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main

Music-Genre / DECISION_TREE_1.0.ipynb

Parthib25 Created using Colaboratory History

1 contributor

1029 lines (1029 sloc) | 210 KB

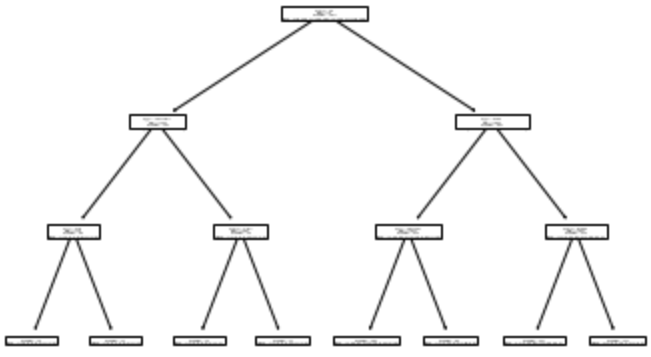
Open in Colab

In [5]:
```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
```

In [6]:
```
df=pd.read_csv("features_30_sec.csv")
data=df.iloc[:,2:-1]
labels=df.iloc[:,-1]
from sklearn import tree
```

In [10]:
```
model=tree.DecisionTreeClassifier(random_state=100,max_depth=3)
model.fit(data,labels)
tree.plot_tree(model)
```

Out[10]:
```
[Text(0.5, 0.875, 'x[15] <= 0.0\ngini = 0.9\nsamples = 1000\nvalue = [100, 100, 100, 10
0, 100, 100, 100, 100, 100, 100]'),
 Text(0.25, 0.625, 'x[9] <= 1649228.0\ngini = 0.423\nsamples = 109\nvalue = [0, 80, 3,
1, 0, 21, 0, 1, 1, 2]'),
 Text(0.125, 0.375, 'x[1] <= 0.09\ngini = 0.19\nsamples = 86\nvalue = [0, 77, 0, 1, 0,
8, 0, 0, 0, 0]'),
 Text(0.0625, 0.125, 'gini = 0.077\nsamples = 75\nvalue = [0, 72, 0, 0, 0, 3, 0, 0, 0,
0]'),
 Text(0.1875, 0.125, 'gini = 0.579\nsamples = 11\nvalue = [0, 5, 0, 1, 0, 5, 0, 0, 0,
0]'),
 Text(0.375, 0.375, 'x[45] <= -0.802\ngini = 0.635\nsamples = 23\nvalue = [0, 3, 3, 0,
0, 13, 0, 1, 1, 2]'),
 Text(0.3125, 0.125, 'gini = 0.806\nsamples = 12\nvalue = [0, 3, 3, 0, 0, 2, 0, 1, 1,
2]'),
 Text(0.4375, 0.125, 'gini = 0.0\nsamples = 11\nvalue = [0, 0, 0, 0, 0, 11, 0, 0, 0,
0]'),
 Text(0.75, 0.625, 'x[0] <= 0.422\ngini = 0.893\nsamples = 891\nvalue = [100, 20, 97, 9
9, 100, 79, 100, 99, 99, 98]'),
 Text(0.625, 0.375, 'x[6] <= 2848.267\ngini = 0.874\nsamples = 573\nvalue = [91, 20, 9
5, 57, 20, 76, 9, 64, 62, 79]'),
 Text(0.5625, 0.125, 'gini = 0.861\nsamples = 488\nvalue = [91, 20, 91, 45, 16, 70, 9,
16, 57, 73]'),
 Text(0.6875, 0.125, 'gini = 0.643\nsamples = 85\nvalue = [0, 0, 4, 12, 4, 6, 0, 48, 5,
6]'),
 Text(0.875, 0.375, 'x[23] <= 50.889\ngini = 0.807\nsamples = 318\nvalue = [9, 0, 2, 4
2, 80, 3, 91, 35, 37, 19]'),
 Text(0.8125, 0.125, 'gini = 0.801\nsamples = 207\nvalue = [1, 0, 2, 40, 65, 2, 13, 35,
32, 17]'),
 Text(0.9375, 0.125, 'gini = 0.48\nsamples = 111\nvalue = [8, 0, 0, 2, 15, 1, 78, 0, 5,
2]')]
```



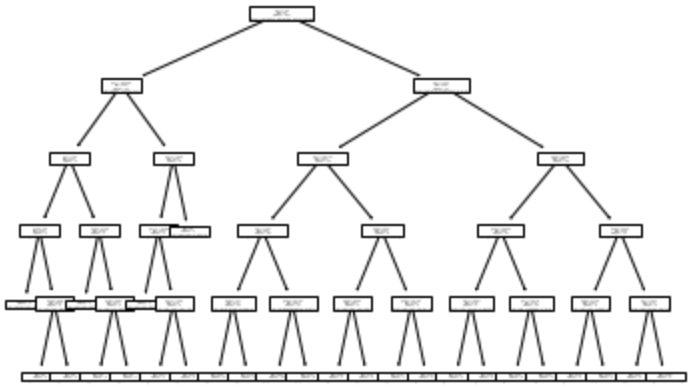
In [7]:

```
model=tree.DecisionTreeClassifier(random_state=100,max_depth=5)
model.fit(data,labels)
tree.plot_tree(model)
```

