Problem:

Imagine you are working for a travel agency named "Wanderlust Adventures." Your team has been assigned a project to analyze and visualize the travel data for the past year. The data includes information about various destinations, the number of travelers per month, and the revenue generated. As the data analyst, you decide to use Matplotlib to create insightful visualizations.
As a data analyst at "Wanderlust Adventures," you have been given a dataset containing monthly travel data for different destinations. The dataset includes information about the number of travelers and the revenue generated each month. Your task is to create three visualizations using Matplotlib: a line plot, a pie chart, and a scatter plot.

1. **Line Plot:** Create a line plot using Matplotlib that illustrates the trend of both traveler count and revenue over the past year. The x-axis should represent the months, while the y-axis should represent the traveler count and revenue, respectively. The line plot should display two lines, one for traveler count and another for revenue, showcasing their trends over time.
2. **Pie Chart:** Generate a pie chart using Matplotlib to display the distribution of traveler count among the top five destinations for the entire year. Each slice of the pie should represent a destination, and its size should correspond to the proportion of travelers visiting that particular destination.
3. **Scatter Plot:** Create a scatter plot using Matplotlib that demonstrates the relationship between the number of travelers and the revenue generated for each month. Each data point on the scatter plot should represent a month, with the x-coordinate representing the traveler count and the y-coordinate representing the revenue generated.

Note: Use the file called "travel.csv"

```
#Please use the file travel.csv for the above
#The dataset is available at https://tinyurl.com/travelDataset
```

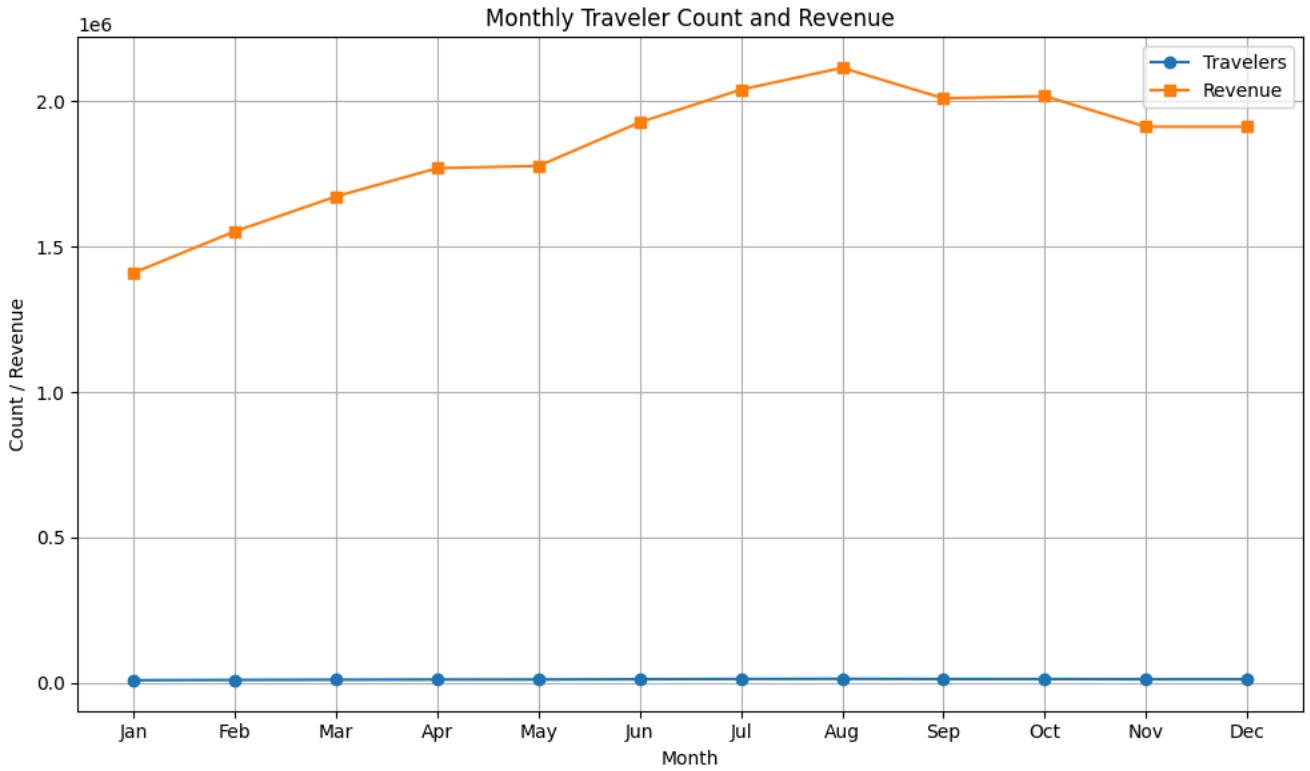
```
import pandas as pd

# Load the uploaded CSV file


# Assuming the uploaded file is named 'travel.csv'
df = pd.read_csv('travel.csv')
df.head()

df.head()
```

