

Learn / Courses / Introduction to Data Visua...

← Course Outline →

Light Mode

Exercise

### Customizing bar plots

In this exercise, we'll explore data from students in secondary school. The "study\_time" variable records each student's reported weekly study time as one of the following categories: "<2 hours", "2 to 5 hours", "5 to 10 hours", or ">10 hours". Do students who report higher amounts of studying tend to get better final grades? Let's compare the average final grade among students in each category using a bar plot.

Seaborn has been imported as `sns` and `matplotlib.pyplot` has been imported as `plt`.

Instructions 1/3

35 XP

1 2 3

- Use `sns.catplot()` to create a bar plot with "study\_time" on the x-axis and final grade ("G3") on the y-axis, using the `student_data` DataFrame.

Take Hint (-10 XP)

script.py

```
1 # Create bar plot of average final grade in
  each study category
2
3
4
5
6 # Show plot
7 plt.show()
```

Run Code Submit Answer

IPython Shell

Slides

In [1]:

## Customizing Bar Plots

Use `sns.catplot()` to create a bar plot with 'study\_time' on the x-axis and final grade ('G3') on the y-axis, using the `student_data` DataFrame.

### Full Answer ###

To create a bar plot of average final grade in each study category, use `sns.catplot()` with 'kind' set to 'bar'. Below is the working code:

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

# Create a bar plot of average final grade in each study category
sns.catplot(x='study_time', y='G3',
            data=student_data,
            kind='bar')

# Show plot
plt.show()
```

### ### Code Explanation ###

1. Import seaborn and matplotlib.pyplot for creating visualizations.
2. Use sns.catplot() to create a bar plot with:
  - 'x' set to 'study\_time' to display study time categories on the x-axis.
  - 'y' set to 'G3' to display the average final grade for each study time category.
  - 'kind' set to 'bar' to create a bar plot.
  - 'data' set to student\_data, the DataFrame containing the data.
3. Use plt.show() to render and display the plot.