Rajendra Prasad Ponnam

DSC 540

Project Milestone 1

**Foreign Currency Exchange Rates Analysis**

The 3 datasets that I will be using are below:

* **CSV File** Downloaded from [Foreign exchange rates](https://www.kaggle.com/datasets/brunotly/foreign-exchange-rates-per-dollar-20002019)

This CSV file contains a list of country names with the currency values, time series and other informational data. The list was generated in 2000 t0 2019 so it needs updated as per the current results.

* **Website – Federal Reserve**

This website has a screener that provides data in a tabular format based on the country. It contains county names, currency name and its currency value with other information.

* **API –** [Currency layer](https://currencylayer.com/?utm_source=geekflare&utm_medium=Leads%20Acquisition&utm_content=ProductListCurrencyExchange)

This API collects data sources from banks and commercial sources. The data solution gets delivered in JSON format for easy integration, compatibility with multiple applications, and maximum usability. We will also get advanced features like switch source currency, currency change parameters, convert single amounts, historical data, and more.

For this Project, I will have to format the CSV file for any duplicates or missing values using python pandas library. I will have to rename few columns as well, because some columns also overlap from other data sources. It has mainly, information about the company and contains mostly string data. I will need to do lot of data cleaning in this. For website data, I will be selecting columns for exchange rate indicator. I will also need to filter the data based on the country. I have two reasons for this: 1.) Since foreign exchange data is real-time. 2.)

Some of the libraries I may need is Requests, html\_table\_parser, pprint, BeautifulSoup to perform web scraping. From API I intend to get daily exchange prices, change, volume for each country. This project is a small attempt to build exchange rate strategies using, historical prices, financial indicators, and news data. Since foreign exchange prices change real-time, I will only include historical data for prices and news.