	Month	Destination	Travelers	Revenue
0	Jan	Paris	1000	150000
1	Jan	Rome	800	120000
2	Feb	Paris	1100	165000
3	Feb	Rome	900	135000
4	Mar	Paris	1200	180000

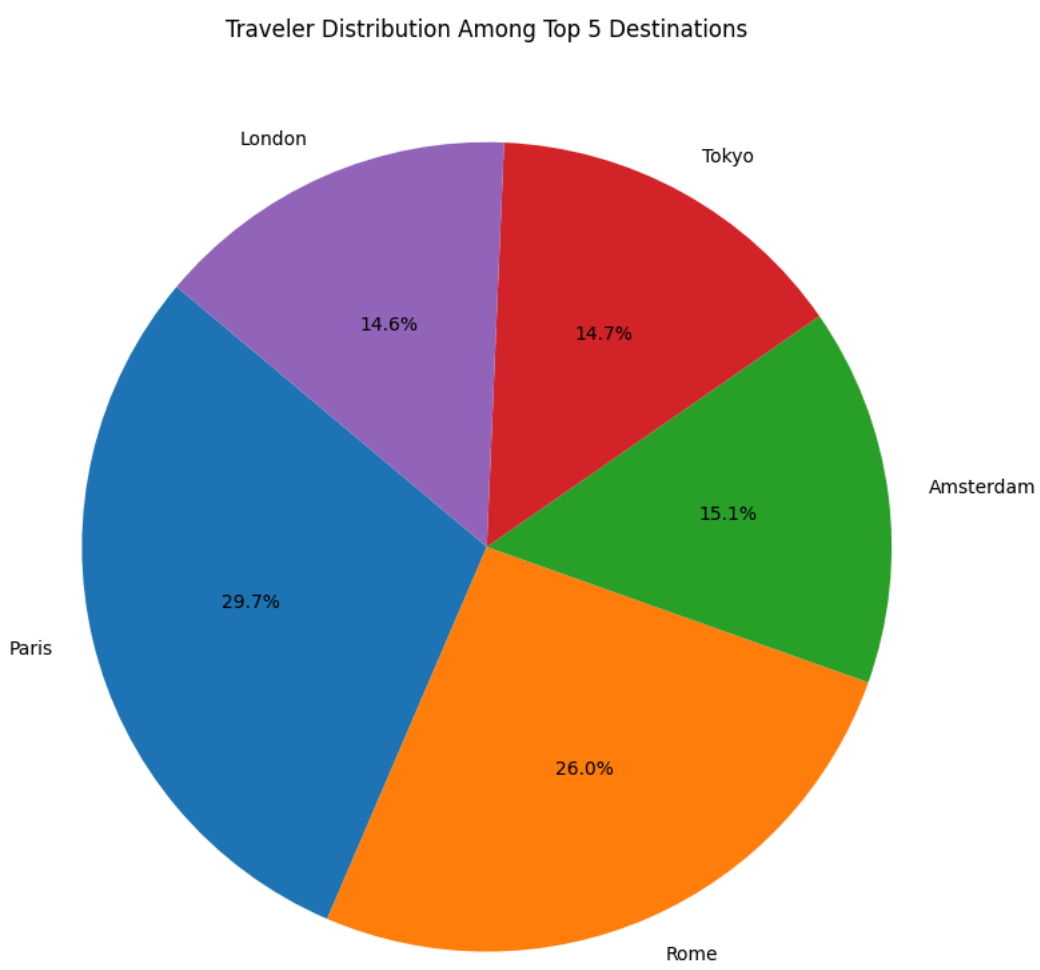
Next steps: Generate code with df | View recommended plots | New interactive sheet

```
import matplotlib.pyplot as plt

# Prepare data for line plot: group by month
monthly_data = df.groupby('Month').agg({'Travelers': 'sum', 'Revenue': 'sum'}).reset_index()

# Ensure months are in calendar order
months_order = ['Jan', 'Feb', 'Mar', 'Apr', 'May', 'Jun',
                'Jul', 'Aug', 'Sep', 'Oct', 'Nov', 'Dec']
monthly_data['Month'] = pd.Categorical(monthly_data['Month'], categories=months_order, ordered=True)
monthly_data = monthly_data.sort_values('Month')

# Line plot
plt.figure(figsize=(10, 6))
plt.plot(monthly_data['Month'], monthly_data['Travelers'], marker='o', label='Travelers')
plt.plot(monthly_data['Month'], monthly_data['Revenue'], marker='s', label='Revenue')
plt.title('Monthly Traveler Count and Revenue')
plt.xlabel('Month')
plt.ylabel('Count / Revenue')
```

