Report Document (Assignment 5)

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```python
import pandas as pd
import matplotlib.pyplot as plt
import numpy as np
wdi = pd.read_csv('/Users/rishikhullar/Desktop/QTM350/Assignment5/wdi.csv')

# Exploratory Data Analysis
inflation_rate_mean = np.mean(wdi['inflation_rate'])
print(inflation_rate_mean)

sorted = wdi.sort_values(by='unemployment_rate', ascending=False)
topunemployment = sorted[['country', 'unemployment_rate']].head(5)
print(topunemployment)

sorted2 = wdi.sort_values(by='adult_literacy_rate', ascending=False)
topliteracy = sorted2[['country', 'adult_literacy_rate']].head(5)
print(topliteracy)
```

```
12.49393593294422
                    country  unemployment_rate
63                 Eswatini             37.852
177           South Africa             28.838
54                 Djibouti             26.367
213     West Bank and Gaza             24.420
25                 Botswana             23.615
                    country  adult_literacy_rate
208              Uzbekistan            99.999977
164              San Marino            99.914757
72                  Georgia            99.574989
1                   Albania            98.500000
24    Bosnia and Herzegovina            98.300003
```
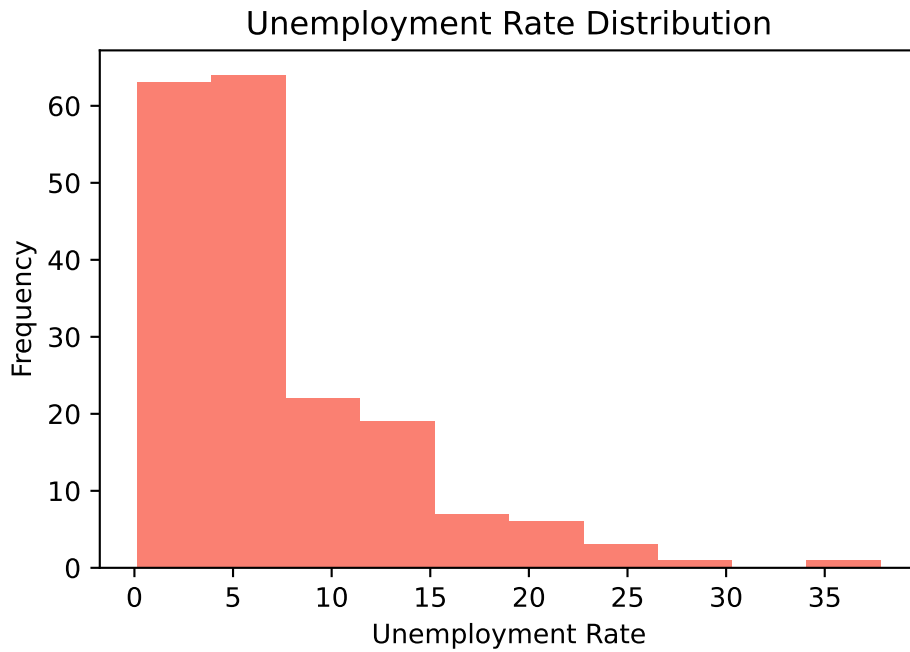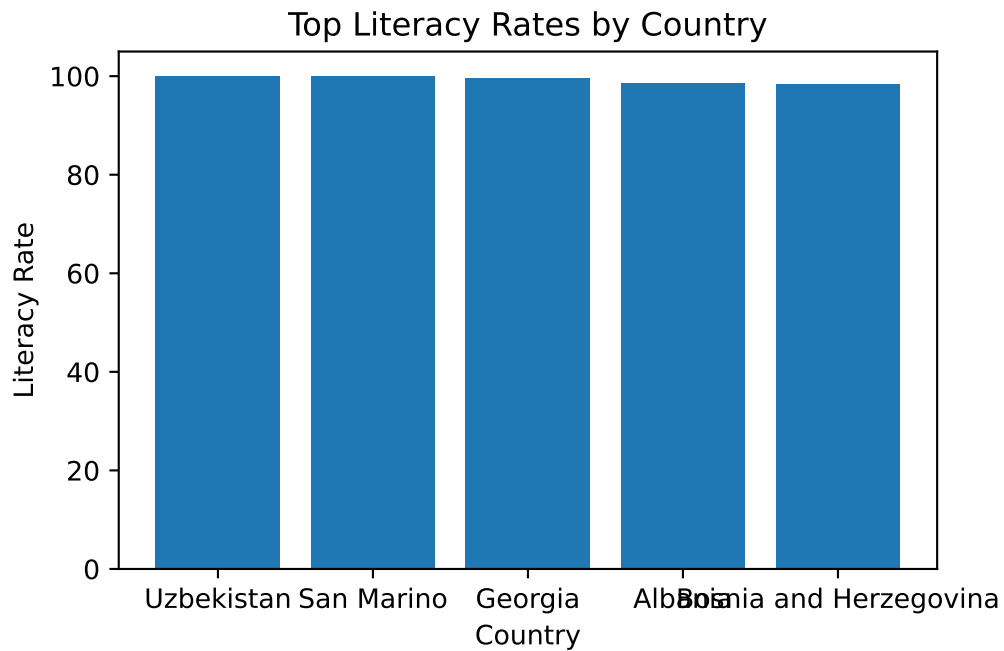
I first imported the dataset and used the numpy package to calculate the average inflation rate across all the countries which was found to be 12.49. Then I used the pandas package to find the top 5 countries with the highest unemployment rate by sorting all of the data by unemployment rate, subsetting the country and unemployment rate columns, and displaying the top 5. I found that Eswatini, South Afria, Djibouti, West Bank and Gaza, and Botswana had the highest unemployment rates. Lastly, I did the same process as before to find the countries with the highest adult literacy rates with Uzbekistan, San Marino, Georgia and Albania being the highest.

Unemployment Rate Distribution

Top Literacy Rates by Country

The histogram graph show a right skewed distribution of unemployment rates. The bar plot shows that most of the highest literacy rates are very similar.

Top 5 Countries with Highest Literacy Rate	Mean Unemployment Rate
Uzbekistan	7.26
San Marino	
Georgia	
Albania	
Bosnia and Herzegovina	

The table shows the mean unemployment rate of 7.26 and the top 5 countries with the highest adult literacy rate.