

ASSIGNMENT 1: VISUALISATION

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MODULE: APPLIED DATA SCIENCE 1

In this assignment, line chart was plotted with data on the population's access to electricity. The data from the GPC transaction report were used to create pie chart. While the data that shows the employment rate of women was used to plot the bar graph. Also, the data source used to create the line and bar chart was World Bank Open Data and pie chart was from gov.uk.

Data source:

<https://data.gov.uk/>

<https://data.worldbank.org/>

Data sets are stored as excel files in OneDrive

OneDrive link:

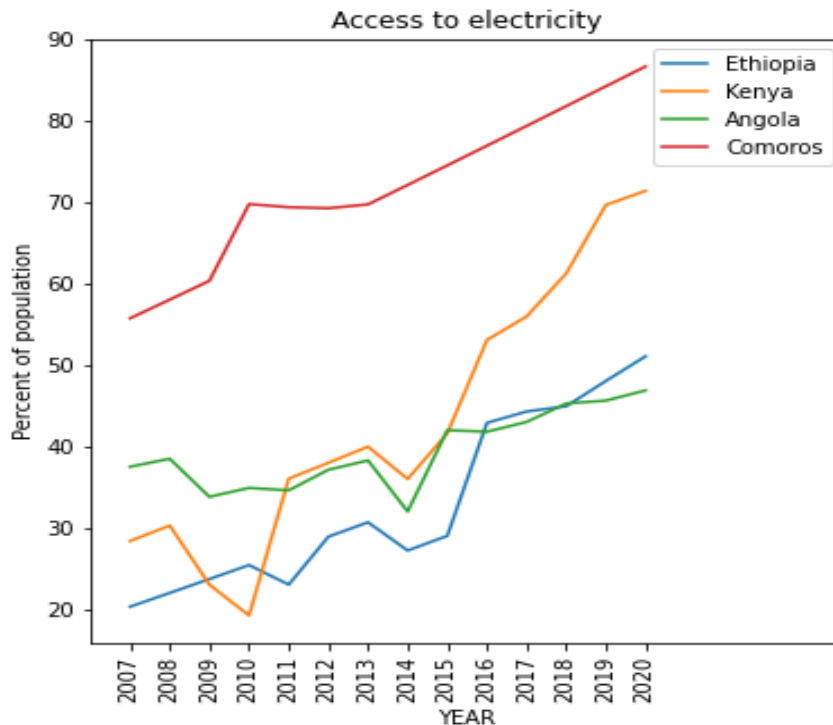
[applied data science](#)

The GitHub repository contains python code for all three data sets

GitHub link:

<https://github.com/anjanajoshy/anjana.git>

VISUALISATION 1 – LINE CHART

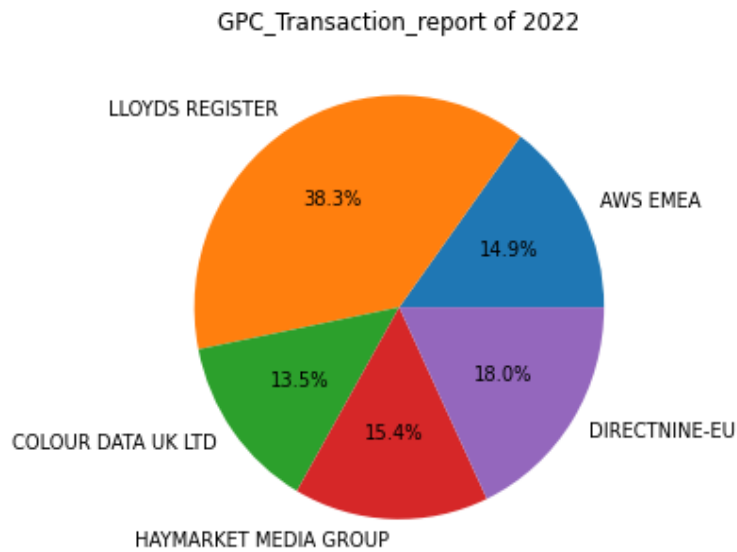


Line chart illustrates the percentage of people who have access to electricity from 2007 to 2020. From the graph it is clear that the population of Comoros had above 50% and increased to about 80% within 13 years.

