EXPERIMENT NO: 1(a)

Data visualization

Analyse the trend of Data Science job postings over the last decade

Aim:

To visualize and analyze the yearly trend of Data Science job postings using Python with Pandas and Matplotlib.

Algorithm:

1. Import necessary libraries (pandas, matplotlib).
2. Create or load the dataset with year-wise job postings.
3. Store data in a Pandas Data Frame.
4. Plot a line graph showing job postings vs. year.
5. Display the visualization and observe the trend.

Program:

•[3]:
```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
data = {
    'Year': [2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025],
    'Job_Postings': [500, 750, 1100, 1600, 2200, 2000, 2700, 3400, 4100, 4800, 5200]
}

df = pd.DataFrame(data)

print("Data Science Job Postings (2015-2025)")
display(df)

sns.set(style="whitegrid")

plt.figure(figsize=(10, 5))
sns.lineplot(data=df, x='Year', y='Job_Postings', marker='o', linewidth=2.5)

plt.title("Trend of Data Science Job Postings (2015-2025)", fontsize=14, fontweight='bold')
plt.xlabel("Year", fontsize=12)
plt.ylabel("Number of Job Postings", fontsize=12)

plt.grid(True)
plt.show()
```

```
Data Science Job Postings (2015-2025)
```

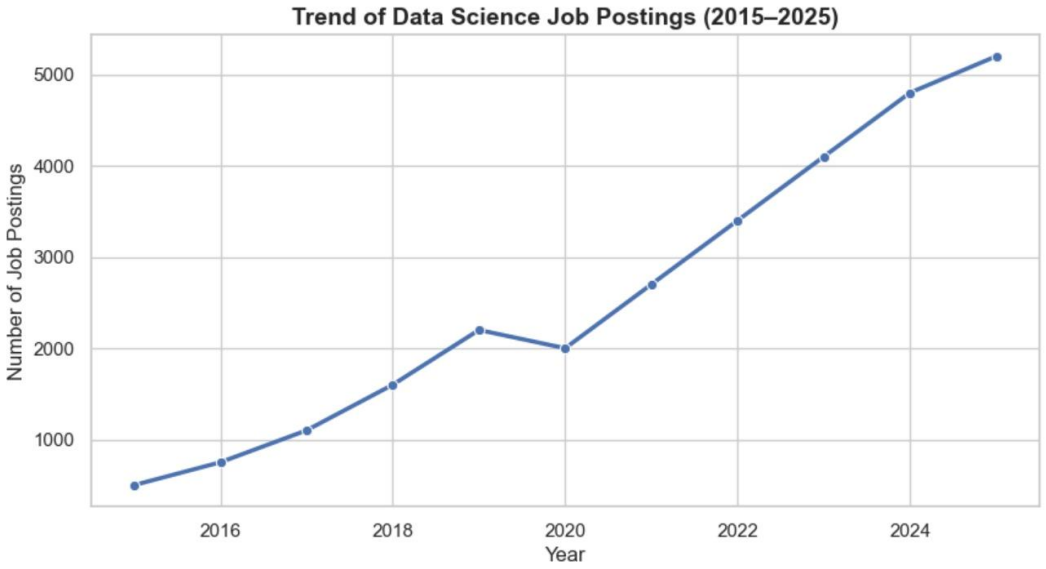
	Year	Job_Postings

```
plt.title("Trend of Data Science Job Postings (2015-2025)", fontsize=14, fontweight='bold')
plt.xlabel("Year", fontsize=12)
plt.ylabel("Number of Job Postings", fontsize=12)

plt.grid(True)
plt.show()
```

```
Data Science Job Postings (2015-2025)
```

	Year	Job_Postings
0	2015	500
1	2016	750
2	2017	1100
3	2018	1600
4	2019	2200
5	2020	2000
6	2021	2700
7	2022	3400
8	2023	4100
9	2024	4800
10	2025	5200



Result:

Thus, the Python code to analyse the trend of Data Science job postings over the last decade has been successfully executed.