After training our linear regression model, the next step is to utilize it for making predictions on new, unseen data. Follow these steps to guide you through the process:

Make predictions on new data

Make predictions on the new, normalized test data:

```
[29] reg_pred = regression.predict(X_test_norm)

[30] reg_pred

array([0.71912284, 1.76401657, 2.70965883, ..., 4.46877017, 1.18751119,
       2.00940251])
```

Making Predictions

The model has made predictions based on the new data, providing estimated house prices based on the features.

Calculate Residuals

Calculate the residuals by subtracting the true values from the predicted values:

```
[31] residuals = y_test - reg_pred
     residuals

20046   -0.242123
3024    -1.306017
15663    2.290351
20484   -0.652926
9814     0.175343
           ...
15362    0.641254
16623    0.418161
18086    0.531240
2144    -0.464511
3665    -0.494403
Name: Price, Length: 4128, dtype: float64
```

Calculating Residuals

Residuals represent the model's errors. Positive residuals indicate underestimation, while negative residuals indicate overestimation.

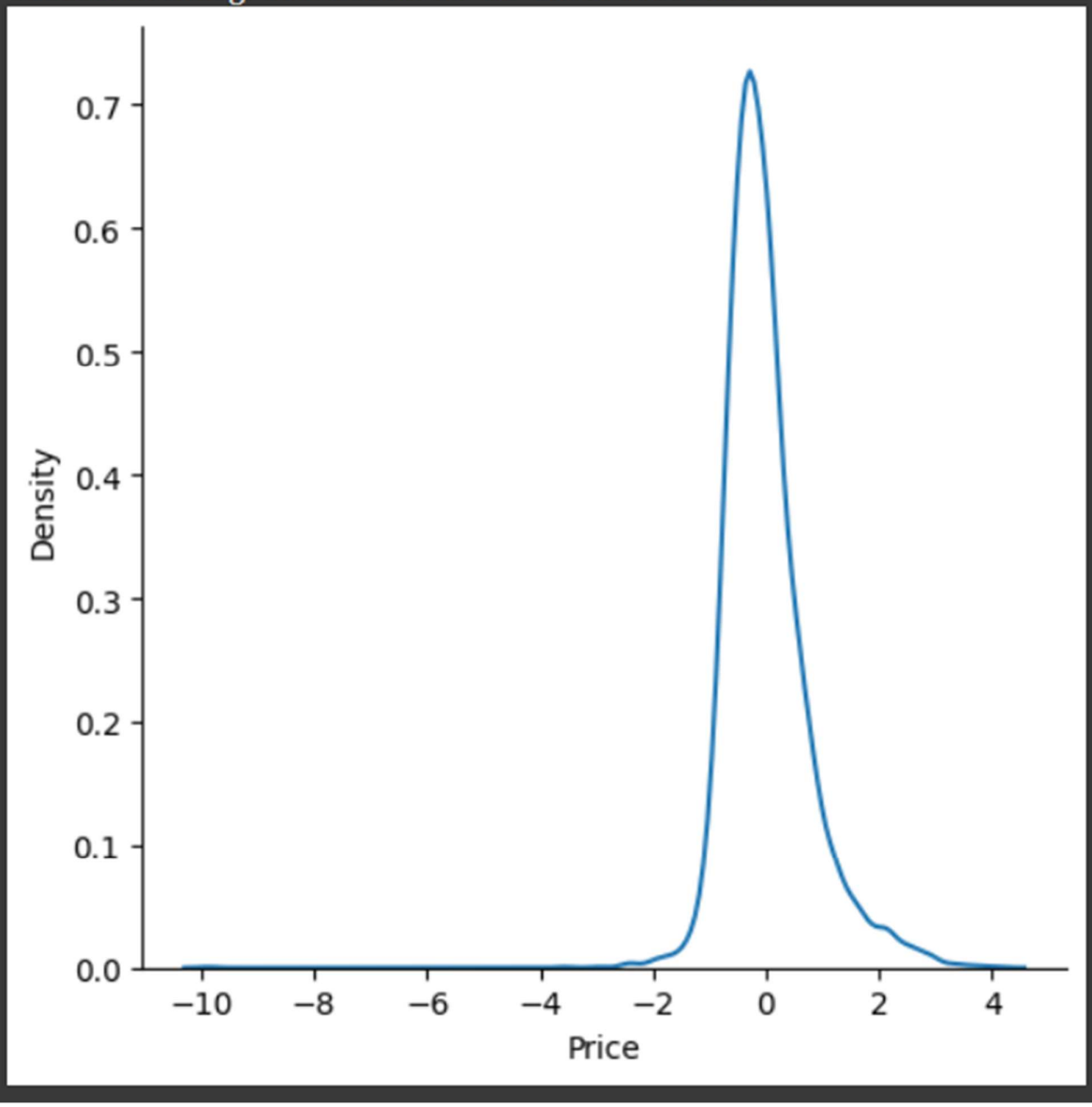
Visualize Residuals

Create a distribution plot of the residuals to assess their distribution using the displot function

sns.displot(residuals,kind = 'kde')

```
[32] sns.displot(residuals,kind='kde')
```

```
<seaborn.axisgrid.FacetGrid at 0x7a75bc50a2f0>
```



Plotting Residuals

This plot visually represents the spread and shape of residuals. A symmetric and approximately normal distribution around zero is desirable.