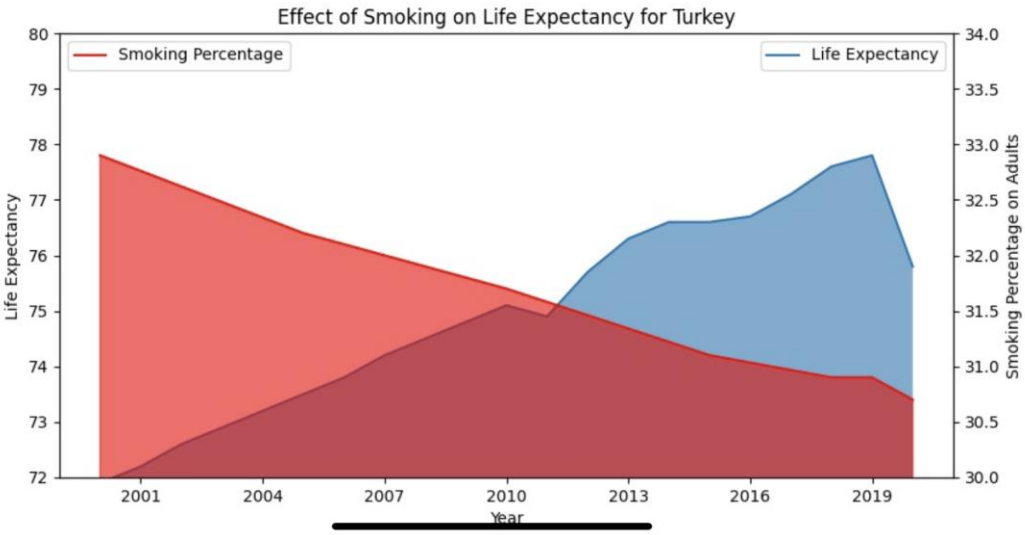
CS306 - Term Project Step 4

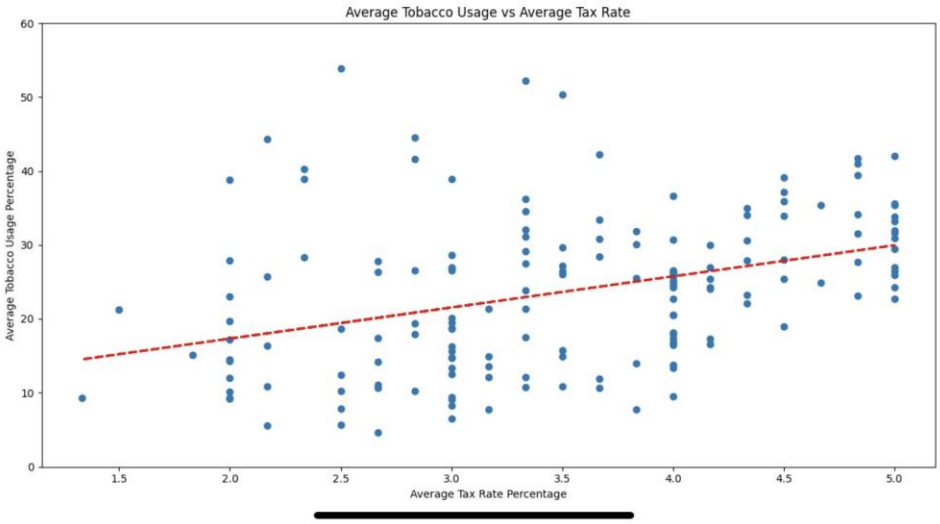
Group Name: Hasta la Vista Baby!

Group Members: Ahmet Emre Eser, Barkin Var, Ecem Akin, Sadiq Qara, Beste Bayhan

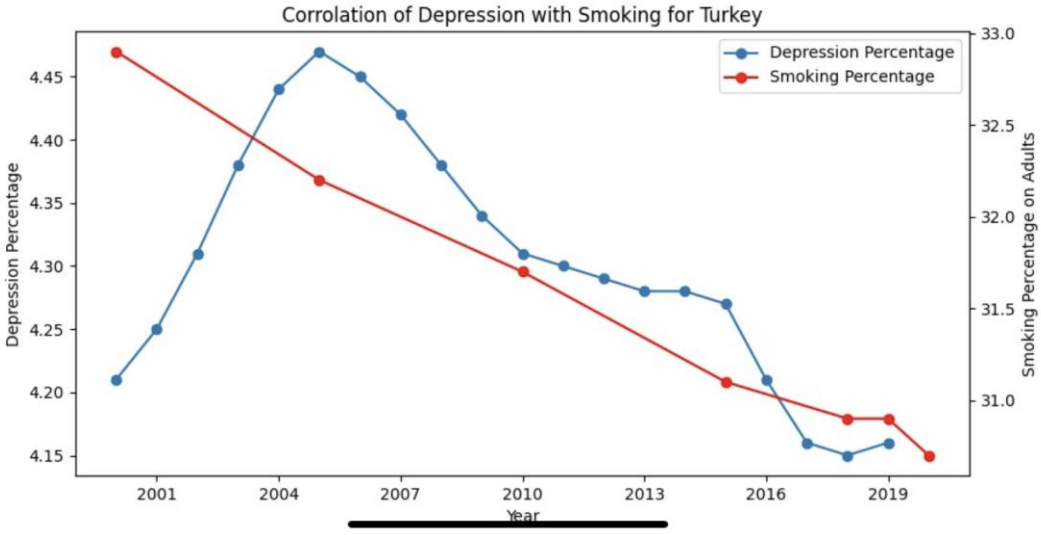
GitHub repository link: https://github.com/barkinvar/CS306-Hasta-La-Vista-Baby



