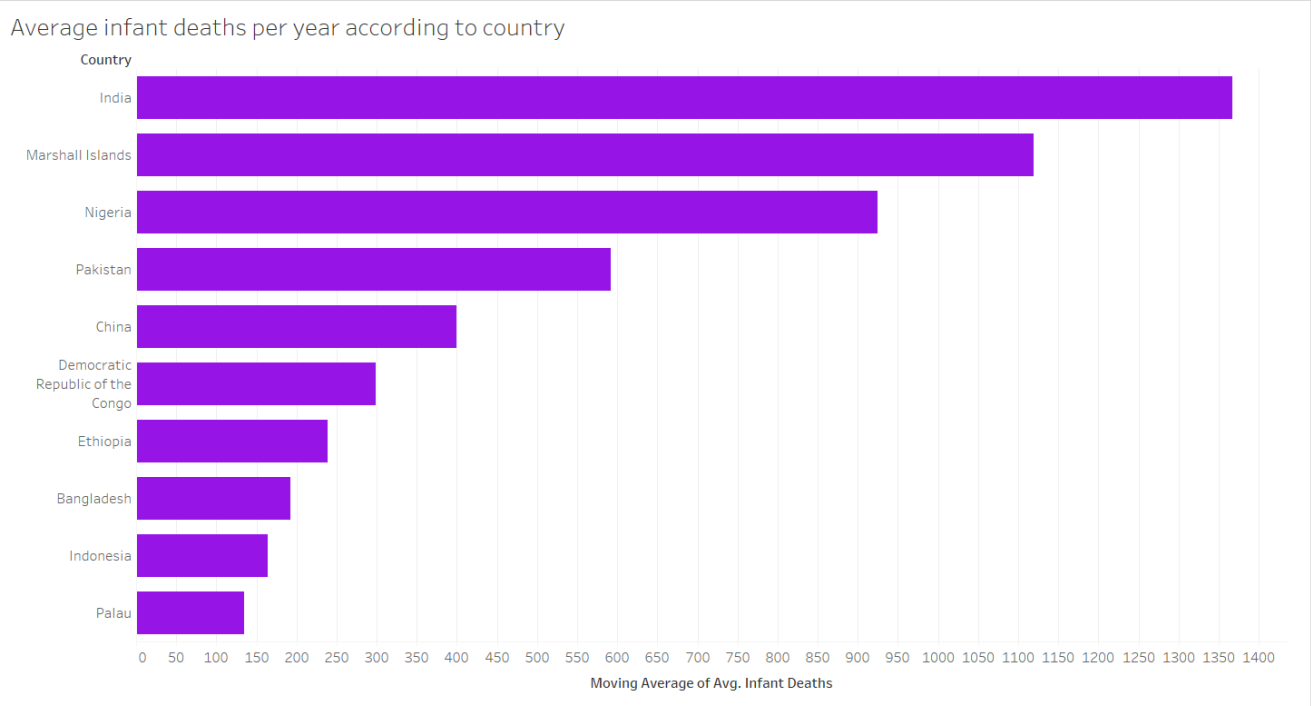
About dataset : It has been observed that in the past 15 years , there has been a huge development in health sector resulting in improvement of human mortality rates especially in the developing nations in comparison to the past 30 years. Therefore, in this project we have considered data from year 2000-2015 for 193 countries for further analysis. The individual data files have been merged together into a single data-set. On initial visual inspection of the data showed some missing values. As the data-sets were from WHO, we found no evident errors. Missing data was handled in R software by using Missmap command. The result indicated that most of the missing data was for population, Hepatitis B and GDP.

1.) Time line plot :