Out[7]:

```
[Text(0.40555555555555556, 0.9166666666666666, 'x[15] <= 0.0\ngini = 0.9\nsamples = 100
0\nvalue = [100, 100, 100, 100, 100, 100, 100, 100, 100, 100]'),
 Text(0.16666666666666666, 0.75, 'x[9] <= 1649228.0\ngini = 0.423\nsamples = 109\nvalue
= [0, 80, 3, 1, 0, 21, 0, 1, 1, 2]'),
 Text(0.08888888888888889, 0.5833333333333334, 'x[1] <= 0.09\ngini = 0.19\nsamples = 86
\nvalue = [0, 77, 0, 1, 0, 8, 0, 0, 0, 0]'),
 Text(0.044444444444444446, 0.4166666666666667, 'x[14] <= 0.0\ngini = 0.077\nsamples =
75\nvalue = [0, 72, 0, 0, 0, 3, 0, 0, 0, 0]'),
 Text(0.022222222222222223, 0.25, 'gini = 0.0\nsamples = 67\nvalue = [0, 67, 0, 0, 0,
0, 0, 0, 0, 0]'),
 Text(0.06666666666666667, 0.25, 'x[13] <= 0.002\ngini = 0.469\nsamples = 8\nvalue =
[0, 5, 0, 0, 0, 3, 0, 0, 0, 0]'),
 Text(0.044444444444444446, 0.08333333333333333, 'gini = 0.0\nsamples = 5\nvalue = [0,
5, 0, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.08888888888888889, 0.08333333333333333, 'gini = 0.0\nsamples = 3\nvalue = [0,
0, 0, 0, 0, 3, 0, 0, 0, 0]'),
 Text(0.13333333333333333, 0.4166666666666667, 'x[32] <= 67.397\ngini = 0.579\nsamples
= 11\nvalue = [0, 5, 0, 1, 0, 5, 0, 0, 0, 0]'),
 Text(0.1111111111111111, 0.25, 'gini = 0.0\nsamples = 5\nvalue = [0, 0, 0, 0, 0, 5, 0,
0, 0, 0]'),
 Text(0.15555555555555556, 0.25, 'x[13] <= 0.002\ngini = 0.278\nsamples = 6\nvalue =
[0, 5, 0, 1, 0, 0, 0, 0, 0, 0]'),
 Text(0.13333333333333333, 0.08333333333333333, 'gini = 0.0\nsamples = 5\nvalue = [0,
5, 0, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.17777777777777778, 0.08333333333333333, 'gini = 0.0\nsamples = 1\nvalue = [0,
0, 0, 1, 0, 0, 0, 0, 0, 0]'),
 Text(0.24444444444444444, 0.5833333333333334, 'x[45] <= -0.802\ngini = 0.635\nsamples
= 23\nvalue = [0, 3, 3, 0, 0, 13, 0, 1, 1, 2]'),
 Text(0.2222222222222222, 0.4166666666666667, 'x[17] <= -366.733\ngini = 0.806\nsamples
= 12\nvalue = [0, 3, 3, 0, 0, 2, 0, 1, 1, 2]'),
 Text(0.2, 0.25, 'gini = 0.0\nsamples = 3\nvalue = [0, 3, 0, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.24444444444444444, 0.25, 'x[55] <= -2.304\ngini = 0.765\nsamples = 9\nvalue =
[0, 0, 3, 0, 0, 2, 0, 1, 1, 2]'),
 Text(0.2222222222222222, 0.08333333333333333, 'gini = 0.375\nsamples = 4\nvalue = [0,
0, 3, 0, 0, 0, 0, 0, 1, 0]'),
 Text(0.26666666666666666, 0.08333333333333333, 'gini = 0.64\nsamples = 5\nvalue = [0,
0, 0, 0, 0, 2, 0, 1, 0, 2]'),
 Text(0.26666666666666666, 0.4166666666666667, 'gini = 0.0\nsamples = 11\nvalue = [0,
0, 0, 0, 0, 11, 0, 0, 0, 0]'),
 Text(0.6444444444444445, 0.75, 'x[0] <= 0.422\ngini = 0.893\nsamples = 891\nvalue = [1
00, 20, 97, 99, 100, 79, 100, 99, 99, 98]'),
 Text(0.4666666666666667, 0.5833333333333334, 'x[6] <= 2848.267\ngini = 0.874\nsamples
= 573\nvalue = [91, 20, 95, 57, 20, 76, 9, 64, 62, 79]'),
 Text(0.37777777777777777, 0.4166666666666667, 'x[0] <= 0.321\ngini = 0.861\nsamples =
488\nvalue = [91, 20, 91, 45, 16, 70, 9, 16, 57, 73]'),
 Text(0.3333333333333333, 0.25, 'x[12] <= -0.0\ngini = 0.765\nsamples = 151\nvalue = [4
2, 17, 29, 0, 0, 49, 0, 5, 3, 6]'),
 Text(0.3111111111111111, 0.08333333333333333, 'gini = 0.587\nsamples = 52\nvalue = [2,
11, 2, 0, 0, 31, 0, 0, 1, 5]'),
 Text(0.35555555555555557, 0.08333333333333333, 'gini = 0.723\nsamples = 99\nvalue = [4
0, 6, 27, 0, 0, 18, 0, 5, 2, 1]'),
 Text(0.4222222222222222, 0.25, 'x[26] <= 232.704\ngini = 0.854\nsamples = 337\nvalue =
[49, 3, 62, 45, 16, 21, 9, 11, 54, 67]'),
 Text(0.4, 0.08333333333333333, 'gini = 0.837\nsamples = 255\nvalue = [37, 3, 48, 44,
5, 21, 7, 8, 18, 64]'),
 Text(0.4444444444444444, 0.08333333333333333, 'gini = 0.735\nsamples = 82\nvalue = [1
2, 0, 14, 1, 11, 0, 2, 3, 36, 3]'),
 Text(0.5555555555555556, 0.4166666666666667, 'x[33] <= 0.231\ngini = 0.643\nsamples =
85\nvalue = [0, 0, 4, 12, 4, 6, 0, 48, 5, 6]'),
```

```
 Text(0.5111111111111111, 0.25, 'x[34] <= 68.225\ngini = 0.816\nsamples = 30\nvalue =
[0, 0, 2, 9, 2, 4, 0, 3, 4, 6]'),
 Text(0.4888888888888889, 0.08333333333333333, 'gini = 0.562\nsamples = 11\nvalue = [0,
0, 0, 1, 0, 4, 0, 0, 0, 6]'),
 Text(0.5333333333333333, 0.08333333333333333, 'gini = 0.731\nsamples = 19\nvalue = [0,
0, 2, 8, 2, 0, 0, 3, 4, 0]'),
 Text(0.6, 0.25, 'x[28] <= 112.725\ngini = 0.323\nsamples = 55\nvalue = [0, 0, 2, 3, 2,
2, 0, 45, 1, 0]'),
 Text(0.5777777777777777, 0.08333333333333333, 'gini = 0.735\nsamples = 7\nvalue = [0,
0, 2, 2, 0, 2, 0, 1, 0, 0]'),
 Text(0.6222222222222222, 0.08333333333333333, 'gini = 0.157\nsamples = 48\nvalue = [0,
0, 0, 1, 2, 0, 0, 44, 1, 0]'),
 Text(0.8222222222222222, 0.5833333333333334, 'x[23] <= 50.889\ngini = 0.807\nsamples =
318\nvalue = [9, 0, 2, 42, 80, 3, 91, 35, 37, 19]'),
 Text(0.7333333333333333, 0.4166666666666667, 'x[26] <= 152.873\ngini = 0.801\nsamples
= 207\nvalue = [1, 0, 2, 40, 65, 2, 13, 35, 32, 17]'),
 Text(0.6888888888888889, 0.25, 'x[15] <= 0.013\ngini = 0.788\nsamples = 76\nvalue =
[1, 0, 1, 27, 7, 2, 12, 8, 3, 15]'),
 Text(0.6666666666666666, 0.08333333333333333, 'gini = 0.742\nsamples = 66\nvalue = [0,
0, 1, 27, 6, 2, 11, 1, 3, 15]'),
 Text(0.7111111111111111, 0.08333333333333333, 'gini = 0.48\nsamples = 10\nvalue = [1,
0, 0, 0, 1, 0, 1, 7, 0, 0]'),
 Text(0.7777777777777778, 0.25, 'x[6] <= 2956.36\ngini = 0.702\nsamples = 131\nvalue =
[0, 0, 1, 13, 58, 0, 1, 27, 29, 2]'),
 Text(0.7555555555555555, 0.08333333333333333, 'gini = 0.631\nsamples = 98\nvalue = [0,
0, 0, 11, 52, 0, 1, 6, 26, 2]'),
 Text(0.8, 0.08333333333333333, 'gini = 0.549\nsamples = 33\nvalue = [0, 0, 1, 2, 6, 0,
0, 21, 3, 0]'),
 Text(0.9111111111111111, 0.4166666666666667, 'x[38] <= 59.314\ngini = 0.48\nsamples =
111\nvalue = [8, 0, 0, 2, 15, 1, 78, 0, 5, 2]'),
 Text(0.8666666666666667, 0.25, 'x[54] <= 67.279\ngini = 0.204\nsamples = 82\nvalue =
[4, 0, 0, 0, 2, 1, 73, 0, 1, 1]'),
 Text(0.8444444444444444, 0.08333333333333333, 'gini = 0.145\nsamples = 79\nvalue = [2,
0, 0, 0, 2, 0, 73, 0, 1, 1]'),
 Text(0.8888888888888888, 0.08333333333333333, 'gini = 0.444\nsamples = 3\nvalue = [2,
0, 0, 0, 0, 1, 0, 0, 0, 0]'),
 Text(0.9555555555555556, 0.25, 'x[3] <= 0.002\ngini = 0.725\nsamples = 29\nvalue = [4,
0, 0, 2, 13, 0, 5, 0, 4, 1]'),
 Text(0.9333333333333333, 0.08333333333333333, 'gini = 0.64\nsamples = 10\nvalue = [1,
0, 0, 1, 0, 0, 5, 0, 3, 0]'),
 Text(0.9777777777777777, 0.08333333333333333, 'gini = 0.499\nsamples = 19\nvalue = [3,
0, 0, 1, 13, 0, 0, 0, 1, 1]')]
```

