```python
from sklearn.datasets import make_blobs
import pandas as pd
import numpy as np

dataset, classes = make_blobs(n_samples=300, n_features=2, centers=5, cluster_std=0.
df = pd.DataFrame(dataset, columns=['x1', 'x2'])
X = df.values
x1 = df['x1']
x2 = df['x2']
```

```python
from sklearn.cluster import AgglomerativeClustering
ac = AgglomerativeClustering(n_clusters=5)
model = ac.fit(X)
```

```python
print(model.n_clusters)
print(model.n_leaves_)
print(model.n_features_in_)
```

```
5
300
2
```

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

sns.scatterplot(x1,x2, hue = model.labels_)
```

/Users/sampathroutu/opt/anaconda3/lib/python3.8/site-packages/seaborn/
_decorators.py:36: FutureWarning: Pass the following variables as keyw
ord args: x, y. From version 0.12, the only valid positional argument
will be `data`, and passing other arguments without an explicit keywor
d will result in an error or misinterpretation.
  warnings.warn(

Out[4]:

<matplotlib.axes._subplots.AxesSubplot at 0x7f9ee8c5cf40>