

Learn / Courses / Introduction to Data Visualization with Seaborn

← Course Outline →

Daily XP 150

Exercise

Interpreting line plots

In this exercise, we'll continue to explore Seaborn's `mpg` dataset, which contains one row per car model and includes information such as the year the car was made, its fuel efficiency (measured in "miles per gallon" or "MPG"), and its country of origin (USA, Europe, or Japan).

How has the average miles per gallon achieved by these cars changed over time? Let's use line plots to find out!

Instructions 1/2 50 XP 1 - 2

- Use `relplot()` and the `mpg` DataFrame to create a line plot with `"model_year"` on the x-axis and `"mpg"` on the y-axis.

Take Hint (-15 XP)

script.py

Light Mode

```
1 import seaborn as sns
2 import matplotlib.pyplot as plt
3
4 # Create scatter plot of acceleration vs. mpg with style and color based on origin
5 sns.relplot(x='acceleration', y='mpg',
6             hue='origin',
7             style='origin',
8             data=mpg,
9             kind='scatter')
10
11 # Show plot
12 plt.show()
13
```

Run Code Submit Answer

IPython Shell

Slides

In [1]:

Interpreting Line Plots

Use `relplot()` and the `mpg` DataFrame to create a line plot with `'model_year'` on the x-axis and `'mpg'` on the y-axis. This will help analyze how the average miles per gallon (mpg) achieved by cars has changed over time.

Full Answer

The following code creates a line plot using `relplot()`. It plots the 'model_year' against 'mpg' to visualize trends in fuel efficiency over time. Below is the working code:

```
import seaborn as sns
import matplotlib.pyplot as plt

# Create line plot of model_year vs. mpg
sns.relplot(x='model_year', y='mpg',
            kind='line',
            data=mpg)

# Show plot
plt.show()
```

Code Explanation

1. Import `seaborn` and `matplotlib.pyplot` for creating visualizations.
2. Use `sns.relplot()` to create a line plot with:
 - 'x' set to 'model_year' for the year the car model was produced.
 - 'y' set to 'mpg' for the fuel efficiency in miles per gallon.
 - 'kind' set to 'line' to generate a line plot.
 - 'data' set to `mpg`, the DataFrame containing the data.
3. Use `plt.show()` to render and display the plot.