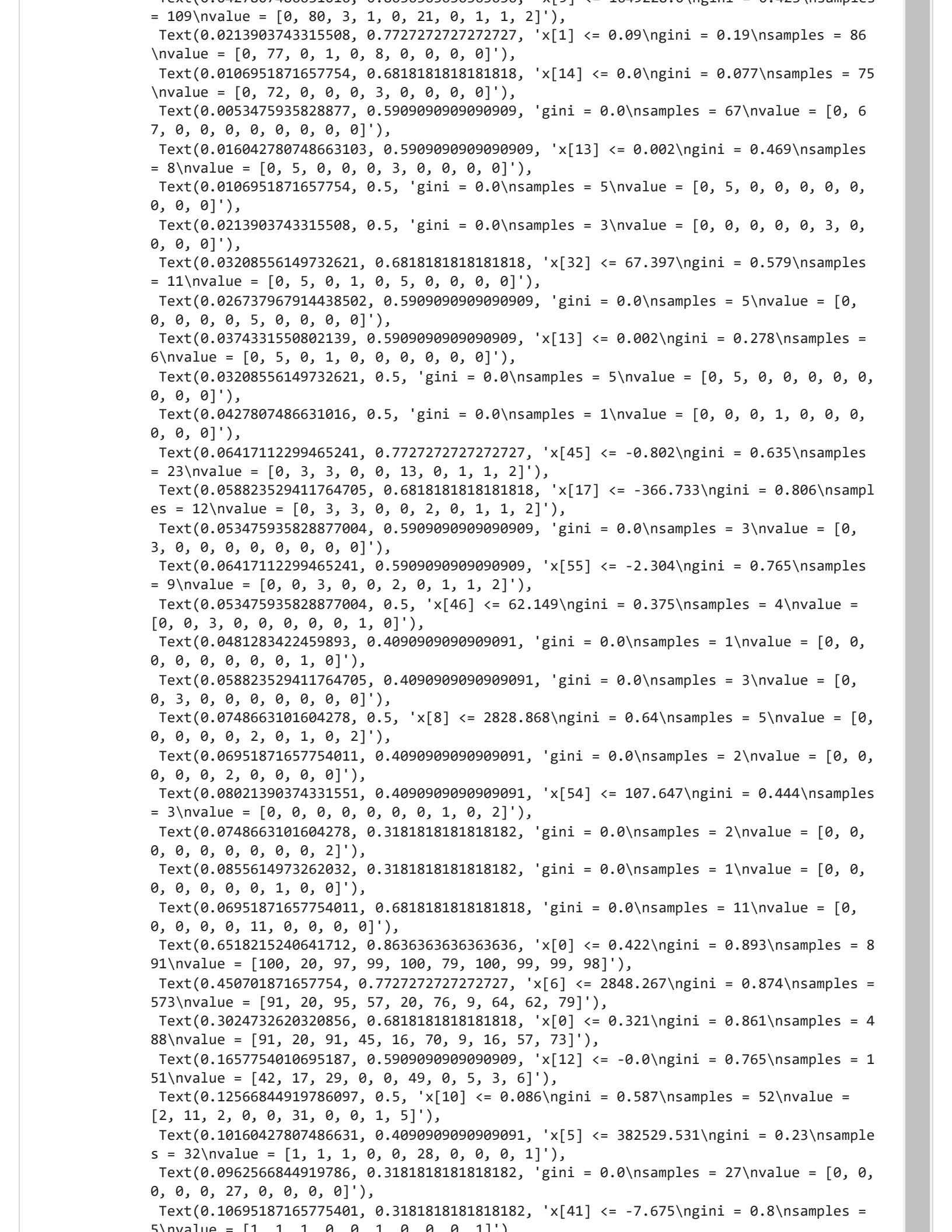


In [8]:

```
model=tree.DecisionTreeClassifier(random_state=100,max_depth=10)
model.fit(data,labels)
tree.plot_tree(model)
```

