

Updating KDE Plot Using 'cut' Parameter

Question

Have you considered using the cut parameter in the sns.kdeplot function to limit the smoothing of the KDE plot to the range of the data?

```
# Try using the 'cut' parameter to adjust the KDE plot
sns.kdeplot(data=divorce, x="marriage_duration", hue="num_kids", cut=0)
plt.show()
```

Explanation of the Question

This question asks how to limit the smoothing of the KDE plot to the actual range of the data using the 'cut' parameter. This avoids unrealistic values being shown beyond the data's minimum and maximum bounds.

Answer

```
# Update the KDE plot using the 'cut' parameter
import seaborn as sns
import matplotlib.pyplot as plt

sns.kdeplot(
    data=divorce,
    x="marriage_duration",
    hue="num_kids",
    cut=0, # Restrict KDE smoothing to the data range
    palette="coolwarm"
)
plt.title("Marriage Duration Distributions by Number of Kids (Using 'cut')")
plt.xlabel("Marriage Duration (years)")
plt.ylabel("Density")
plt.show()
```

Explanation of the Answer

The 'cut' parameter in the kdeplot function is used to restrict the KDE smoothing to the actual data range. Setting cut=0 ensures no smoothing occurs outside the observed data range. Titles and labels enhance the plot's interpretability.