Bing

There are several ways to convert categorical data to numerical data in a Python dataframe. Here are some of the most common methods:

1. **Label Encoding**: This method assigns a unique integer value to each category in the column. The `LabelEncoder` class from the `sklearn.preprocessing` module can be used to perform this operation .

2. **One-Hot Encoding**: This method creates a new binary column for each category in the original column. The `get_dummies()` function from the `pandas` library can be used to perform this operation .

3. **Ordinal Encoding**: This method is similar to label encoding, but it assigns integer values based on the order of the categories instead of arbitrary values. The `OrdinalEncoder` class from the `sklearn.preprocessing` module can be used to perform this operation .

4. **Custom Encoding**: This method involves creating a custom mapping between categories and numerical values. This can be done using a dictionary or a function .

Here is an example of how to use Label Encoding in Python:

```
from sklearn.preprocessing import LabelEncoder
import pandas as pd

# Create a sample dataframe
df = pd.DataFrame({'fruit': ['apple', 'banana', 'orange', 'banana', 'orange']})

# Create an instance of LabelEncoder
le = LabelEncoder()

# Fit and transform the 'fruit' column
df['fruit_encoded'] = le.fit_transform(df['fruit'])

print(df)
```

This will output:

```
    fruit  fruit_encoded
0   apple              0
1  banana              1
2  orange              2
3  banana              1
4  orange              2
```

I hope this helps!