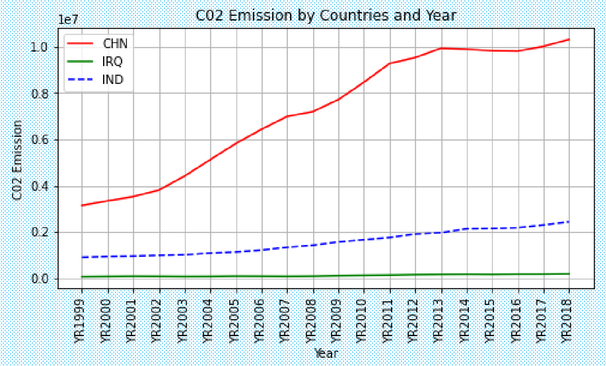
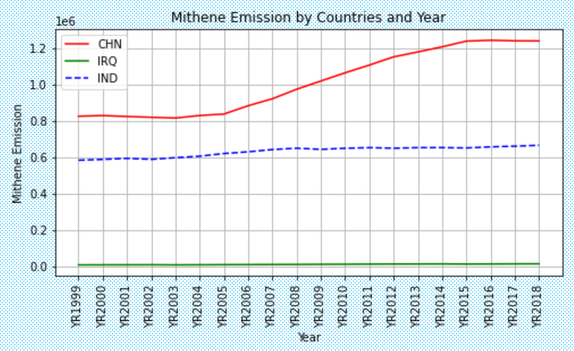
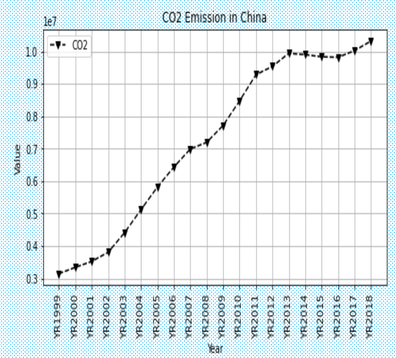
Air Pollution: CO2 & Methane Emission

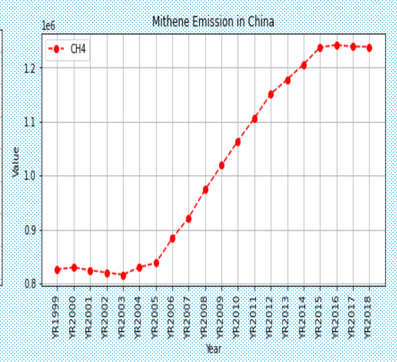


The emission of the CO2 and Methane have been analyzed for the selected countries and the line charts have been produced for better perception to view time series data



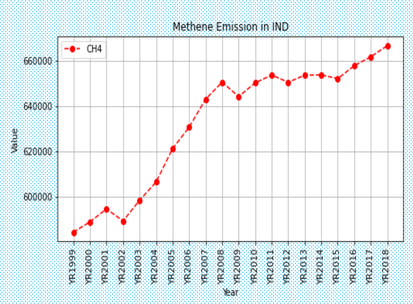
The analysis is showing the fact that the emission of CO2 is highest for China followed by India and same for Methane.

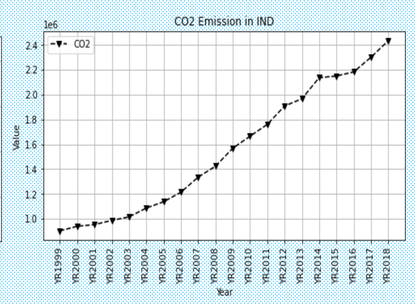


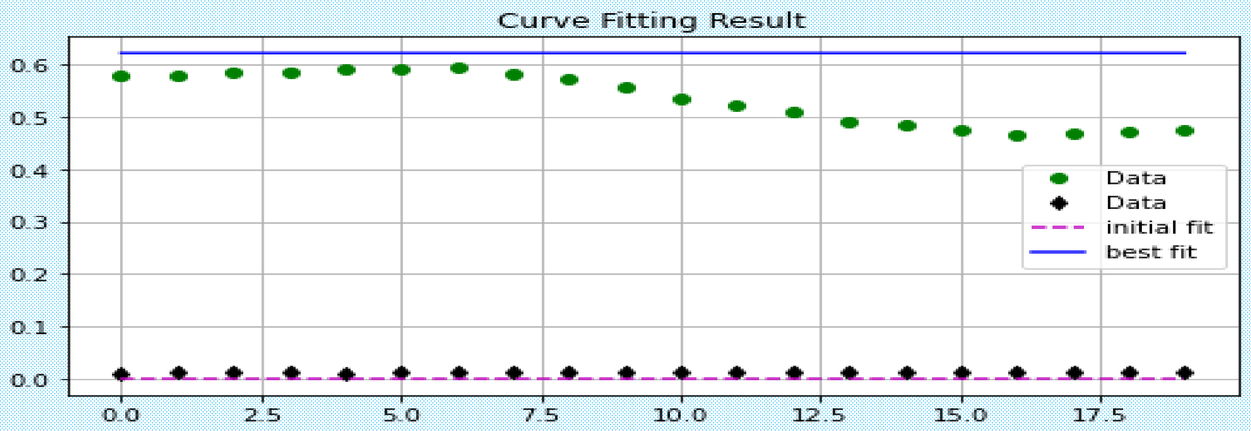


The analysis is showing that the emission of CO2 and Methane has been grown by years for the last 20 years for China