Visualization of data enables complex data relationships and data-driven insights to be communicated in an easy-to-understand way. As a result of the analysis of the data we collected, we created five different types of schemas. The first of these charts is the above area chart, which shows the relationship between the average life expectancy and the percentage of smoking in adults. In this diagram, when we compare the area under the blue line representing adults who smoke and the area under the red line representing life expectancy, we see that the first one is gradually increasing while the other is gradually decreasing. In this diagram, it is clearly seen that there is an inverse proportion between these two relations.

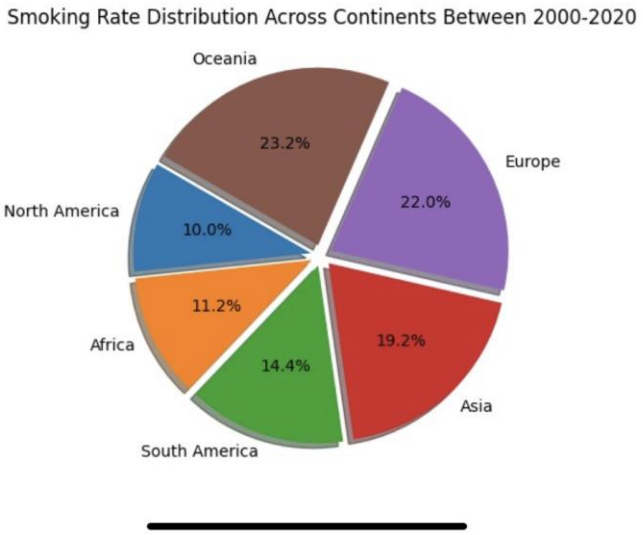


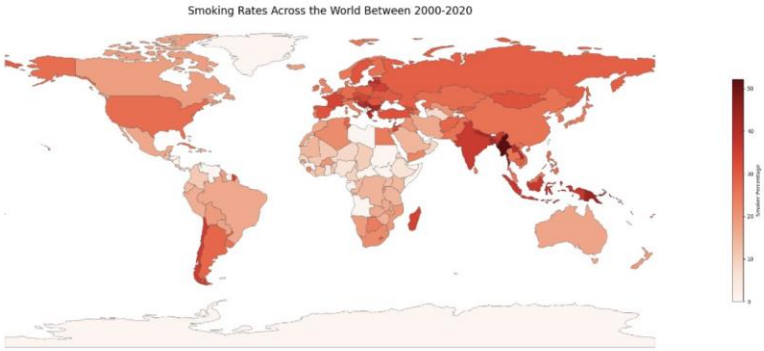
Secondly, from the data we have, we obtained a scattered chart we called "Average Tobacco Usage vs Average Tax Rate". This chart shows the relationship between taxation and tobacco usage. When we take the mean of the dots which is representing average smoking usage, a line is obtained. This positively sloping line reveals that there is a direct proportionality between smoking and taxation. By looking at this graph, it can be deduced that the increase in taxation will not prevent smoking.The fact that smoking increases with taxation can be explained by the possibility that taxation is positively affected by increasing smoking rates and not vice versa.



The third chart, "Correlation of depression with smoking for Turkey" is a line chart comparing the percentage of depression with smoking rate. When we look at this graph, we see that the percentage of depression peaked between 2004 and 2007 and then decreased continuously. Until the percentage of depression peaks, there seems to be an inverse relationship between depression and smoking. However, in the period after the peak, which covers most of the graph, it is seen that the blue line representing the percentage of depression and the red line

representing smoking percentage decrease continuously. Therefore, it can be said that there is a direct proportion between them. As a result, it can be deduced that there is a link between depression and smoking in Turkey.





The last two charts are based on the worldwide smoking rate between 2000 and 2020. The pie chart "Smoking Rate Distribution Across Continents Between 2000-2020" shows the smoking rate in each continent as a slice of the circle. According to this scheme, the continents with the largest slice have the highest smoking rates oceania with 23.2% and europe with 22%. Smoking rates of other continents are very close to each other. According to this scheme, it can be deduced that the rate of cigarette consumption in developed countries is higher than that of other countries.

The area map chart "Smoking Rates Across the World Between 2000-2020" visualized the smoking percentages of countries on the world map. The areas marked in lighter color are the ones with low smoking rate while the areas marked in darker colors are the ones with high

smoking rate. When we look at the regions marked with dark red on the map, it is seen that countries such as France, Papua New Guinea as well as the Balkans region, where there is high smoking rate, are concentrated on the Europe and Oceania continents as shown in the pie chart.