CS 306 DATABASE SYSTEMS – PROJECT STEP 4
COUNTRIES, POLLUTIONS AND SOLUTIONS
GROUP 22

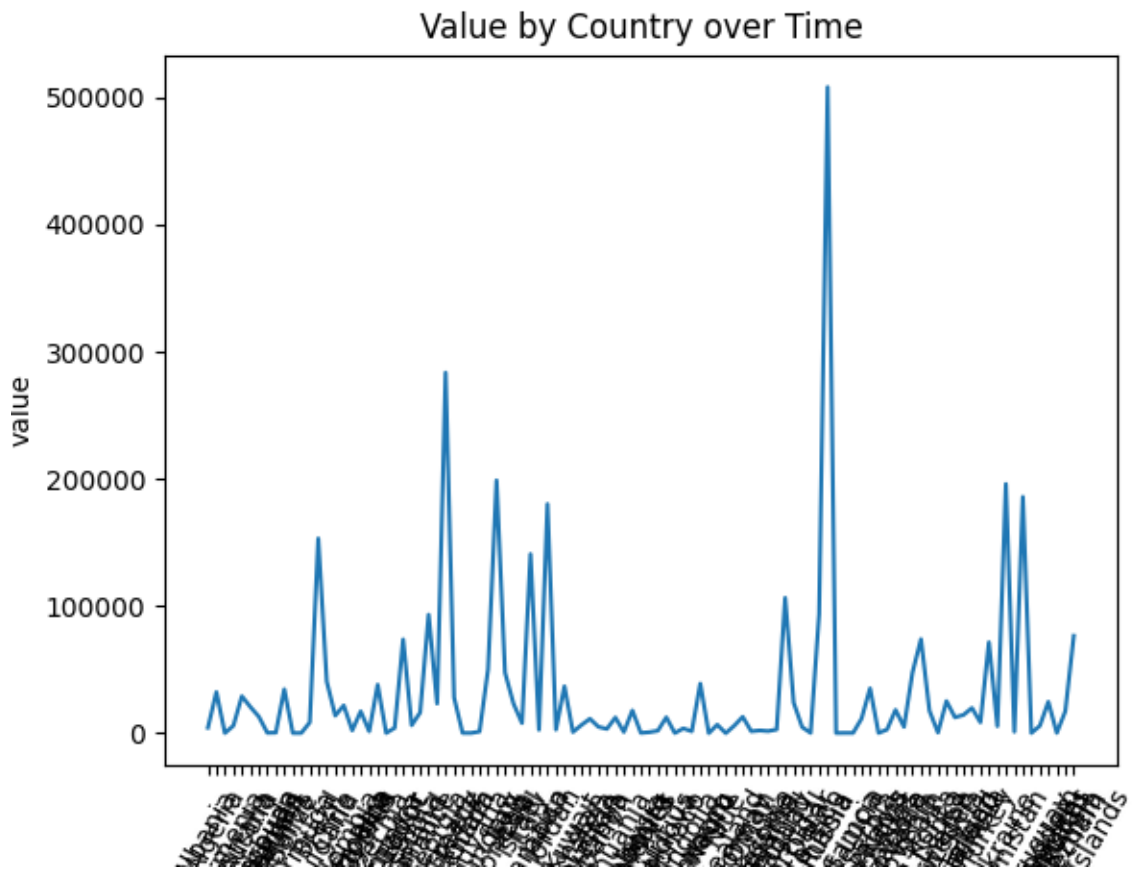
- Ahmet Alperen Güngör – 28847
- Anıl Arslan – 29468
- Batuhan İşildak - 29181
- Dediş Atakan Öz – 29414
- Eren Altın – 28986

https://github.com/batuhanisildak-malwation/CS306_Group22

The goal of this project is to promote awareness on some of the current disasters while promoting alternative & renewable energy sources. The views and charts below are designed in a way to shed light on some of the major issues – from air pollution to major global death causes.

