CLUSTERING and FITTING

Introduction

This is a depiction of the process and meaningful outcomes obtained after performing clustering and curve fit methods. It will illustrate the application and visualization on topic.

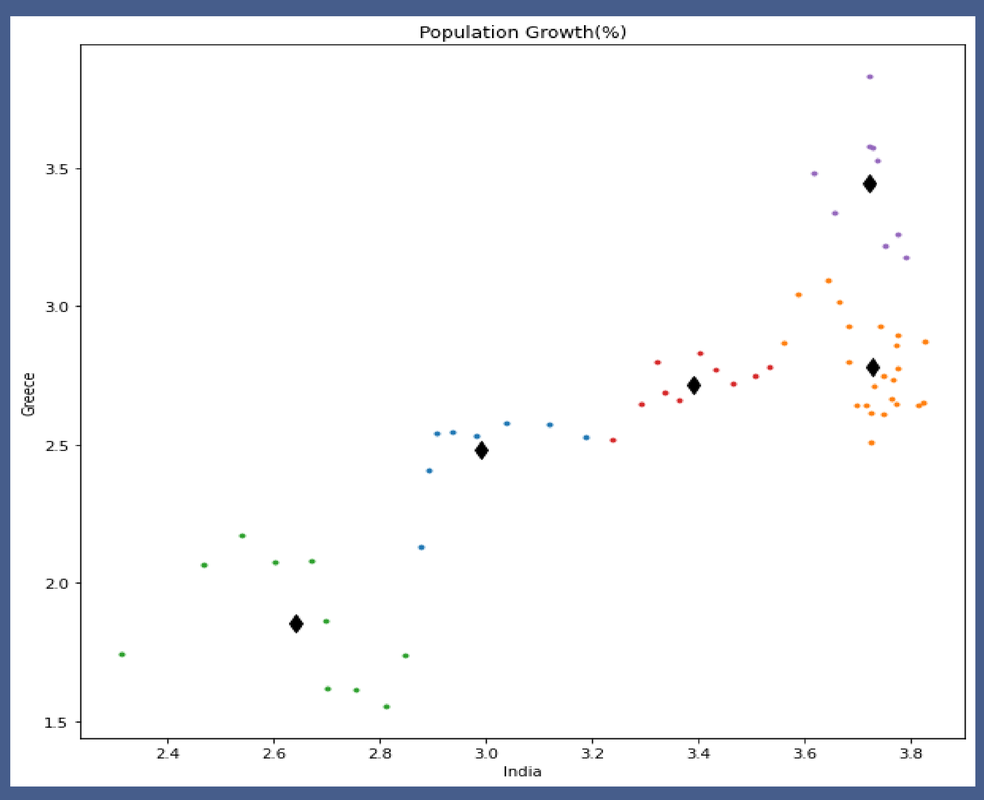
CLUSTERING

- It is one of the most common way to identify similar set of items in a group of numerous categories.
- The process is prominently based on separating parts of dataset based on specific characteristic.
- It is majorly used in healthcare, finance, super stores and so on.

➢ **Tabular Form of Data:**

YEAR	INDIA	GREECE
1965	0.94956	0.523588
1975	0.951645	0.730262
1985	0.958186	0.488695
1995	0.788826	0.523329
2005	0.532801	0.44698
2015	0.257898	0.029082
2021	0.0	0.082237

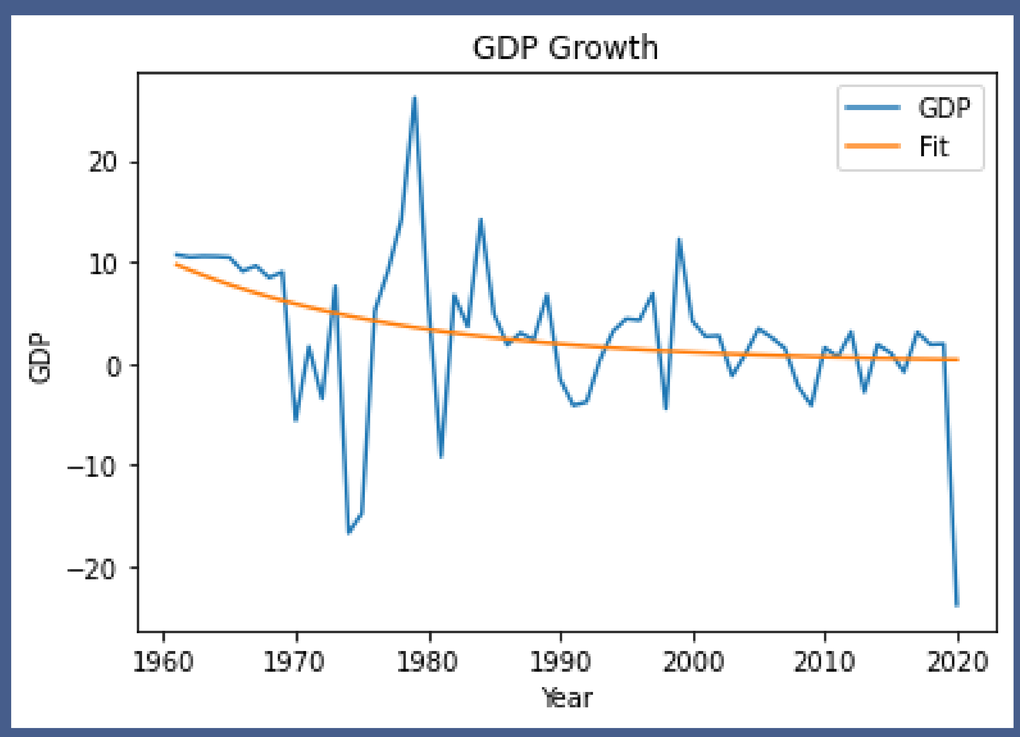
- In the table above, two countries are taken into consideration and their growth of population is compared simultaneously over a period.



