EXPERIMENT NO: 1A

Analyze the trend of data science job postings over the last decade

Aim:

    To visualize the **trend of Data Science job postings from 2014 to 2023** using a line graph in Python with the help of **Pandas**, **Matplotlib**, and **Seaborn** libraries.
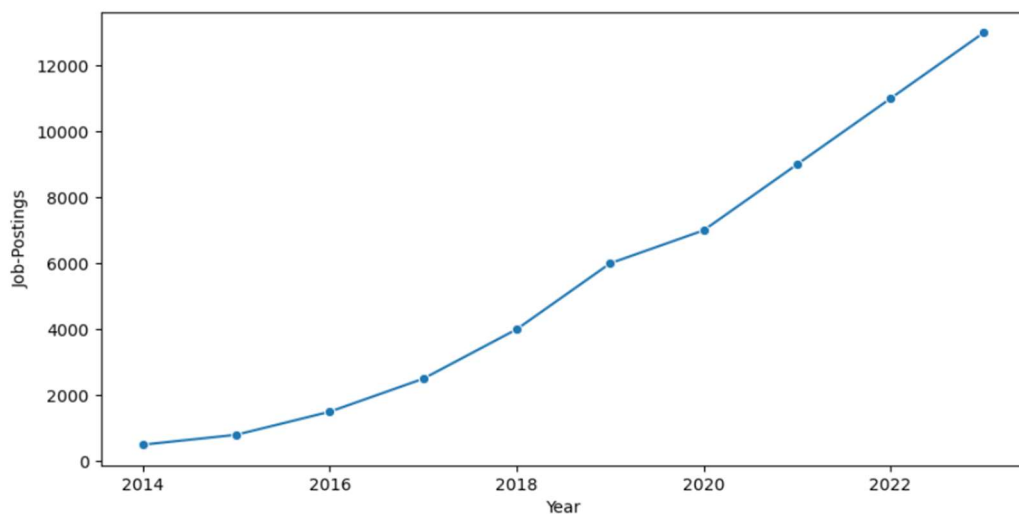
Algorithm:

- Import pandas, matplotlib.pyplot, and seaborn.
- Store data of *Years* and *Job Postings* in a dictionary.
- Use pd.DataFrame() to convert the dictionary into a DataFrame.
- Use sns.lineplot() to plot a line graph between Year (x-axis) and Job Postings (y-axis).
- Add the graph title, x-label, y-label, and grid.
- Use `plt.show()` to display the plotted graph.
-

Program:

```
[15]: import pandas as pd
      import matplotlib.pyplot as plt
      import seaborn as sns
      data={
          'Year':[2014,2015,2016,2017,2018,2019,2020,2021,2022,2023],
          'Job-Postings':[500,800,1500,2500,4000,6000,7000,9000,11000,13000]
      }
      df=pd.DataFrame(data)
      plt.figure(figsize=(10,5))
      sns.lineplot(x='Year',y='Job-Postings',data=df,marker='o')
```

[15]: <Axes: xlabel='Year', ylabel='Job-Postings'>

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```
[13]: sns.lineplot(x='Year', y='Job-Postings', data=df, marker='o', color='blue', linewidth=2)
      plt.title("Trend of Data Science Job Postings(2014-2023)")
      plt.xlabel('Year')
      plt.ylabel('Number of Job Postings')
      plt.grid(True)
      plt.show()
```

Trend of Data Science Job Postings(2014-2023)
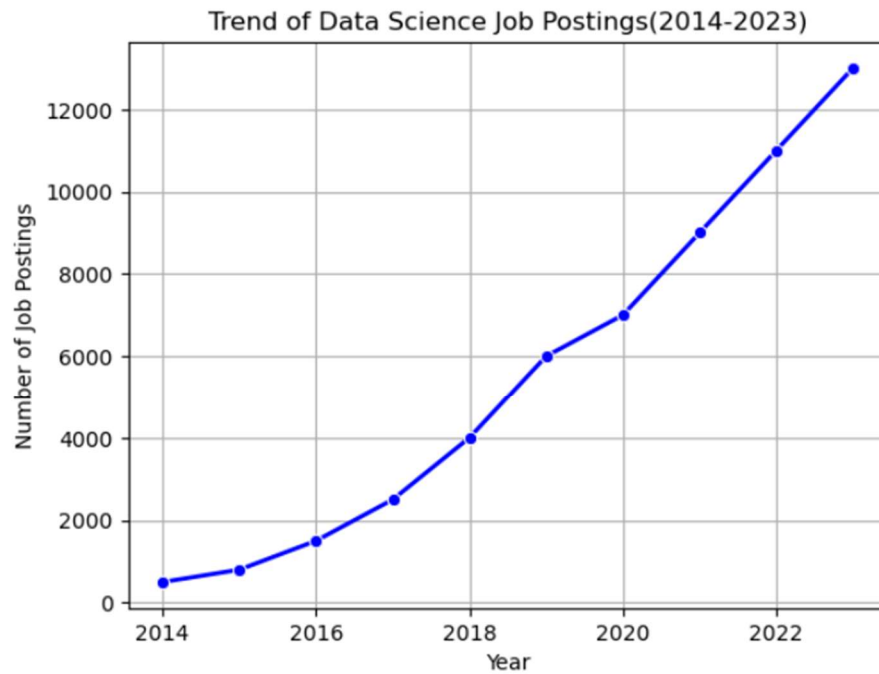
Result:

The program successfully displays a **line graph** showing a **steady increase in Data Science job postings** from **2014 (500)** to **2023 (13,000)**.