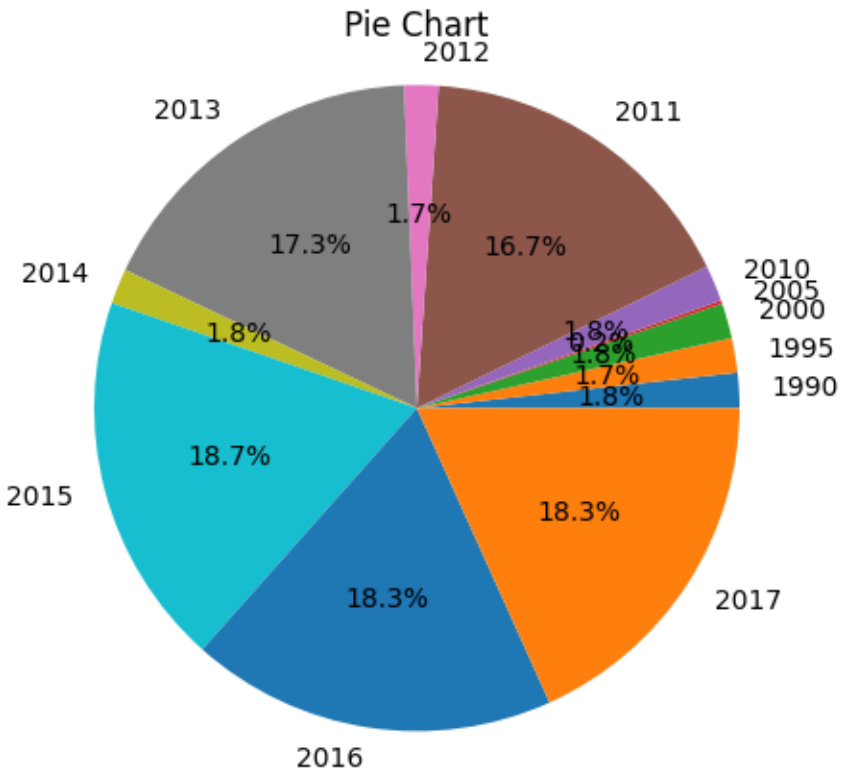
Most Common Death Cause's Graph – Line Chart:

GetMostCommonDeathCauseByCountry view is used in order to visualize the total amount of maximum deaths caused by a single cause in each country. (country names are looking scrambled since the figure is currently small to fit the image, in larger photos it is much more clear)



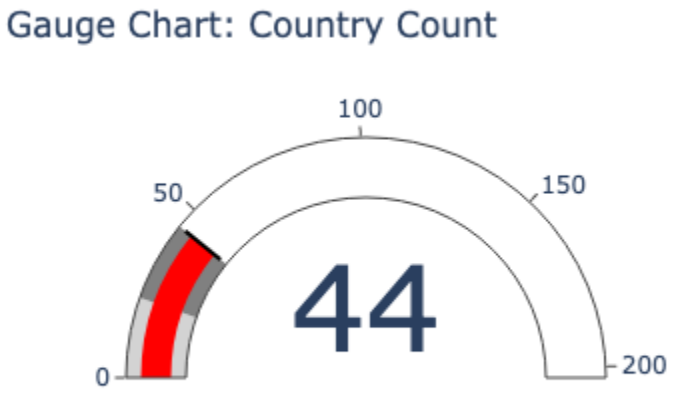
Turkey's Air Pollution By Year Graph – Pie Chart:

GetCountryAirPollutionByYear view is used in order to visualize how Turkey's air pollution is changing by each year. As it can be seen from the chart, air pollution has increased over years: 20-year period between 1990 to 2010 is only around %8 of total air pollution, while the later 7 years from 2011 to 2017 is around %92 percent.



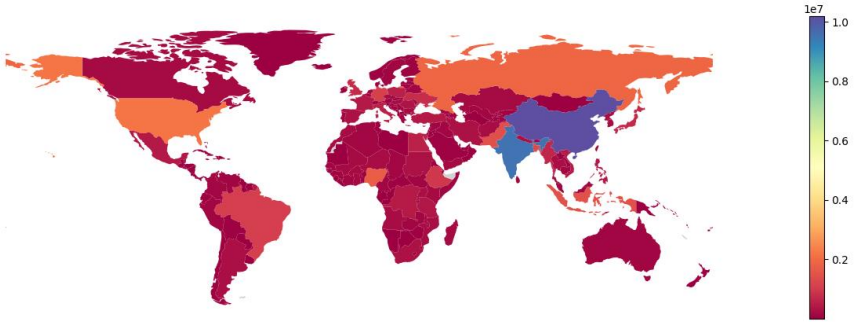
Number of Countries That Use More Than 10 KWH of Solar Energy – Gauge Chart:

GetCountriesWithAvgSolarEnergyAmountMoreThanTenByYea view is used in order to visualize number of countries that use more than 10 kwh of solar energy average per year. This is an important data to emphasize how most of the countries have not adapted to renewable energy sources, even though their affects are proved to be environmentally friendly.



