

# ASSIGNMENT-1

## VISUALISATION

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Module : Applied Data Science 1

Data Source link used : <https://data.worldbank.org>

Python program code is stored in GitHub

GitHub : <https://github.com/AnnMaryKurian/Ann-Mary-Kurian-DS.git>

Data Sources are stored as excel files in OneDrive

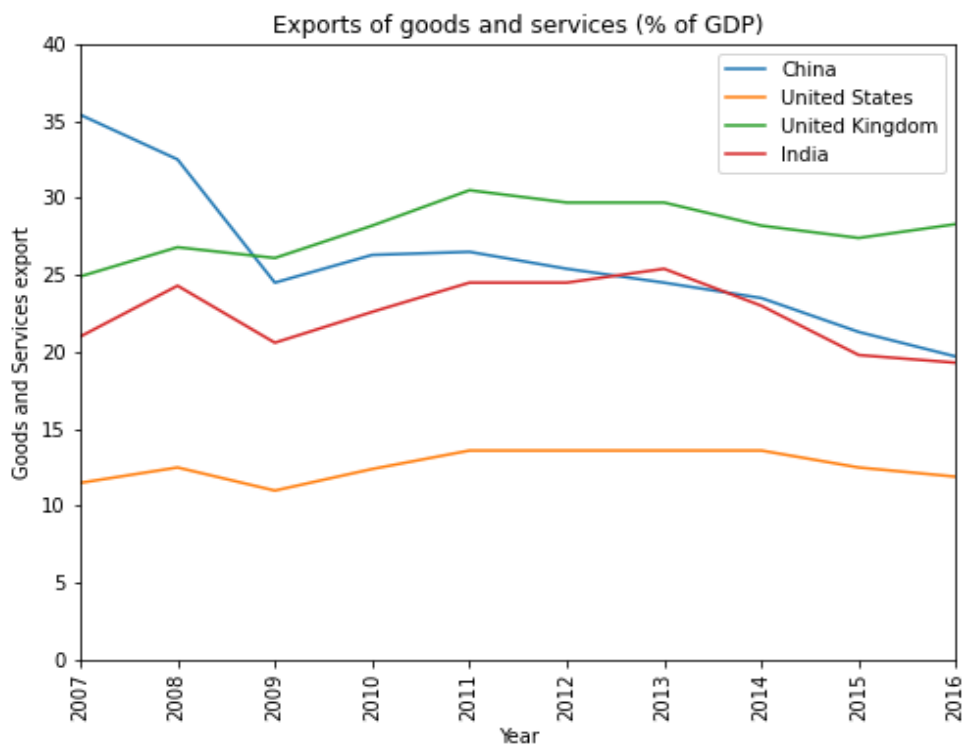
OneDrive : [ADS Assignment](#)

Data visualisation provides the graphical representation of data. Various visualisation techniques are used for providing the visualisation. These include Line plots, Pie charts, Bar graphs, Histograms etc. A data representation is selected depending upon the type of source data.

## Visualisation 1 : Line Plot

### Topic : Exports of goods and services (% of GDP)

Line plots are suitable to show the changes occurred throughout a period of time. The line plot provides the best explanation of services and goods export as a percentage of GDP. The ups and downs for each nation is shown in the line plot by connecting the value points for each year.

