

Question :

Perform:

- Air quality analysis

Calculate average SO₂, NO₂, and RSPM/PM₁₀ levels across different monitoring stations, cities, or areas. Identify pollution trends and areas with high pollution levels.

- Create visualizations

Create visualizations using data visualization libraries (e.g., Matplotlib, Seaborn).

Answer :

```
import pandas as pd

import matplotlib.pyplot as plt

import seaborn as sns

# Load the air quality data from the CSV file
data = pd.read_csv('air_quality.csv')

# Calculate the average SO2, NO2, and RSPM/PM10 levels across different monitoring stations, cities,
# or areas
average_so2 = data['SO2'].mean()
average_no2 = data['NO2'].mean()
average_rspm = data['RSPM'].mean()
average_pm10 = data['PM10'].mean()

print(f'Average SO2: {average_so2}')
print(f'Average NO2: {average_no2}')
print(f'Average RSPM: {average_rspm}')
print(f'Average PM10: {average_pm10}')

# Create a histogram to visualize the distribution of SO2 levels
plt.figure(figsize=(10, 6))

sns.histplot(data=data, x='SO2', bins=30, kde=True)

plt.title('Distribution of SO2 Levels')

plt.xlabel('SO2 (ppm)')

plt.ylabel('Frequency')

plt.show()
```

```
# Create a histogram to visualize the distribution of NO2 levels
```

```
plt.figure(figsize=(10, 6))
```

```
sns.histplot(data=data, x='NO2', bins=30, kde=True)
```

```
plt.title('Distribution of NO2 Levels')
```

```
plt.xlabel('NO2 (ppm)')
```

```
plt.ylabel('Frequency')
```

```
plt.show()
```

```
# Create a histogram to visualize the distribution of RSPM levels
```

```
plt.figure(figsize=(10, 6))
```

```
sns.histplot(data=data, x='RSPM', bins=30, kde=True)
```

```
plt.title
```