Clearly, the graph of Kenya shows a high degree of decline from 30% to less than 20% by 2010 and then raised highly to above 70%. For Angola and Ethiopia in 2007, the range of the population without electricity was about 37% and 29% respectively, thereafter the flow of these two countries were similarly different. Overall, Kenya and Comoros topped to 60%, while Ethiopia and Angola reached around 40%.

Line charts are used to compare multiple line data sets over a particular period of time and helps to show the frequency of occurrence of each value.

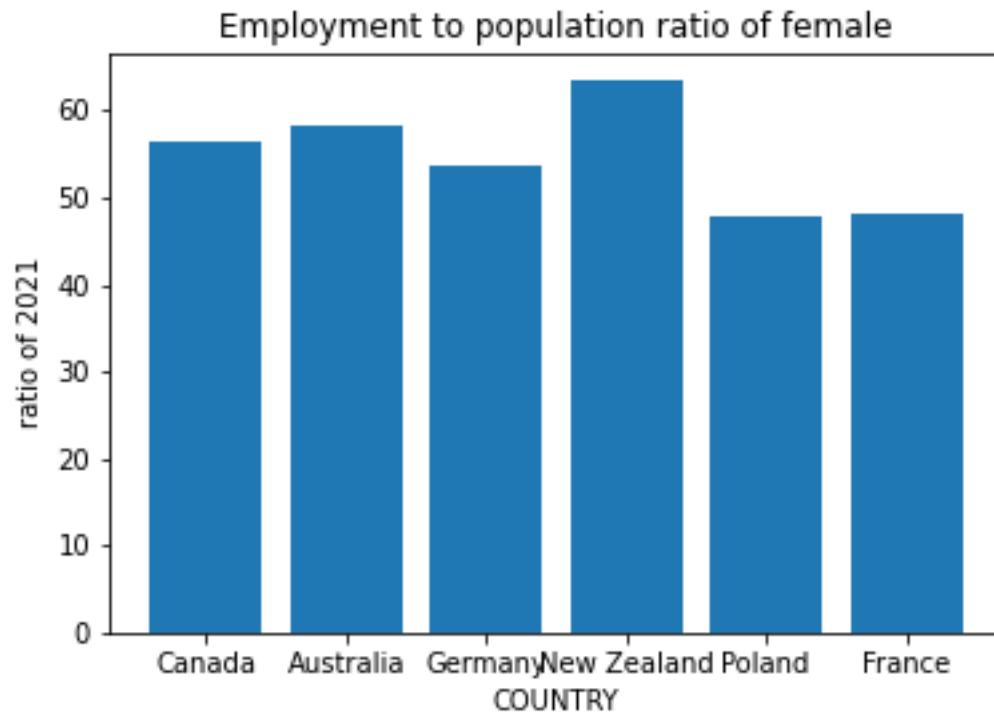
VISUALISATION 2 – PIE CHART



The GPC transaction report for each merchant in 2022 is compared in the pie chart. The graph shows that Lloyds Register had the highest transaction range of any other merchants. On the other hand, Directnine-EU ranked the second place on the graph and had a proportion of 18.0%. As in the case with AWS EMEA and Haymarket Media Group, merely a manageable difference can be seen from the chart, they ranged around 14% to 15%. Similarly, Colour Data UK LTD had the lowest ratio of transaction report. Overall, more than a quarter of the charts is run by Lloyds Register compared to other four merchants, according to the transaction report.

Pie charts are useful way to display the relative proportion of various components of a single data set, and they are frequently used in business and economics to present data in a way that is clear.

VISUALISATION 3 – BAR CHART



The bar chart shows the employment rate of female in six different countries in 2021. Clearly, New Zealand's employment rate is higher than other countries. In addition, France and Poland had similar percentages, around 50%. Moreover, Canada and Australia shows slightly different employment rates. However, the lowest range of population employment rates was found in Germany. In summary, as the graph shows, only New Zealand raised its employment rate to above 60%.

The bar chart are good to compare fractions and used in presentation and reports as they as visually easy to interpret.