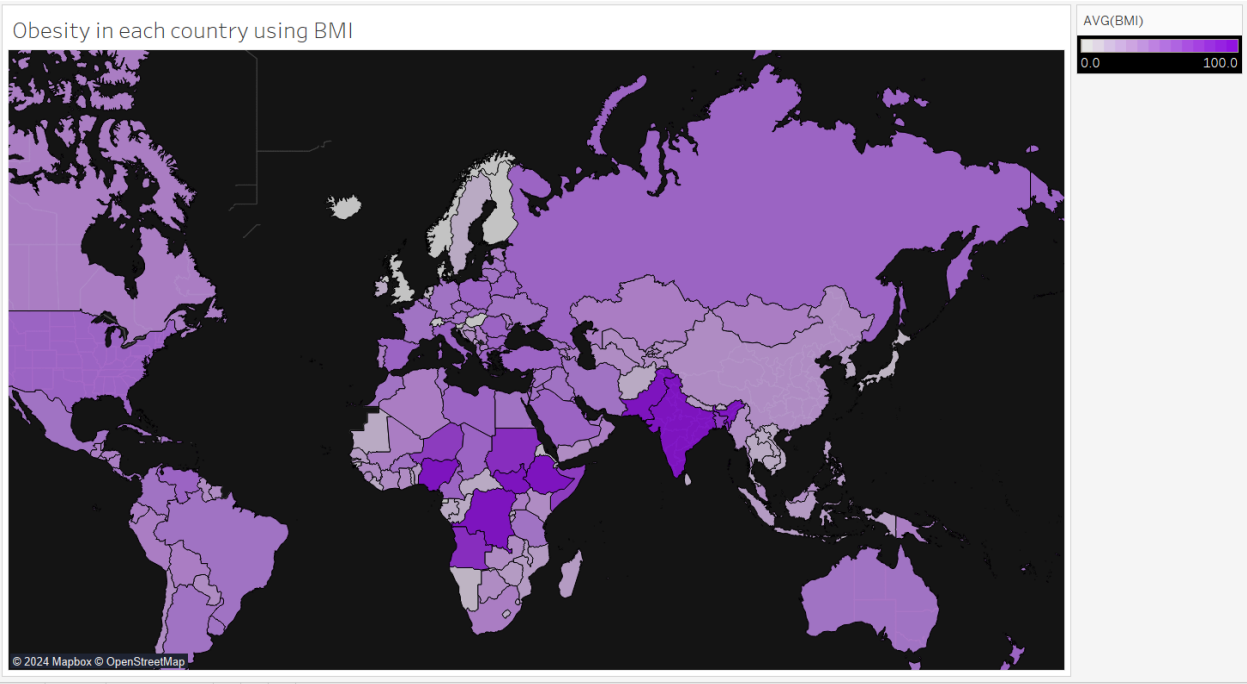
Observation : From the above plot we can see that Afghanistan has the lowest life expectancy rate over the years while Switzerland and Italy have high life expectancy.

2.) Barplot :



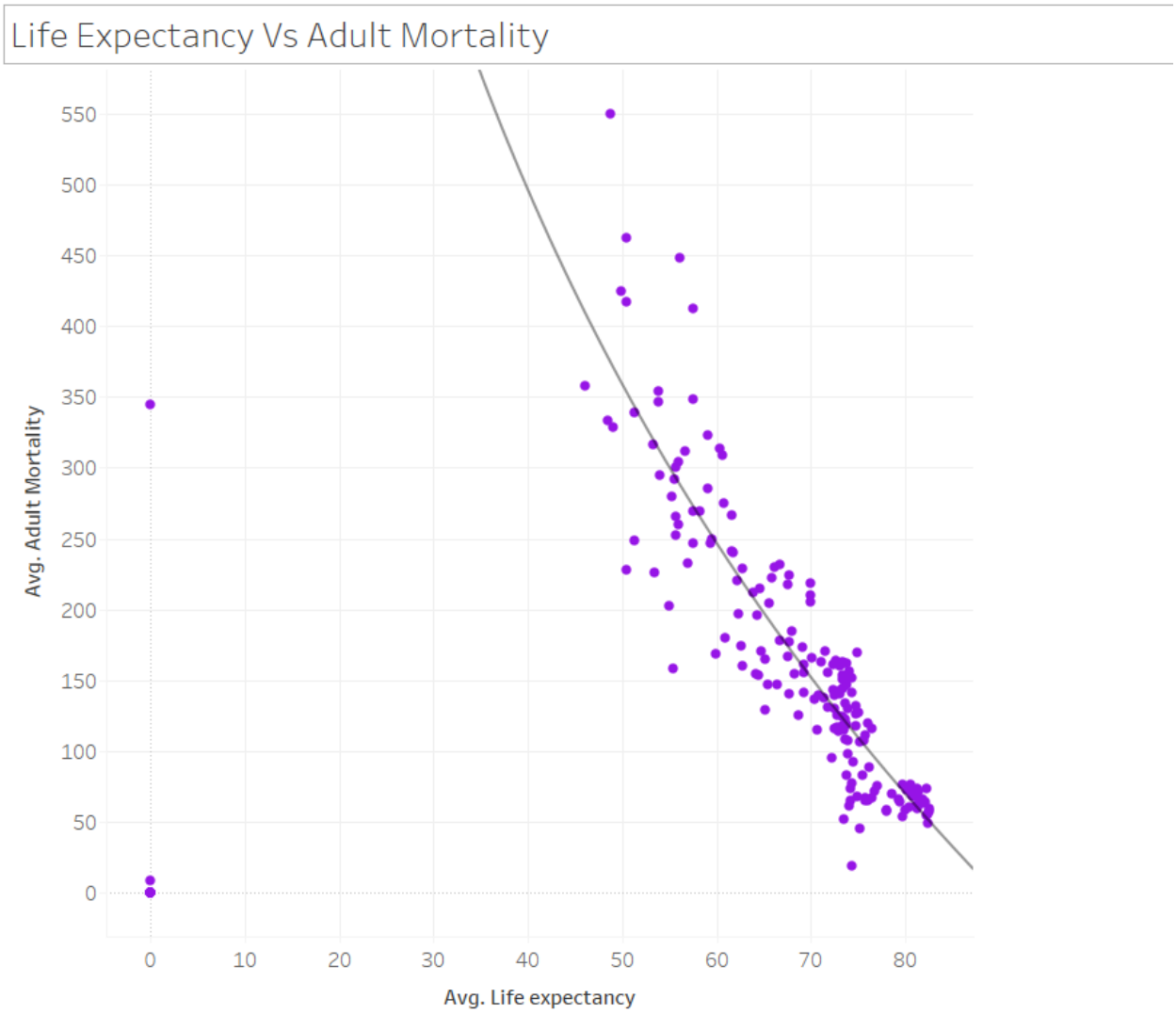
Observation : From barplot we can see that India has highest average infant deaths followed by Marshall Islands. Palau has the lowest average infant deaths.

