OASIS INFOBYTE INTERNSHIP (Data Science)

Task 2: Unemployment Analysis

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Introduction: Unemployment analysis helps understand the percentage of people without jobs in a given region. Using data science techniques, we can visualize unemployment trends and identify regions with high or low unemployment rates. This beginner project uses simple visualization and pandas operations to analyze unemployment data.

Libraries to install (run once in terminal): pip install pandas pip install matplotlib pip install seaborn

Code (copy and run in Python):

```
# Beginner-friendly Unemployment Analysis

import pandas as pd
import matplotlib.pyplot as plt

# Load dataset (make sure file path is correct)
data = pd.read_csv("Unemployment.csv")

# Show first few rows to understand the structure
print("First five rows of dataset:")
print(data.head())

# Check for missing values
print("\nMissing values in each column:")
print(data.isnull().sum())

# Basic statistics
print("\nBasic Information:")
print(data.describe())

# Simple line plot for unemployment rate by region
plt.figure(figsize=(10, 6))
plt.plot(data['Region'], data['Estimated Unemployment Rate (%)'], 'o-', color='blue')
plt.title('Unemployment Rate by Region')
plt.xlabel('Region')
plt.ylabel('Unemployment Rate (%)')
```

```
plt.xticks(rotation=90)
plt.tight_layout()
plt.show()
```

Expected Output (example): - The first few rows of the dataset displayed in the console. - Summary statistics showing mean, min, max, etc. - A line plot showing unemployment rate by region. Note: - This is a beginner-level project designed for easy understanding. - Ensure the CSV file name is correct before running. - You can use any similar unemployment dataset with region and rate columns.

Conclusion: This project helps in analyzing unemployment data using Python. With simple plots and pandas functions, beginners can easily understand trends and insights from data.