Out[8]:

```
[Text(0.34730113636363635, 0.9545454545454546, 'x[15] <= 0.0\ngini = 0.9\nsamples = 100
0\nvalue = [100, 100, 100, 100, 100, 100, 100, 100, 100, 100]'),
 Text(0.0427807486631016, 0.8636363636363636, 'x[9] <= 1649228.0\ngini = 0.423\nsamples
```


= 109\nvalue = [0, 80, 3, 1, 0, 21, 0, 1, 1, 2]'),
Text(0.0213903743315508, 0.7727272727272727, 'x[1] <= 0.09\ngini = 0.19\nsamples = 86
\nvalue = [0, 77, 0, 1, 0, 8, 0, 0, 0, 0]'),
Text(0.0106951871657754, 0.6818181818181818, 'x[14] <= 0.0\ngini = 0.077\nsamples = 75
\nvalue = [0, 72, 0, 0, 0, 3, 0, 0, 0, 0]'),
Text(0.0053475935828877, 0.5909090909090909, 'gini = 0.0\nsamples = 67\nvalue = [0, 6
7, 0, 0, 0, 0, 0, 0, 0, 0]'),
Text(0.016042780748663103, 0.5909090909090909, 'x[13] <= 0.002\ngini = 0.469\nsamples
= 8\nvalue = [0, 5, 0, 0, 0, 3, 0, 0, 0, 0]'),
Text(0.0106951871657754, 0.5, 'gini = 0.0\nsamples = 5\nvalue = [0, 5, 0, 0, 0, 0, 0,
0, 0, 0]'),
Text(0.0213903743315508, 0.5, 'gini = 0.0\nsamples = 3\nvalue = [0, 0, 0, 0, 0, 3, 0,
0, 0, 0]'),
Text(0.03208556149732621, 0.6818181818181818, 'x[32] <= 67.397\ngini = 0.579\nsamples
= 11\nvalue = [0, 5, 0, 1, 0, 5, 0, 0, 0, 0]'),
Text(0.026737967914438502, 0.5909090909090909, 'gini = 0.0\nsamples = 5\nvalue = [0,
0, 0, 0, 0, 5, 0, 0, 0, 0]'),
Text(0.0374331550802139, 0.5909090909090909, 'x[13] <= 0.002\ngini = 0.278\nsamples =
6\nvalue = [0, 5, 0, 1, 0, 0, 0, 0, 0, 0]'),
Text(0.03208556149732621, 0.5, 'gini = 0.0\nsamples = 5\nvalue = [0, 5, 0, 0, 0, 0, 0,
0, 0, 0]'),
Text(0.0427807486631016, 0.5, 'gini = 0.0\nsamples = 1\nvalue = [0, 0, 0, 1, 0, 0, 0,
0, 0, 0]'),
Text(0.06417112299465241, 0.7727272727272727, 'x[45] <= -0.802\ngini = 0.635\nsamples
= 23\nvalue = [0, 3, 3, 0, 0, 13, 0, 1, 1, 2]'),
Text(0.058823529411764705, 0.6818181818181818, 'x[17] <= -366.733\ngini = 0.806\nsampl
es = 12\nvalue = [0, 3, 3, 0, 0, 2, 0, 1, 1, 2]'),
Text(0.053475935828877004, 0.5909090909090909, 'gini = 0.0\nsamples = 3\nvalue = [0,
3, 0, 0, 0, 0, 0, 0, 0, 0]'),
Text(0.06417112299465241, 0.5909090909090909, 'x[55] <= -2.304\ngini = 0.765\nsamples
= 9\nvalue = [0, 0, 3, 0, 0, 2, 0, 1, 1, 2]'),
Text(0.053475935828877004, 0.5, 'x[46] <= 62.149\ngini = 0.375\nsamples = 4\nvalue =
[0, 0, 3, 0, 0, 0, 0, 0, 1, 0]'),
Text(0.0481283422459893, 0.4090909090909091, 'gini = 0.0\nsamples = 1\nvalue = [0, 0,
0, 0, 0, 0, 0, 0, 1, 0]'),
Text(0.058823529411764705, 0.4090909090909091, 'gini = 0.0\nsamples = 3\nvalue = [0,
0, 3, 0, 0, 0, 0, 0, 0, 0]'),
Text(0.0748663101604278, 0.5, 'x[8] <= 2828.868\ngini = 0.64\nsamples = 5\nvalue = [0,
0, 0, 0, 0, 2, 0, 1, 0, 2]'),
Text(0.06951871657754011, 0.4090909090909091, 'gini = 0.0\nsamples = 2\nvalue = [0, 0,
0, 0, 0, 2, 0, 0, 0, 0]'),
Text(0.08021390374331551, 0.4090909090909091, 'x[54] <= 107.647\ngini = 0.444\nsamples
= 3\nvalue = [0, 0, 0, 0, 0, 0, 0, 1, 0, 2]'),
Text(0.0748663101604278, 0.3181818181818182, 'gini = 0.0\nsamples = 2\nvalue = [0, 0,
0, 0, 0, 0, 0, 0, 0, 2]'),
Text(0.0855614973262032, 0.3181818181818182, 'gini = 0.0\nsamples = 1\nvalue = [0, 0,
0, 0, 0, 0, 0, 1, 0, 0]'),
Text(0.06951871657754011, 0.6818181818181818, 'gini = 0.0\nsamples = 11\nvalue = [0,
0, 0, 0, 0, 11, 0, 0, 0, 0]'),
Text(0.6518215240641712, 0.8636363636363636, 'x[0] <= 0.422\ngini = 0.893\nsamples = 8
91\nvalue = [100, 20, 97, 99, 100, 79, 100, 99, 99, 98]'),
Text(0.450701871657754, 0.7727272727272727, 'x[6] <= 2848.267\ngini = 0.874\nsamples =
573\nvalue = [91, 20, 95, 57, 20, 76, 9, 64, 62, 79]'),
Text(0.3024732620320856, 0.6818181818181818, 'x[0] <= 0.321\ngini = 0.861\nsamples = 4
88\nvalue = [91, 20, 91, 45, 16, 70, 9, 16, 57, 73]'),
Text(0.1657754010695187, 0.5909090909090909, 'x[12] <= -0.0\ngini = 0.765\nsamples = 1
51\nvalue = [42, 17, 29, 0, 0, 49, 0, 5, 3, 6]'),
Text(0.12566844919786097, 0.5, 'x[10] <= 0.086\ngini = 0.587\nsamples = 52\nvalue =
[2, 11, 2, 0, 0, 31, 0, 0, 1, 5]'),
Text(0.10160427807486631, 0.4090909090909091, 'x[5] <= 382529.531\ngini = 0.23\nsample
s = 32\nvalue = [1, 1, 1, 0, 0, 28, 0, 0, 0, 1]'),
Text(0.0962566844919786, 0.3181818181818182, 'gini = 0.0\nsamples = 27\nvalue = [0, 0,
0, 0, 0, 27, 0, 0, 0, 0]'),
Text(0.10695187165775401, 0.3181818181818182, 'x[41] <= -7.675\ngini = 0.8\nsamples =
5\nvalue = [1, 1, 1, 0, 0, 1, 0, 0, 0, 1]'),

