Currency Calculator

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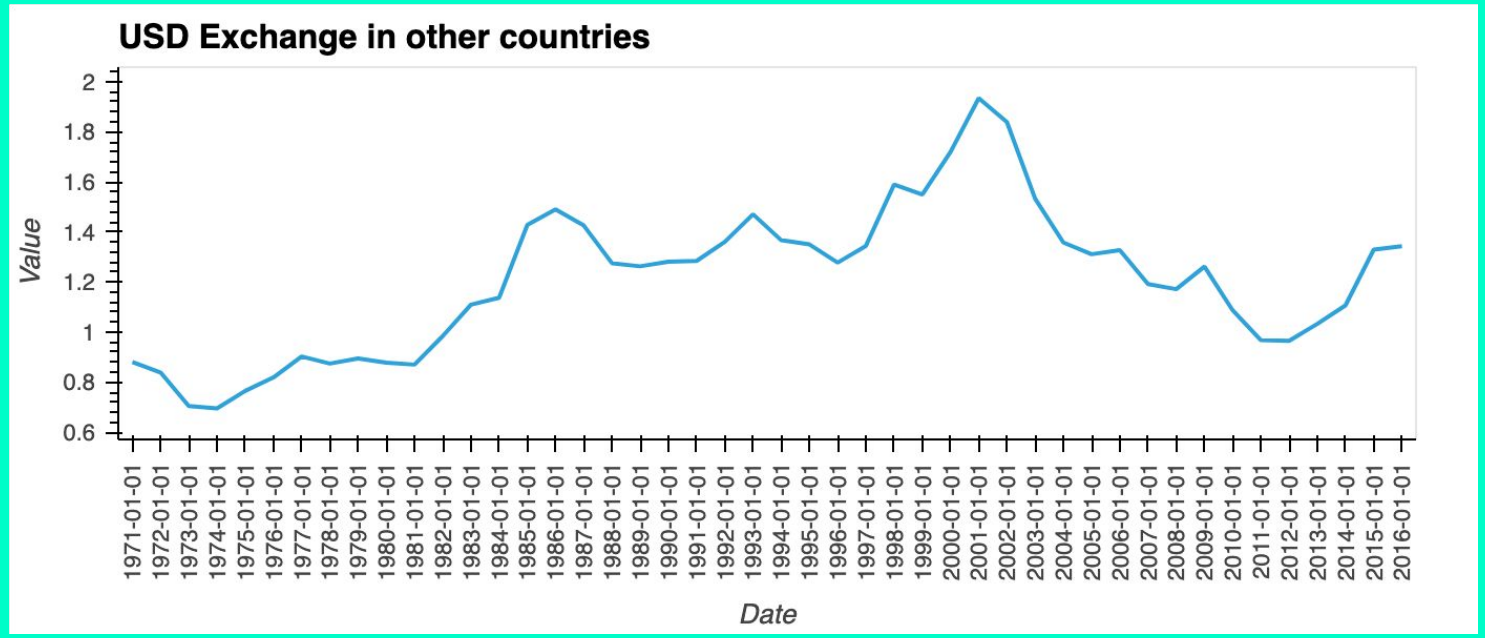
- Currencies history around the world
- Current currencies values
- Currency calculator in jupyter lab

World Currencies history USD

A list of other countries currencies in USD and how they have changed over time, and also I have made a dot plot , also an interactive line plot by countries is shown in the analysis.

This depicts the different values of othe currencies compare to the dollar and the value how has change over time


USD Exchange in other countries
Value
2
1.8
1.6
1.4
1.2
1
0.8
0.6
1971-01-01
1972-01-01
1973-01-01
1974-01-01
1975-01-01
1976-01-01
1977-01-01
1978-01-01
1979-01-01
1980-01-01
1981-01-01
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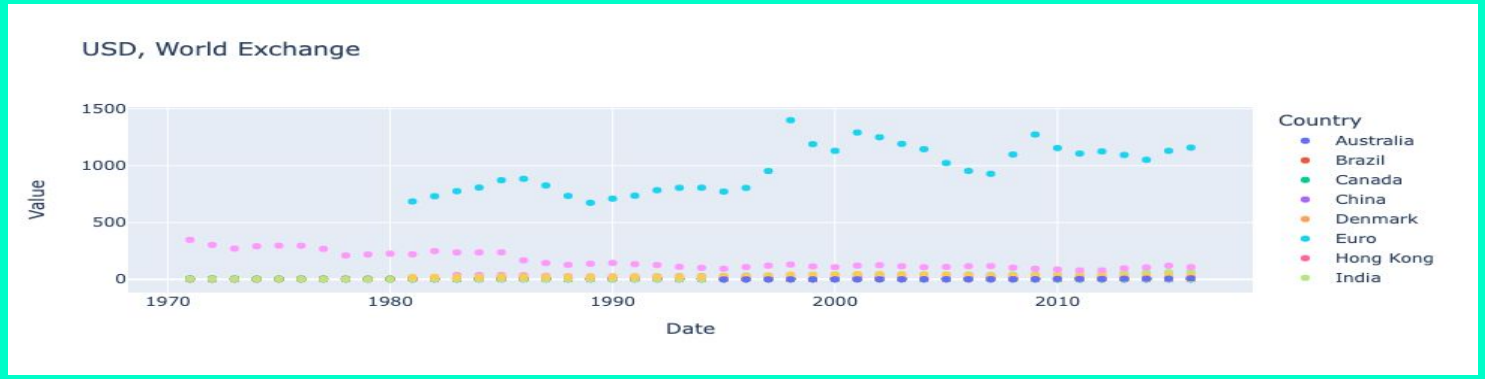
2010-01-01
2011-01-01
2012-01-01
2013-01-01
2014-01-01
2015-01-01
2016-01-01
Date

