

Adding a Title and Axis Labels

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← Course Outline →

Daily XP 180

Exercise

Adding a title and axis labels

Let's continue to look at the miles per gallon dataset. This time we'll create a line plot to answer the question: How does the average miles per gallon achieved by cars change over time for each of the three places of origin? To improve the readability of this plot, we'll add a title and more informative axis labels.

In the code provided, we create the line plot using the `lineplot()` function. Note that `lineplot()` does not support the creation of subplots, so it returns an `AxesSubplot` object instead of an `FacetGrid` object.

We've already imported Seaborn as `sns` and `matplotlib.pyplot` as `plt`.

Instructions 1/2 50 XP 1 2

- Add the following title to the plot: "Average MPG Over Time".

Take Hint (-15 XP)

script.py Light Mode

```
1 # Create line plot
2 g = sns.lineplot(x="model_year", y="mpg_mean",
3                 data=mpg_mean,
4                 hue="origin")
5
6 # Add a title "Average MPG Over Time"
7
8
9 # Show plot
10 plt.show()
```

↺ Run Code Submit Answer

IPython Shell Slides

In [1]:

Figure 1: Screenshot showing the task to add a title and axis labels to a line plot.

Question

We continue to look at the miles per gallon dataset. This exercise creates a line plot to answer the question: How does the average miles per gallon achieved by cars change over time for each of the three places of origin?

The task involves adding the title "Average MPG Over Time" to the line plot.

Question Explanation

The `sns.lineplot()` function creates a line plot for visualizing trends over time or categories. Unlike `relplot()`, `lineplot()` returns an `AxesSubplot` object rather than a `FacetGrid`. Titles can be added directly to `AxesSubplot` objects using the `set_title()` method.

Code Solution

```
# Create line plot
g = sns.lineplot(x="model_year", y="mpg_mean",
                 data=mpg_mean, hue="origin")

# Add a title
g.set_title("Average MPG Over Time")

# Show plot
plt.show()
```

Answer Explanation

1. `g = sns.lineplot(...)`: Creates a line plot using 'mpg_mean' dataset, with 'model_year' on the x-axis and 'mpg_mean' on the y-axis, and differentiates data by 'origin' using hue.
2. `g.set_title("Average MPG Over Time")`: Adds a title to the `AxesSubplot` object using the `set_title()` method.
3. `plt.show()`: Displays the plot with the added title.