Retail Analytics

Tasks for Internal Assessment

1. To be worked using Python
2. Work with the country allocated.
3. For change of country in case of data problems, contact Faculty

Create a csv file for the Country allocated.

**Submission Incudes a data file as excel/csv & .ipynb file**

**Create a data frame of following variables:**

|  |
| --- |
| Year |
| CO2 emissions (metric tons per capita) |
| Current account balance (% of GDP) |
| GDP growth (annual %) |
| GDP per capita growth (annual %) |
| GNI growth (annual %) |
| Imports of goods and services (% of GDP) |
| Inflation, consumer prices (annual %) |
| Inflation, GDP deflator (annual %)  Population growth (annual %)  Unemployment, total (% of total labor force) (national estimate) |
|  |

Run the following Tasks:

1. Line plots of variables and interpret trend - GDP per capita growth (annual %) & Inflation, consumer prices (annual %)
2. describe(), skew() & kurt() of all variables
3. Histogram, boxplot and density curve of the following and interpret skewness, kurtosis and outliers
4. Inflation..consumer.prices..annual..."
5. "GDP.growth..annual...",
6. Correlation and Covariance Analysis of all the variables and interpret correlations. Check for Multicollinearity
7. Scatter plot for all variables
8. Test Null No Significant difference in Average Inflation..consumer.prices..annual and GDP.growth..annual. interpret based on p-value
9. Test Null No Significant difference in Avearge Population.growth..annual, Inflation, consumer prices (annual %) and GNI.growth..annual... . interpret based on p-value
10. Univariate Time Series Forecasting, Stationarity Test, Decomposition, ARIMA Modelling and Interpretation for variables
11. GDP growth (annual %)
12. Inflation, consumer prices (annual %)