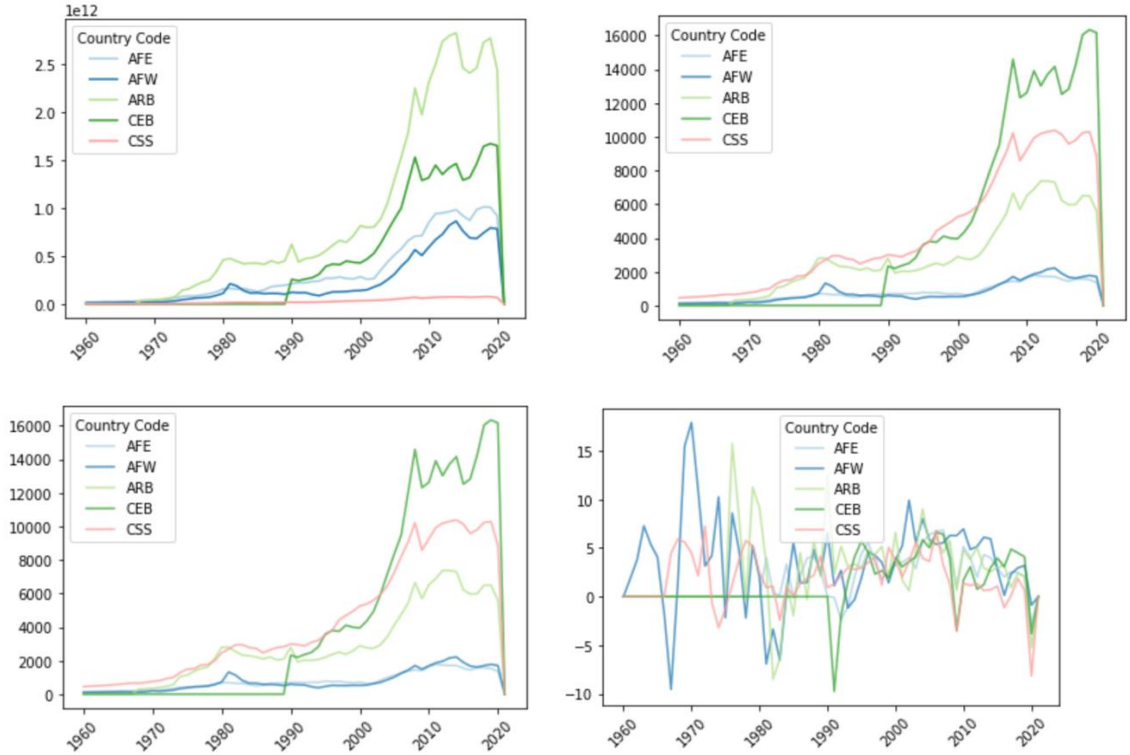
7PAM2000 Applied Data Science 2
Assignment 2

In this assignment I explored public data from the World Bank, and specifically country-by-country indicators related to climate change: https://data.worldbank.org/ topic for this assignment which I supposed to choose is related to climate change. So, I choose one of the datasets which is World Development Indicators Dataset csv file which contains dataset of climate change from 1960 to 2021.

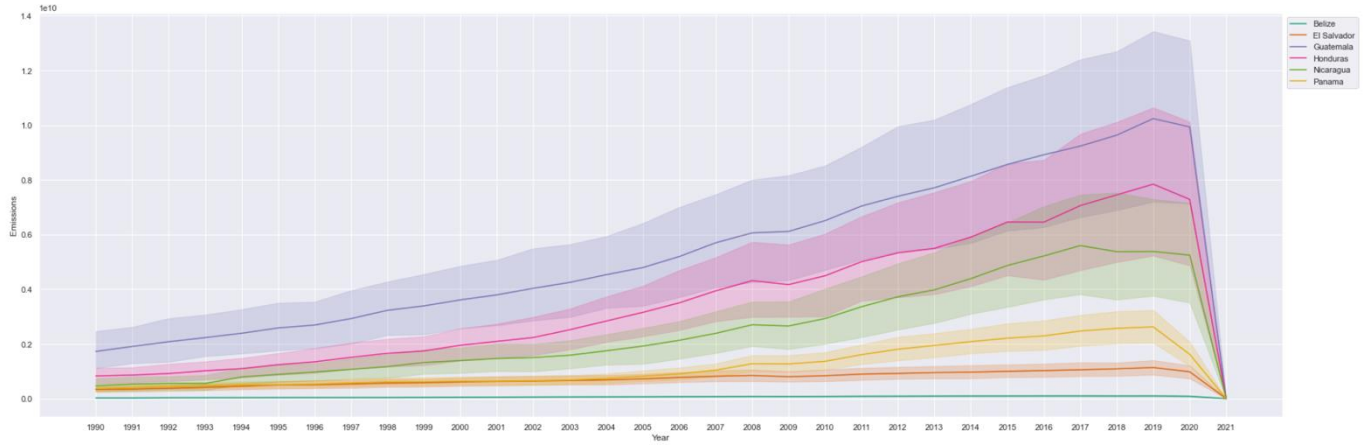
In general, I investigated measurements of environmental change and patterns in more detail here as I dealt with the live dataset and this task prepped my abilities also. World climate is changing rapidly and one of the main causes to this is emission of CO2 gas also CO gas which is the most dangerous gas also known as silent killer gas. This effects our environment very badly. I did some visualizations on this you will find my findings later on this report.

