**Umemployment analysis**

import pandas as pd

import matplotlib.pyplot as plt

import seaborn as sns

# Load the unemployment dataset

df = pd.read\_csv('unemployment\_data.csv') # Replace with your dataset path

# Display the first few rows

print(df.head())

# Convert the date column to datetime format

df['date'] = pd.to\_datetime(df['date'])

# Set the date as the index

df.set\_index('date', inplace=True)

# Plot the unemployment rate over time

plt.figure(figsize=(12, 6))

plt.plot(df['unemployment\_rate'], label='Unemployment Rate', color='blue')

plt.title('Unemployment Rate Over Time')

plt.xlabel('Date')

plt.ylabel('Unemployment Rate (%)')

plt.axvline(x=pd.Timestamp('2020-03-01'), color='red', linestyle='--', label='COVID-19 Start')

plt.axvline(x=pd.Timestamp('2021-03-01'), color='green', linestyle='--', label='COVID-19 End')

plt.legend()

plt.grid()

plt.show()

# Analyze correlations with other economic indicators

correlation = df.corr()

plt.figure(figsize=(10, 8))

sns.heatmap(correlation, annot=True, cmap='coolwarm', fmt='.2f')

plt.title('Correlation Heatmap')

plt.show()