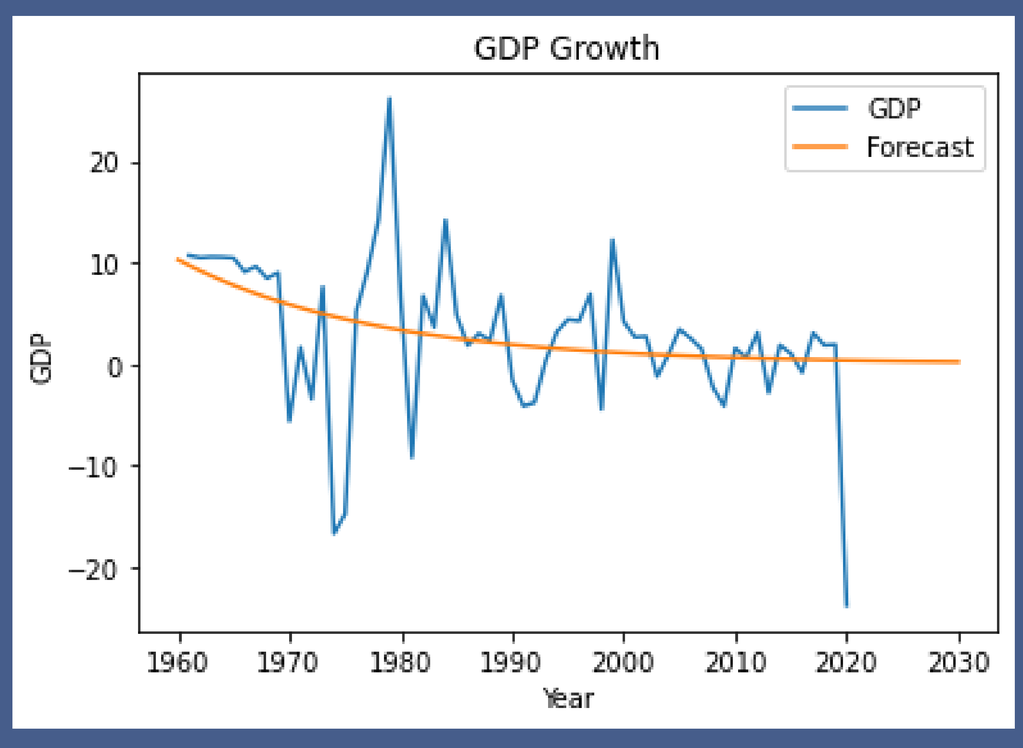
- The graph illustrates that both countries have seen majority of growth at 2.5-3% rate have more population of people in that ratio and are more tightly packed.
- Whereas the amount is much lesser at the end points such as 2.4% and 3.6% in the pair comparison.

FITTING

- Fitting is a type of phenomenon in which we find to fit a line according to our set of observations.
- Here, with use of appropriate modules we can fit different curves in our observation set and can interfere meaning results.



- The growth of GDP for country ‘Bahamas, The’ is at peak in the year 1980 and the curve fit line declines along the time period depicting that GDP sees a huge dip in 2020.



- The graph seen above is being plotted to predict the GDP in upcoming 10 years of time gap from year 2020.
- Here, the best fit curve stays almost stable throughout that period depicting that GDP will not fluctuate majorly.

GitHub Link

- https://github.com/PrachiDiwan-git/ADS-Assignment3