

Analysis Report

The data set of the following program taken from Kgggle, the link of the Kgggle site is given below.

<https://www.kaggle.com/datasets/pantanjali/unemployment-dataset>

The dataset is about “**Unemployment dataset**”.

Unemployment is a situation when a person actively searches for a job and is unable to find work.

Unemployment indicates the health of the economy.

Why does unemployment occur?

- Large population.
- Lack of vocational skills or low educational levels of the working population.

In the above code we take only datasets X1=unemployment in 1991 and X2=unemployment in 2021.

The reason of choosing these two data sets, both belongs to same kind of category and by choosing these we cover all the years between 1991-2021

In the first graph we use Elbow Method to determine the value of K. then we simply use k, means algorithm and plot its clusters.

In second phase we use” Spectral Clustering”. In Spectral clustering we don’t need to find the value of number of k’s. We just use spectral clustering algorithm and plot the graph. The method finds value of k on their own.

Conclusion:

The use of “Spectral Clustering” is better because in “Spectral Clustering” there is no need to find the value of k. we simply give the value of X1 and X2 and the algorithm finds the k and plot the graph. So, in my opinion “Spectral Clustering “is better and easy to use.