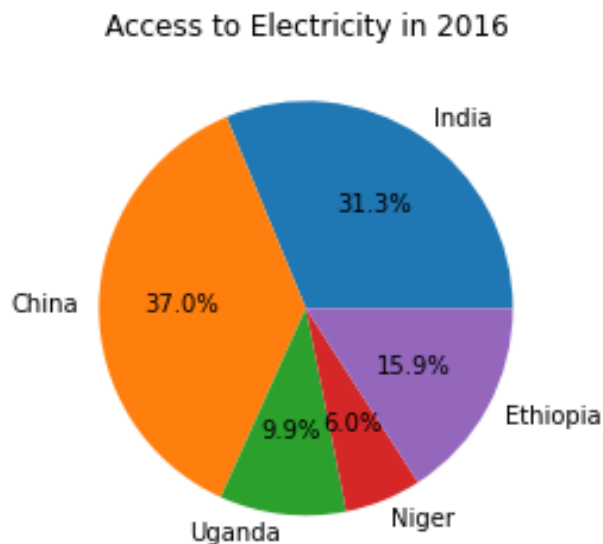


China has the highest level of GDP and US has the lowest GDP level. Both India and UK are having slight variation in the initial stage and out of both countries UK has the higher percentage. Although China shows higher rates in the initial two years the country had a decline in 2009 and then from the year 2009 till 2016, the country gains only a slight rise in GDP. US shows only a minor changes over the whole years. India has shown a sharp spike in 2006 and a dip in 2009, then followed by ups and downs in further years. Britain had shown a slight drive in 2007 and it shows slight decrease throughout the following years.

## Visualisation 2 : Pie Chart

### Topic : Access to Electricity in 2016

Pie charts are best to compare the percentage changes in a given situation, for different countries.

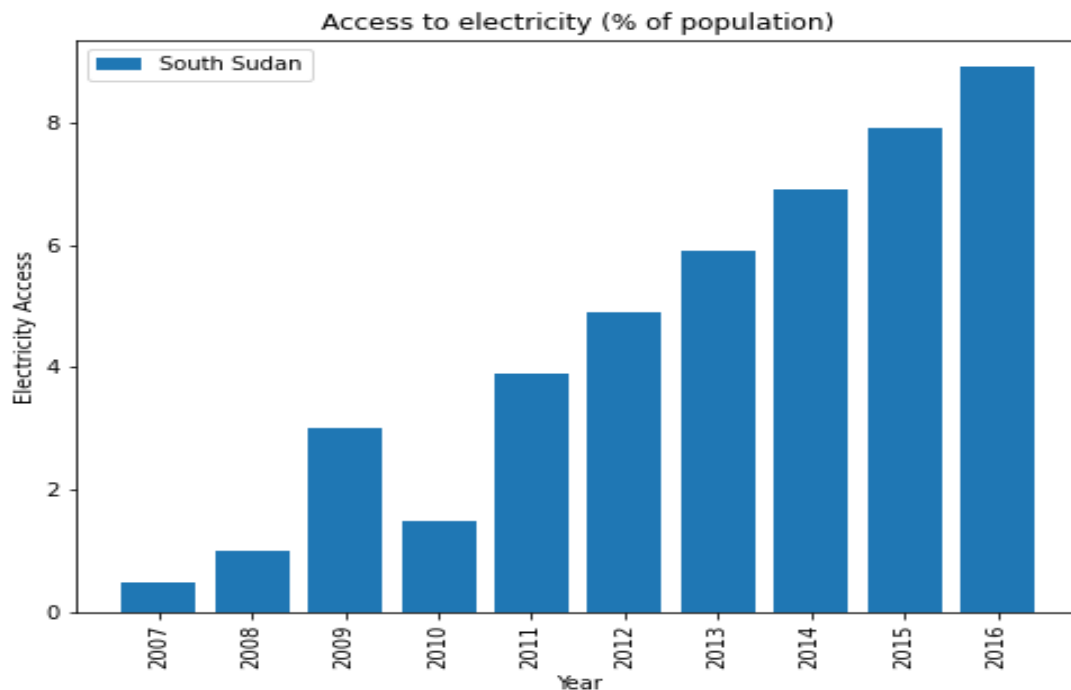


Here the availability of power in different nations are compared for the year 2016. China has the most and Niger has the least access to power. The three nations except China and India sums up to the same percentage of power consumption as that of India. Ethiopia shows the same percentage increase as the same proportion of both Niger and Uganda together.

## Visualisation 3 : Bar Chart

### Topic : Access to Electricity (% of population)

Bar Graphs are best to explain the population fluctuation over a period of time.



Here the Bar graph shows the changes in population of South Sudan towards electricity availability. In 2009 the population shows a sharp increase and in the next year it shows a sudden fall. The population then exhibits a periodic growth from 2011 till the end of 2016. Within a short span of time South Sudan reached in a positive track of growth.