3.) Geographical plot :



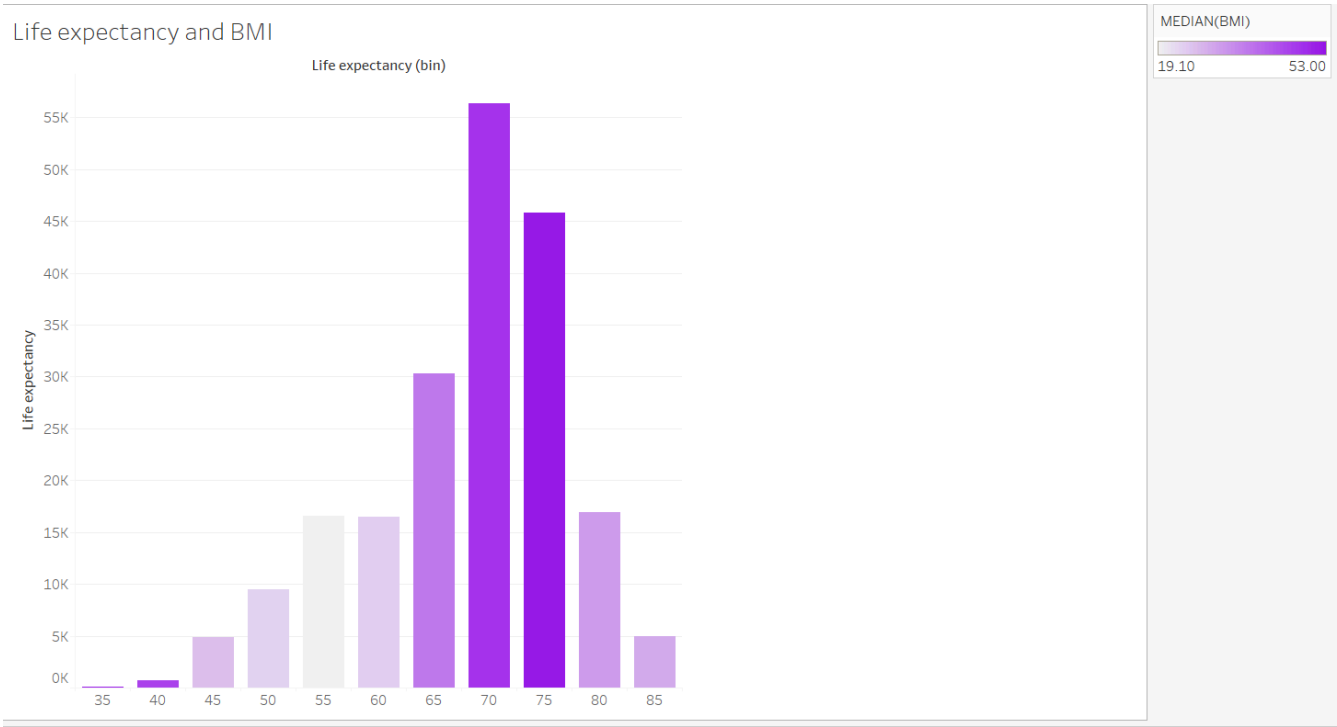
Observation : India, Pakistan, Democratic Republic Of Congo and South Sudan are the most obese countries. Afghanistan has the lowest BMI indicating health issues in the country. This supports our fact that Afghanistan has the lowest high expectancy.