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 Text(0.10160427807486631, 0.22727272727272727, 'gini = 0.0\nsamples = 1\nvalue = [0,
0, 0, 0, 0, 1, 0, 0, 0, 0]'),
 Text(0.11229946524064172, 0.22727272727272727, 'x[1] <= 0.087\ngini = 0.75\nsamples =
4\nvalue = [1, 1, 1, 0, 0, 0, 0, 0, 0, 1]'),
 Text(0.10695187165775401, 0.13636363636363635, 'gini = 0.0\nsamples = 1\nvalue = [0,
0, 0, 0, 0, 0, 0, 0, 0, 1]'),
 Text(0.11764705882352941, 0.13636363636363635, 'x[9] <= 2221025.25\ngini = 0.667\nsamp
les = 3\nvalue = [1, 1, 1, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.11229946524064172, 0.045454545454545456, 'gini = 0.0\nsamples = 1\nvalue = [0,
0, 1, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.12299465240641712, 0.045454545454545456, 'gini = 0.5\nsamples = 2\nvalue = [1,
1, 0, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.1497326203208556, 0.4090909090909091, 'x[8] <= 4657.687\ngini = 0.68\nsamples =
20\nvalue = [1, 10, 1, 0, 0, 3, 0, 0, 1, 4]'),
 Text(0.13903743315508021, 0.3181818181818182, 'x[53] <= -1.367\ngini = 0.507\nsamples
= 15\nvalue = [0, 10, 1, 0, 0, 3, 0, 0, 1, 0]'),
 Text(0.13368983957219252, 0.22727272727272727, 'gini = 0.0\nsamples = 10\nvalue = [0,
10, 0, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.1443850267379679, 0.22727272727272727, 'x[27] <= 3.004\ngini = 0.56\nsamples =
5\nvalue = [0, 0, 1, 0, 0, 3, 0, 0, 1, 0]'),
 Text(0.13903743315508021, 0.13636363636363635, 'x[51] <= 0.989\ngini = 0.5\nsamples =
2\nvalue = [0, 0, 1, 0, 0, 0, 0, 0, 1, 0]'),
 Text(0.13368983957219252, 0.045454545454545456, 'gini = 0.0\nsamples = 1\nvalue = [0,
0, 0, 0, 0, 0, 0, 0, 1, 0]'),
 Text(0.1443850267379679, 0.045454545454545456, 'gini = 0.0\nsamples = 1\nvalue = [0,
0, 1, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.1497326203208556, 0.13636363636363635, 'gini = 0.0\nsamples = 3\nvalue = [0, 0,
0, 0, 0, 3, 0, 0, 0, 0]'),
 Text(0.16042780748663102, 0.3181818181818182, 'x[45] <= -11.416\ngini = 0.32\nsamples
= 5\nvalue = [1, 0, 0, 0, 0, 0, 0, 0, 0, 4]'),
 Text(0.15508021390374332, 0.22727272727272727, 'gini = 0.0\nsamples = 1\nvalue = [1,
0, 0, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.1657754010695187, 0.22727272727272727, 'gini = 0.0\nsamples = 4\nvalue = [0, 0,
0, 0, 0, 0, 0, 0, 0, 4]'),
 Text(0.20588235294117646, 0.5, 'x[12] <= -0.0\ngini = 0.723\nsamples = 99\nvalue = [4
0, 6, 27, 0, 0, 18, 0, 5, 2, 1]'),
 Text(0.18716577540106952, 0.4090909090909091, 'x[7] <= 197202.828\ngini = 0.266\nsampl
es = 27\nvalue = [23, 0, 1, 0, 0, 0, 0, 2, 1, 0]'),
 Text(0.18181818181818182, 0.3181818181818182, 'x[40] <= 174.669\ngini = 0.15\nsamples
= 25\nvalue = [23, 0, 1, 0, 0, 0, 0, 0, 1, 0]'),
 Text(0.17647058823529413, 0.22727272727272727, 'x[15] <= 0.007\ngini = 0.08\nsamples =
24\nvalue = [23, 0, 1, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.1711229946524064, 0.13636363636363635, 'gini = 0.0\nsamples = 23\nvalue = [23,
0, 0, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.18181818181818182, 0.13636363636363635, 'gini = 0.0\nsamples = 1\nvalue = [0,
0, 1, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.18716577540106952, 0.22727272727272727, 'gini = 0.0\nsamples = 1\nvalue = [0,
0, 0, 0, 0, 0, 0, 0, 1, 0]'),
 Text(0.1925133689839572, 0.3181818181818182, 'gini = 0.0\nsamples = 2\nvalue = [0, 0,
0, 0, 0, 0, 0, 2, 0, 0]'),
 Text(0.22459893048128343, 0.4090909090909091, 'x[32] <= 87.817\ngini = 0.742\nsamples
= 72\nvalue = [17, 6, 26, 0, 0, 18, 0, 3, 1, 1]'),
 Text(0.20855614973262032, 0.3181818181818182, 'x[12] <= 0.0\ngini = 0.645\nsamples = 3
2\nvalue = [1, 6, 6, 0, 0, 17, 0, 1, 0, 1]'),
 Text(0.20320855614973263, 0.22727272727272727, 'x[56] <= 53.434\ngini = 0.549\nsamples
= 27\nvalue = [1, 1, 6, 0, 0, 17, 0, 1, 0, 1]'),
 Text(0.1925133689839572, 0.13636363636363635, 'x[19] <= 117.064\ngini = 0.278\nsamples
= 6\nvalue = [0, 0, 5, 0, 0, 1, 0, 0, 0, 0]'),
 Text(0.18716577540106952, 0.045454545454545456, 'gini = 0.0\nsamples = 1\nvalue = [0,
0, 0, 0, 0, 1, 0, 0, 0, 0]'),
 Text(0.19786096256684493, 0.045454545454545456, 'gini = 0.0\nsamples = 5\nvalue = [0,
0, 5, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.21390374331550802, 0.13636363636363635, 'x[29] <= 2.792\ngini = 0.408\nsamples
= 21\nvalue = [1, 1, 1, 0, 0, 16, 0, 1, 0, 1]'),