The analysis is showing that the emission of CO2 and Methane has been grown by years for the last 20 years for India

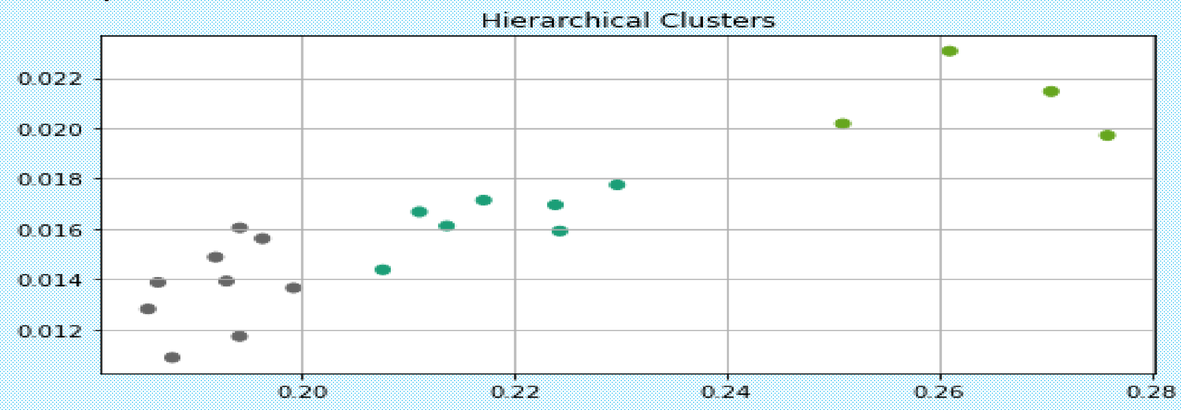




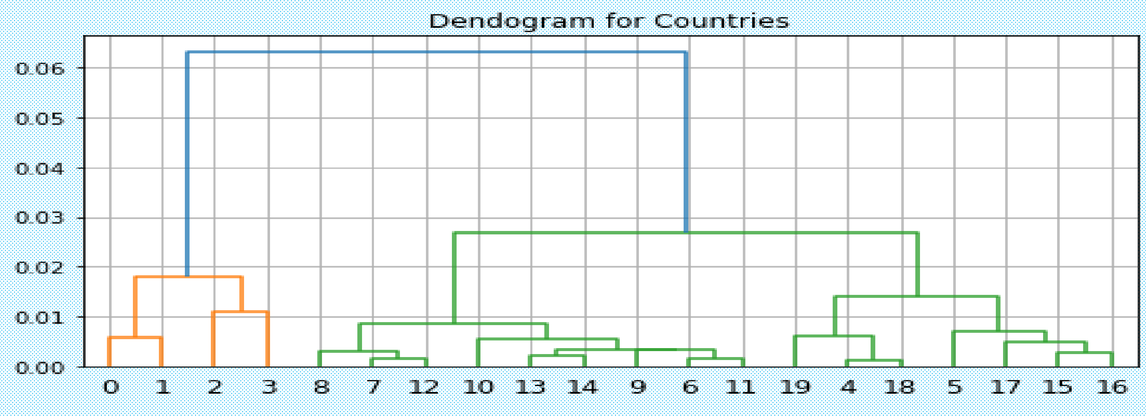


Background and Motivation

Air pollution is a mixture of solid particles and gases in the air. Car emissions, chemicals from factories, dust, pollen and mold spores may be suspended as particles. Ozone, a gas, is a major part of air pollution in cities. When ozone forms air pollution, it's also called smog. Some air pollutants are poisonous. Those are mostly generated from the manufacturing industries, electricity production industries etc. Here, the analyses have been done by taking World Bank data and selecting three countries namely India, China and Iraq.



The countries have been categories using clustering. In this context, both the K-Means and Hierarchical clustering have been used.



The detection and prediction on the spread of air prolusion has bene done on the existing data for last 20 years using curve fitting through Exponential model. The error range has ben taken with lower bound by 1 and upper bound by 5.

Fit Statistics

fitting method	leastsq
# function evals	53
# data points	20
# variables	3
chi-square	0.86097405
reduced chi-square	0.05064553
Akaike info crit.	-56.9084637
Bayesian info crit.	-53.9212669

https://data.worldbank.org/topic/climate-change