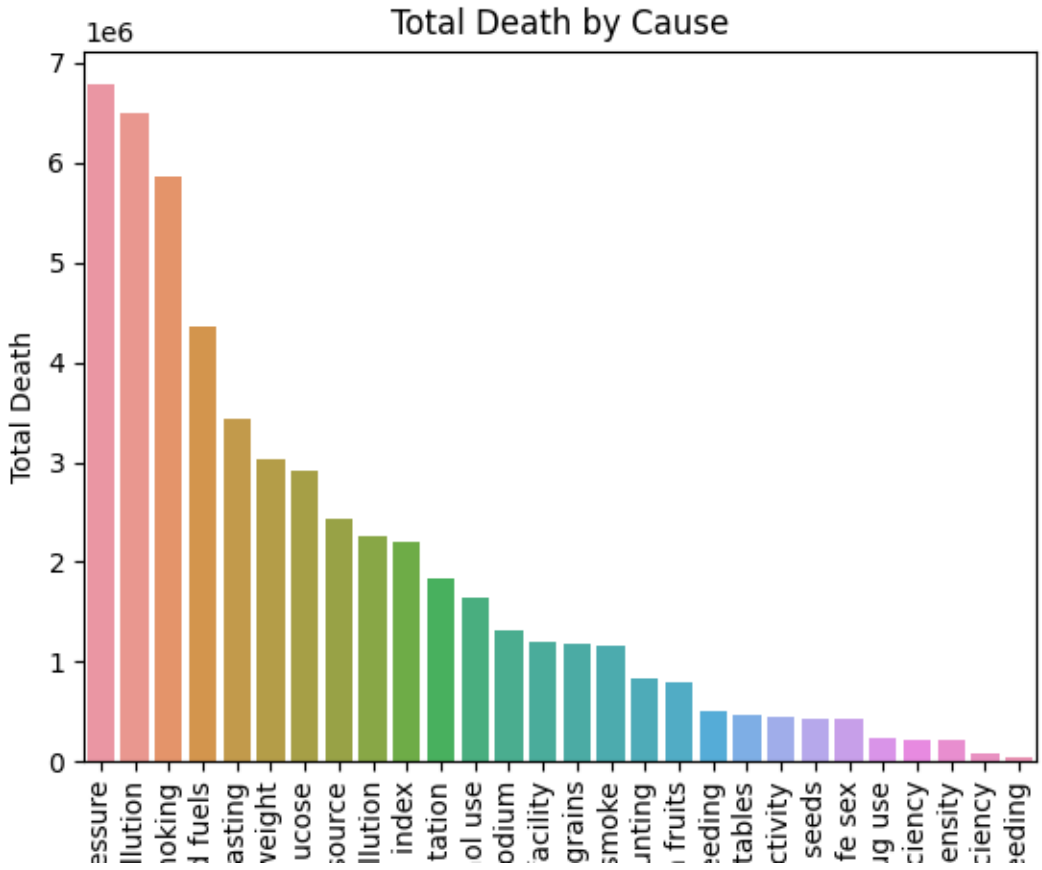
Total Number of Deaths in Each Country – Scatter/Area Map

GetCountryTotalDeathByYear view is used in order to visualize total amount of deaths worldwide in a world map. Combining this data with renewable energy source usage and analyzing most common death cause data, such high numbers of mortality rates can be decreased significantly.



Total Number of Deaths Caused by Different Death Causes – Column Chart

GetDeathCountByDeathCause view is used in order to analyze how much different factors cause deaths globally. When the chart is analyzed, it can be seen that pollution is one of the most important factors that causes high mortalities worldwide. Considering the other analyses that were done above, it can be said that low renewable energy source adaptation rate may be one of the reasons of such disaster.



All of the codes can be found at the github repository. Chart images are in figures folder, and python codes are in main folder, with the names of the views that were used to create these charts. Multiple python libraries were used to create these charts: Matplotlib, Geopandas for scatter/area map, Plotly for gauge chart, Seaborn for column and line charts. Mysql connector is used to pull the data from mysql into python.