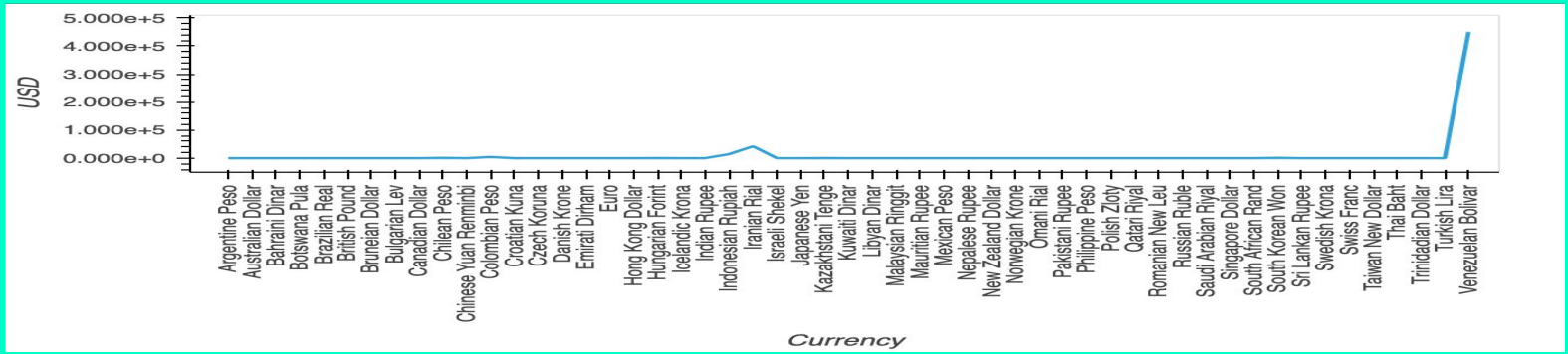

USD, World Exchange
Value
1500
1000
500
0
1970
1980
1990
2000
2010
Date
Country
Australia
Brazil
Canada
China
Denmark
Euro
Hong Kong
India

USD Exchange in other currencies in present times

Dataframe showing the current values of other currrencies in other USD and how much USD they are a worth, along with lat and lon to be able to create a mapbox interactive world map, also a line plot showing how far apart the currencies are worth.

As you hover in the interactive map it gives you the info of the countries currency.

USD World Exchange



CURRENCY CALCULATOR

The actual calculator is capable of returning the value of the currency in other currencies,

I manage to find a library with this function included

```
from currency_converter import CurrencyConverter

c = CurrencyConverter()
```

And also I created a function that manage to work similar by using the key of currencies such as USD , EUR , JPY , and other ones

In [1]:

```
from currency_converter import CurrencyConverter
c = CurrencyConverter()
```

In [2]:

```
c.convert(1000, 'EUR', 'JPY')
```

Out[2]:

```
130979.99999999999
```

```
# of one country to that of another country

# Import the modules needed
import requests

class Currency_convertor:
    # empty dict to store the conversion rates
    rates = {}
    def __init__(self, url):
        data = requests.get(url).json()

        # Extracting only the rates from the json data
        self.rates = data["rates"]

    # function to do a simple cross multiplication between
    # the amount and the conversion rates
    def convert(self, from_currency, to_currency, amount):
        initial_amount = amount
        if from_currency != 'EUR' :
            amount = amount / self.rates[from_currency]

        # limiting the precision to 2 decimal places
        amount = round(amount * self.rates[to_currency], 2)
        print('{} {} = {} {}'.format(initial_amount, from_currency, amount, to_currency))

# Driver code
if __name__ == "__main__":


    url = str.__add__('http://data.fixer.io/api/latest?access_key=', "6fe1a18ce218d324c8e69c1899ba5267")
    c = Currency_convertor(url)
    from_country = input("From CurrencyKey: ")
    to_country = input("TO CurrencyKey: ")
    amount = int(input("Amount: "))

    c.convert(from_country, to_country, amount)
```

```
120 USD = 105.09 EUR
```

In conclusion

I can conclude my analysis with the history of currencies based on USD values all over the world , Also manage to create a code that shows an interactive map that shows the currency by countries and value, and finally made the actual calculator to return the value of one currency to another.

QUESTIONS?