 Text(0.20855614973262032, 0.045454545454545456, 'gini = 0.204\nsamples = 18\nvalue =
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[1, 1, 0, 0, 0, 16, 0, 0, 0, 0]'),
 Text(0.2192513368983957, 0.045454545454545456, 'gini = 0.667\nsamples = 3\nvalue = [0,
0, 1, 0, 0, 0, 0, 1, 0, 1]'),
 Text(0.21390374331550802, 0.22727272727272727, 'gini = 0.0\nsamples = 5\nvalue = [0,
5, 0, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.24064171122994651, 0.3181818181818182, 'x[39] <= -4.311\ngini = 0.586\nsamples
= 40\nvalue = [16, 0, 20, 0, 0, 1, 0, 2, 1, 0]'),
 Text(0.22994652406417113, 0.22727272727272727, 'x[52] <= 179.346\ngini = 0.142\nsample
s = 13\nvalue = [12, 0, 0, 0, 0, 0, 0, 1, 0, 0]'),
 Text(0.22459893048128343, 0.13636363636363635, 'gini = 0.0\nsamples = 12\nvalue = [12,
0, 0, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.23529411764705882, 0.13636363636363635, 'gini = 0.0\nsamples = 1\nvalue = [0,
0, 0, 0, 0, 0, 0, 1, 0, 0]'),
 Text(0.25133689839572193, 0.22727272727272727, 'x[3] <= 0.004\ngini = 0.425\nsamples =
27\nvalue = [4, 0, 20, 0, 0, 1, 0, 1, 1, 0]'),
 Text(0.24598930481283424, 0.13636363636363635, 'x[29] <= -16.684\ngini = 0.299\nsample
s = 24\nvalue = [1, 0, 20, 0, 0, 1, 0, 1, 1, 0]'),
 Text(0.24064171122994651, 0.045454545454545456, 'gini = 0.5\nsamples = 2\nvalue = [1,
0, 0, 0, 0, 0, 0, 0, 1, 0]'),
 Text(0.25133689839572193, 0.045454545454545456, 'gini = 0.169\nsamples = 22\nvalue =
[0, 0, 20, 0, 0, 1, 0, 1, 0, 0]'),
 Text(0.25668449197860965, 0.13636363636363635, 'gini = 0.0\nsamples = 3\nvalue = [3,
0, 0, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.4391711229946524, 0.5909090909090909, 'x[26] <= 232.704\ngini = 0.854\nsamples
= 337\nvalue = [49, 3, 62, 45, 16, 21, 9, 11, 54, 67]'),
 Text(0.3729946524064171, 0.5, 'x[9] <= 1091040.562\ngini = 0.837\nsamples = 255\nvalue
= [37, 3, 48, 44, 5, 21, 7, 8, 18, 64]'),
 Text(0.32887700534759357, 0.4090909090909091, 'x[1] <= 0.085\ngini = 0.776\nsamples =
90\nvalue = [30, 1, 7, 8, 2, 9, 6, 0, 1, 26]'),
 Text(0.2994652406417112, 0.3181818181818182, 'x[55] <= 1.324\ngini = 0.767\nsamples =
54\nvalue = [8, 1, 6, 8, 1, 2, 5, 0, 1, 22]'),
 Text(0.27807486631016043, 0.22727272727272727, 'x[56] <= 45.208\ngini = 0.634\nsamples
= 37\nvalue = [3, 1, 6, 3, 0, 1, 2, 0, 0, 21]'),
 Text(0.26737967914438504, 0.13636363636363635, 'x[50] <= 47.456\ngini = 0.371\nsamples
= 23\nvalue = [1, 0, 2, 0, 0, 0, 2, 0, 0, 18]'),
 Text(0.2620320855614973, 0.045454545454545456, 'gini = 0.185\nsamples = 20\nvalue =
[1, 0, 1, 0, 0, 0, 0, 0, 0, 18]'),
 Text(0.2727272727272727, 0.045454545454545456, 'gini = 0.444\nsamples = 3\nvalue = [0,
0, 1, 0, 0, 0, 2, 0, 0, 0]'),
 Text(0.2887700534759358, 0.13636363636363635, 'x[50] <= 42.477\ngini = 0.796\nsamples
= 14\nvalue = [2, 1, 4, 3, 0, 1, 0, 0, 0, 3]'),
 Text(0.28342245989304815, 0.045454545454545456, 'gini = 0.611\nsamples = 6\nvalue =
[2, 1, 0, 3, 0, 0, 0, 0, 0, 0]'),
 Text(0.29411764705882354, 0.045454545454545456, 'gini = 0.594\nsamples = 8\nvalue =
[0, 0, 4, 0, 0, 1, 0, 0, 0, 3]'),
 Text(0.32085561497326204, 0.22727272727272727, 'x[13] <= 0.007\ngini = 0.782\nsamples
= 17\nvalue = [5, 0, 0, 5, 1, 1, 3, 0, 1, 1]'),
 Text(0.31016042780748665, 0.13636363636363635, 'x[25] <= -24.899\ngini = 0.49\nsamples
= 7\nvalue = [0, 0, 0, 4, 0, 0, 3, 0, 0, 0]'),
 Text(0.3048128342245989, 0.045454545454545456, 'gini = 0.0\nsamples = 3\nvalue = [0,
0, 0, 0, 0, 0, 3, 0, 0, 0]'),
 Text(0.3155080213903743, 0.045454545454545456, 'gini = 0.0\nsamples = 4\nvalue = [0,
0, 0, 4, 0, 0, 0, 0, 0, 0]'),
 Text(0.3315508021390374, 0.13636363636363635, 'x[44] <= 38.752\ngini = 0.7\nsamples =
10\nvalue = [5, 0, 0, 1, 1, 1, 0, 0, 1, 1]'),
 Text(0.32620320855614976, 0.045454545454545456, 'gini = 0.75\nsamples = 4\nvalue = [0,
0, 0, 1, 0, 1, 0, 0, 1, 1]'),
 Text(0.33689839572192515, 0.045454545454545456, 'gini = 0.278\nsamples = 6\nvalue =
[5, 0, 0, 0, 1, 0, 0, 0, 0, 0]'),
 Text(0.3582887700534759, 0.3181818181818182, 'x[13] <= 0.005\ngini = 0.574\nsamples =
36\nvalue = [22, 0, 1, 0, 1, 7, 1, 0, 0, 4]'),
 Text(0.34759358288770054, 0.22727272727272727, 'x[30] <= 88.583\ngini = 0.568\nsamples
= 9\nvalue = [1, 0, 0, 0, 0, 5, 0, 0, 0, 3]'),
 Text(0.3422459893048128, 0.13636363636363635, 'gini = 0.0\nsamples = 5\nvalue = [0, 0,
0, 0, 0, 5, 0, 0, 0, 0]'),