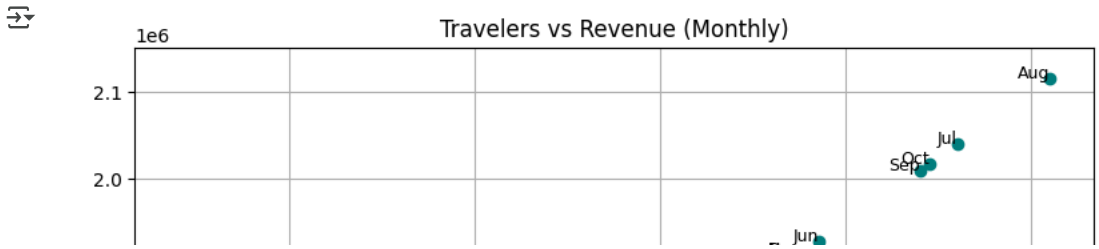
```
plt.legend()
plt.grid(True)
plt.tight_layout()
plt.show()
```




```
# Prepare data for pie chart: total travelers by destination
destination_data = df.groupby('Destination')['Travelers'].sum().sort_values(ascending=False).head(5)

# Pie chart
plt.figure(figsize=(8, 8))
plt.pie(destination_data, labels=destination_data.index, autopct='%1.1f%%', startangle=140)
plt.title('Traveler Distribution Among Top 5 Destinations')
plt.axis('equal')  # Equal aspect ratio ensures pie is drawn as a circle
plt.tight_layout()
plt.show()
```




```
# Prepare data for scatter plot: already grouped by month
x = monthly_data['Travelers']
y = monthly_data['Revenue']

# Scatter plot
plt.figure(figsize=(8, 6))
plt.scatter(x, y, color='teal')
for i, month in enumerate(monthly_data['Month']):
    plt.text(x.iloc[i], y.iloc[i], month, fontsize=9, ha='right')

plt.title('Travelers vs Revenue (Monthly)')
plt.xlabel('Number of Travelers')
plt.ylabel('Revenue')
plt.grid(True)
plt.tight_layout()
plt.show()
```


Travelers vs Revenue (Monthly)
1e6
2.1
2.0
Aug
Jul
Oct
Sept
Jun