Moreover, I made visualizations of GDP (Gross Domestic Product) and CO2 gas and I found very interesting facts. I did visualization on some of the dataset between a gap of 10 years, So, that I made assumptions clearly. Here are the results which I found.

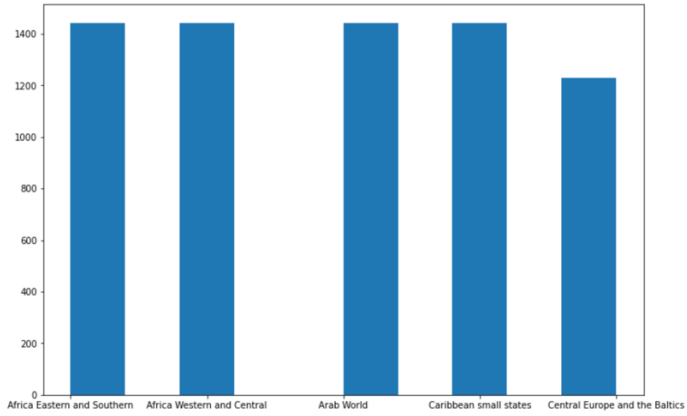


These graphs show GDP of different countries on different years. Graph 1 shows GDP of (current US$) and Graph 2 and Graph 3 shows GDP of per capita (current US$) and Graph 4 shows GDP of growth (annual). As you can see how drastically GDP increased in all these years and made effect in the economy of all these countries. According to the latest facts GDP decreased by -3.6% of the overall world in 2020 as you can see also in the graphs above. How lines are dropping rapidly.

Now comes to the emissions of CO2 in some of the countries from all over the world. I did visualization on some of the countries just to get the best understanding of the emissions.
Here you can see the results:



The chart shows kt of CO2 equivalent of emissions by Guatemala, Honduras, Nicaragua, Panama, El Salvador, Costa Rica, and Belize. The horizontal axis ranges from 1990 to 2021 in increments of 1. The vertical axis ranges from 0 to 1.4 in increments of 0.2.
X-axis of the graph shows years and the Y-axis of the graph shows emission of the CO2 gas.
Carbon dioxide emissions are the essential driver of worldwide environmental change. It's generally perceived that to stay away from the most terrible effects of environmental change, the world necessities to lessen discharges earnestly. Be that as it may, how this obligation is divided among areas, nations, and people has been a perpetual disputed matter in worldwide conversations.
Also, you can see the results in histogram as well of some of the continents.



Conclusion:

How much future warming Earth will encounter relies upon how much carbon dioxide and other ozone depleting substances we radiate in coming many years. Today, our exercises consuming petroleum products and clearing timberlands add around 11 billion metric huge loads of carbon to the air every year. According to the fact that US Environment Science team explored which is indicated that our yearly outflows and refractoriness keeps on expanding and polluting our environment and it is increased day by day. They found that every year it increases 5.9 degrees and our environment hotter up to 5.9 degrees every year which is not good for us and if this continues, we cannot survive on this planet as well. When summer arrives in Asian pacific region every year heat is increasing and survival on those sides are difficult now. So, if we want to live on this beautiful planet, we need to do something to save our environment. May be we need to grow more trees and make our world green and save ourselves from these kind of dangerous gasses.