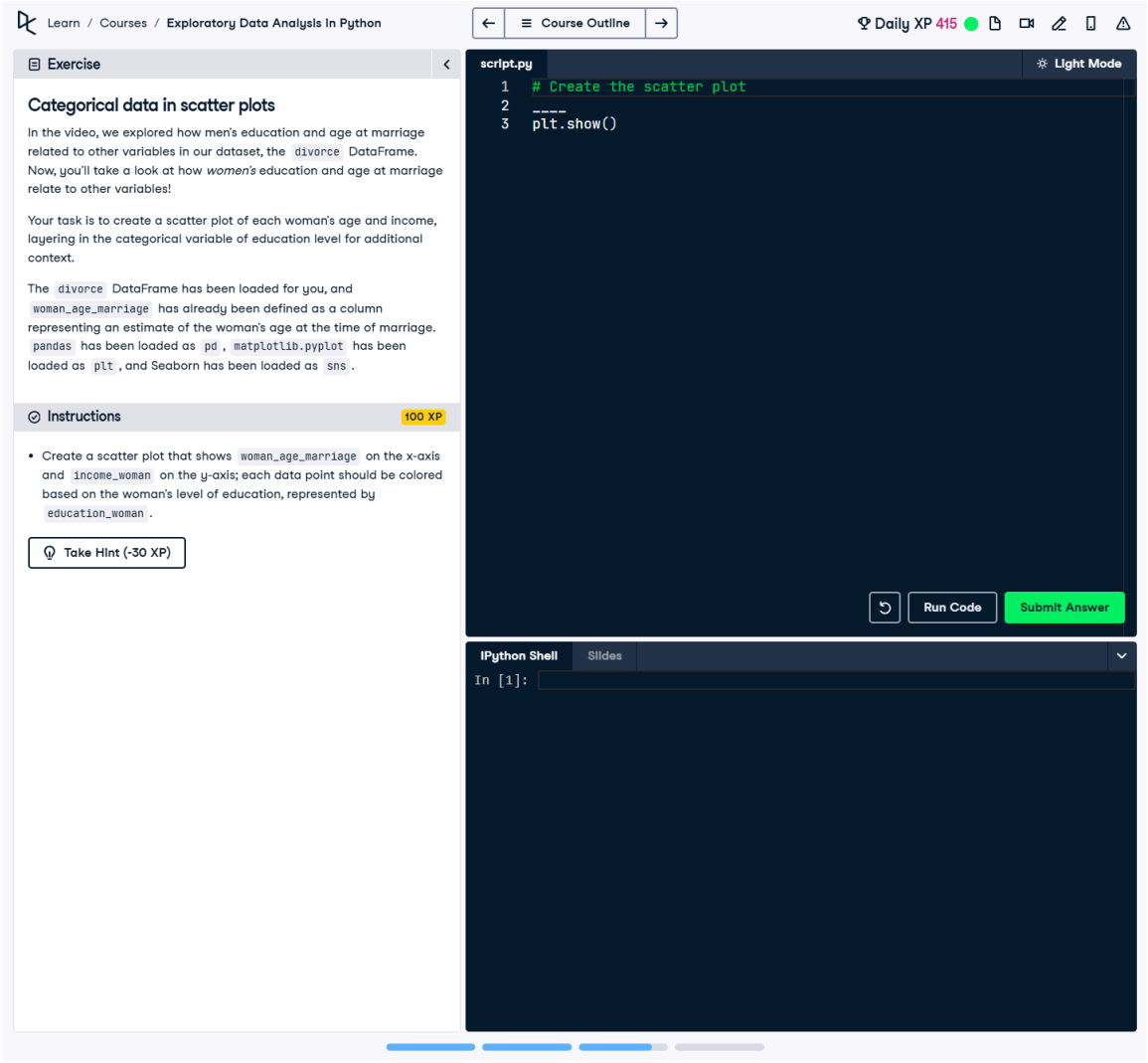
Categorical Data in Scatter Plots



Question

Create a scatter plot that shows woman_age_marriage on the x-axis and income_woman on the y-axis;
each data point should be colored based on the woman's level of education, represented by education_woman.

Explanation of the Question

This task involves creating a scatter plot to explore the relationship between a woman's age at marriage and her income, while adding an additional layer of context by coloring points based on education level.

Answer

```
# Create the scatter plot with categorical coloring
import seaborn as sns
import matplotlib.pyplot as plt

sns.scatterplot(
    data=divorce,
    x="woman_age_marriage",
    y="income_woman",
    hue="education_woman",
    palette="viridis"
)
plt.title("Age at Marriage vs Income (Colored by Education Level)")
plt.xlabel("Woman's Age at Marriage")
plt.ylabel("Income of Woman")
plt.legend(title="Education Level")
plt.show()
```

Explanation of the Answer

The code uses Seaborn's scatterplot function to plot woman_age_marriage on the x-axis and income_woman on the y-axis. The hue parameter adds a categorical dimension, coloring points based on education_woman. The palette ensures distinctive colors for clarity. The plot is further enhanced with a title, axis labels, and a legend.