4.) Scatter plot with regression line :



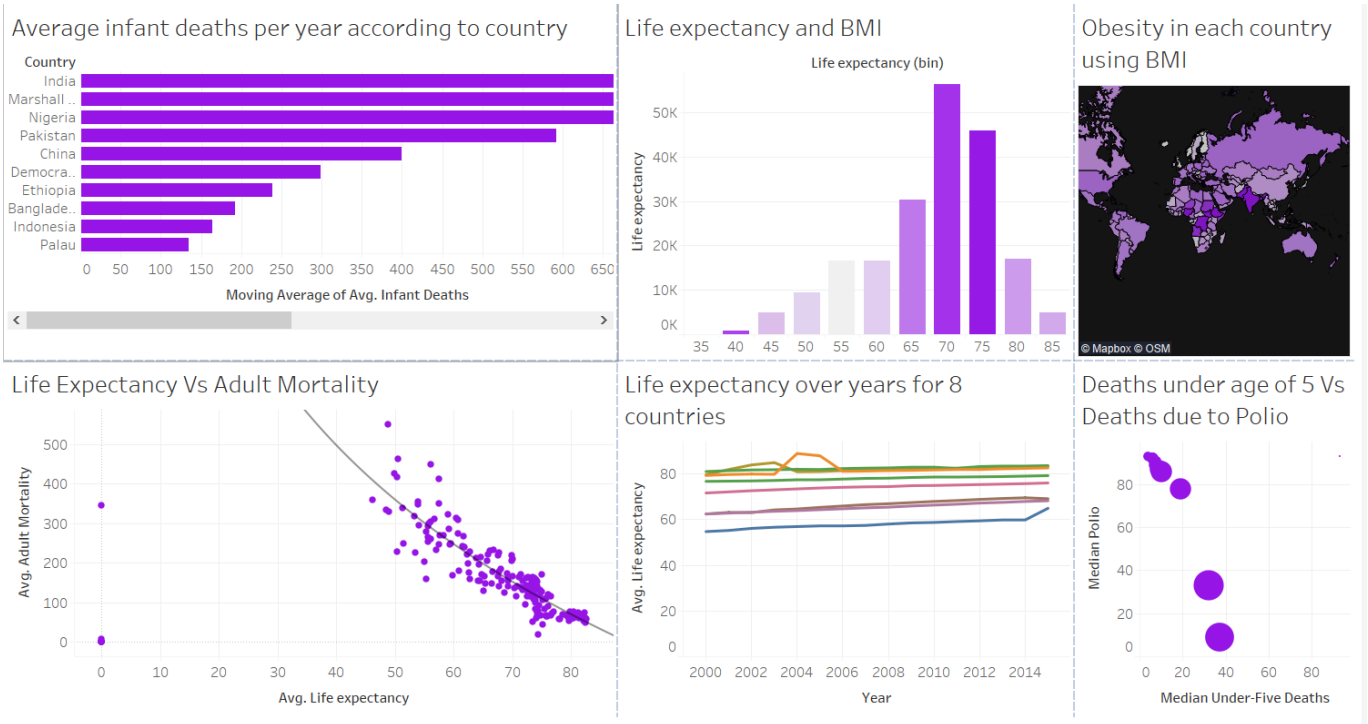
Observation : Adult mortality rate decreases as life expectancy increases. We can see that most of the points are located between 60 and 80 indicating that most people die between 60-80 years of age.

5.) Histogram plot:



Observation : It seems like life expectancy follows a normal distribution. Most of the people live till the age of 70-75. Young people seems to have BMI in low-medium range while people in the age of 70-75 have highest BMI leading to obesity.

Dashboard :



Conclusion : Through this experiment I was able to create different plots in tableau to analyze the life expectancy dataset. Further I was able to create a dashboard to include all the plots.