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 Text(0.35294117647058826, 0.13636363636363635, 'x[13] <= 0.004\ngini = 0.375\nsamples
= 4\nvalue = [1, 0, 0, 0, 0, 0, 0, 0, 0, 3]'),
 Text(0.34759358288770054, 0.045454545454545456, 'gini = 0.0\nsamples = 1\nvalue = [1,
0, 0, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.3582887700534759, 0.045454545454545456, 'gini = 0.0\nsamples = 3\nvalue = [0,
0, 0, 0, 0, 0, 0, 0, 0, 3]'),
 Text(0.3689839572192513, 0.22727272727272727, 'x[39] <= 1.313\ngini = 0.384\nsamples =
27\nvalue = [21, 0, 1, 0, 1, 2, 1, 0, 0, 1]'),
 Text(0.36363636363636365, 0.13636363636363635, 'gini = 0.0\nsamples = 2\nvalue = [0,
0, 0, 0, 0, 2, 0, 0, 0, 0]'),
 Text(0.37433155080213903, 0.13636363636363635, 'x[48] <= 92.777\ngini = 0.288\nsamples
= 25\nvalue = [21, 0, 1, 0, 1, 0, 1, 0, 0, 1]'),
 Text(0.3689839572192513, 0.045454545454545456, 'gini = 0.163\nsamples = 23\nvalue = [2
1, 0, 0, 0, 0, 0, 1, 0, 0, 1]'),
 Text(0.37967914438502676, 0.045454545454545456, 'gini = 0.5\nsamples = 2\nvalue = [0,
0, 1, 0, 1, 0, 0, 0, 0, 0]'),
 Text(0.41711229946524064, 0.4090909090909091, 'x[28] <= 58.637\ngini = 0.817\nsamples
= 165\nvalue = [7, 2, 41, 36, 3, 12, 1, 8, 17, 38]'),
 Text(0.39572192513368987, 0.3181818181818182, 'x[1] <= 0.082\ngini = 0.314\nsamples =
11\nvalue = [0, 0, 1, 0, 0, 9, 0, 0, 0, 1]'),
 Text(0.39037433155080214, 0.22727272727272727, 'x[41] <= -7.22\ngini = 0.5\nsamples =
2\nvalue = [0, 0, 1, 0, 0, 0, 0, 0, 0, 1]'),
 Text(0.3850267379679144, 0.13636363636363635, 'gini = 0.0\nsamples = 1\nvalue = [0, 0,
0, 0, 0, 0, 0, 0, 0, 1]'),
 Text(0.39572192513368987, 0.13636363636363635, 'gini = 0.0\nsamples = 1\nvalue = [0,
0, 1, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.40106951871657753, 0.22727272727272727, 'gini = 0.0\nsamples = 9\nvalue = [0,
0, 0, 0, 0, 9, 0, 0, 0, 0]'),
 Text(0.4385026737967914, 0.3181818181818182, 'x[15] <= 0.007\ngini = 0.802\nsamples =
154\nvalue = [7, 2, 40, 36, 3, 3, 1, 8, 17, 37]'),
 Text(0.41711229946524064, 0.22727272727272727, 'x[11] <= 0.003\ngini = 0.799\nsamples
= 124\nvalue = [5, 2, 36, 18, 2, 3, 1, 7, 17, 33]'),
 Text(0.40641711229946526, 0.13636363636363635, 'x[1] <= 0.09\ngini = 0.794\nsamples =
91\nvalue = [5, 2, 32, 13, 1, 3, 0, 5, 15, 15]'),
 Text(0.40106951871657753, 0.045454545454545456, 'gini = 0.725\nsamples = 63\nvalue =
[1, 2, 29, 7, 0, 2, 0, 5, 5, 12]'),
 Text(0.4117647058823529, 0.045454545454545456, 'gini = 0.781\nsamples = 28\nvalue =
[4, 0, 3, 6, 1, 1, 0, 0, 10, 3]'),
 Text(0.42780748663101603, 0.13636363636363635, 'x[50] <= 50.601\ngini = 0.656\nsamples
= 33\nvalue = [0, 0, 4, 5, 1, 0, 1, 2, 2, 18]'),
 Text(0.42245989304812837, 0.045454545454545456, 'gini = 0.142\nsamples = 13\nvalue =
[0, 0, 0, 1, 0, 0, 0, 0, 0, 12]'),
 Text(0.43315508021390375, 0.045454545454545456, 'gini = 0.805\nsamples = 20\nvalue =
[0, 0, 4, 4, 1, 0, 1, 2, 2, 6]'),
 Text(0.45989304812834225, 0.22727272727272727, 'x[47] <= 4.119\ngini = 0.598\nsamples
= 30\nvalue = [2, 0, 4, 18, 1, 0, 0, 1, 0, 4]'),
 Text(0.44919786096256686, 0.13636363636363635, 'x[13] <= 0.025\ngini = 0.406\nsamples
= 24\nvalue = [1, 0, 0, 18, 1, 0, 0, 0, 0, 4]'),
 Text(0.44385026737967914, 0.045454545454545456, 'gini = 0.254\nsamples = 21\nvalue =
[1, 0, 0, 18, 0, 0, 0, 0, 0, 2]'),
 Text(0.45454545454545453, 0.045454545454545456, 'gini = 0.444\nsamples = 3\nvalue =
[0, 0, 0, 0, 1, 0, 0, 0, 0, 2]'),
 Text(0.47058823529411764, 0.13636363636363635, 'x[56] <= 56.858\ngini = 0.5\nsamples =
6\nvalue = [1, 0, 4, 0, 0, 0, 0, 1, 0, 0]'),
 Text(0.46524064171123, 0.045454545454545456, 'gini = 0.0\nsamples = 4\nvalue = [0, 0,
4, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.47593582887700536, 0.045454545454545456, 'gini = 0.5\nsamples = 2\nvalue = [1,
0, 0, 0, 0, 0, 0, 1, 0, 0]'),
 Text(0.5053475935828877, 0.5, 'x[12] <= -0.0\ngini = 0.735\nsamples = 82\nvalue = [12,
0, 14, 1, 11, 0, 2, 3, 36, 3]'),
 Text(0.48128342245989303, 0.4090909090909091, 'x[14] <= -0.003\ngini = 0.177\nsamples
= 21\nvalue = [0, 0, 0, 0, 1, 0, 1, 0, 19, 0]'),
 Text(0.47593582887700536, 0.3181818181818182, 'gini = 0.0\nsamples = 1\nvalue = [0, 0,
0, 0, 0, 0, 1, 0, 0, 0]'),
 Text(0.4866310160427807, 0.3181818181818182, 'x[33] <= -13.708\ngini = 0.095\nsamples
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= 20\nvalue = [0, 0, 0, 0, 1, 0, 0, 0, 19, 0]'),
 Text(0.48128342245989303, 0.22727272727272727, 'gini = 0.0\nsamples = 1\nvalue = [0,
0, 0, 0, 1, 0, 0, 0, 0, 0]'),
 Text(0.4919786096256685, 0.22727272727272727, 'gini = 0.0\nsamples = 19\nvalue = [0,
0, 0, 0, 0, 0, 0, 0, 19, 0]'),
 Text(0.5294117647058824, 0.4090909090909091, 'x[3] <= 0.007\ngini = 0.799\nsamples = 6
1\nvalue = [12, 0, 14, 1, 10, 0, 1, 3, 17, 3]'),
 Text(0.5240641711229946, 0.3181818181818182, 'x[1] <= 0.089\ngini = 0.774\nsamples = 5
4\nvalue = [12, 0, 14, 1, 3, 0, 1, 3, 17, 3]'),
 Text(0.5026737967914439, 0.22727272727272727, 'x[33] <= -2.862\ngini = 0.436\nsamples
= 15\nvalue = [1, 0, 11, 0, 0, 0, 1, 0, 2, 0]'),
 Text(0.4919786096256685, 0.13636363636363635, 'x[20] <= 562.244\ngini = 0.153\nsamples
= 12\nvalue = [1, 0, 11, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.48663101604278075, 0.045454545454545456, 'gini = 0.0\nsamples = 1\nvalue = [1,
0, 0, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.49732620320855614, 0.045454545454545456, 'gini = 0.0\nsamples = 11\nvalue = [0,
0, 11, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.5133689839572193, 0.13636363636363635, 'x[53] <= -2.774\ngini = 0.444\nsamples
= 3\nvalue = [0, 0, 0, 0, 0, 0, 1, 0, 2, 0]'),
 Text(0.5080213903743316, 0.045454545454545456, 'gini = 0.0\nsamples = 1\nvalue = [0,
0, 0, 0, 0, 0, 1, 0, 0, 0]'),
 Text(0.5187165775401069, 0.045454545454545456, 'gini = 0.0\nsamples = 2\nvalue = [0,
0, 0, 0, 0, 0, 0, 0, 2, 0]'),
 Text(0.5454545454545454, 0.22727272727272727, 'x[10] <= 0.059\ngini = 0.748\nsamples =
39\nvalue = [11, 0, 3, 1, 3, 0, 0, 3, 15, 3]'),
 Text(0.5347593582887701, 0.13636363636363635, 'x[39] <= 6.988\ngini = 0.403\nsamples =
12\nvalue = [9, 0, 2, 0, 0, 0, 0, 0, 0, 1]'),
 Text(0.5294117647058824, 0.045454545454545456, 'gini = 0.0\nsamples = 9\nvalue = [9,
0, 0, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.5401069518716578, 0.045454545454545456, 'gini = 0.444\nsamples = 3\nvalue = [0,
0, 2, 0, 0, 0, 0, 0, 0, 1]'),
 Text(0.5561497326203209, 0.13636363636363635, 'x[43] <= -3.544\ngini = 0.653\nsamples
= 27\nvalue = [2, 0, 1, 1, 3, 0, 0, 3, 15, 2]'),
 Text(0.5508021390374331, 0.045454545454545456, 'gini = 0.667\nsamples = 6\nvalue = [1,
0, 1, 0, 1, 0, 0, 3, 0, 0]'),
 Text(0.5614973262032086, 0.045454545454545456, 'gini = 0.467\nsamples = 21\nvalue =
[1, 0, 0, 1, 2, 0, 0, 0, 15, 2]'),
 Text(0.5347593582887701, 0.3181818181818182, 'gini = 0.0\nsamples = 7\nvalue = [0, 0,
0, 0, 7, 0, 0, 0, 0, 0]'),
 Text(0.5989304812834224, 0.6818181818181818, 'x[33] <= 0.231\ngini = 0.643\nsamples =
85\nvalue = [0, 0, 4, 12, 4, 6, 0, 48, 5, 6]'),
 Text(0.56951871657754, 0.5909090909090909, 'x[34] <= 68.225\ngini = 0.816\nsamples = 3
0\nvalue = [0, 0, 2, 9, 2, 4, 0, 3, 4, 6]'),
 Text(0.5561497326203209, 0.5, 'x[27] <= 6.689\ngini = 0.562\nsamples = 11\nvalue = [0,
0, 0, 1, 0, 4, 0, 0, 0, 6]'),
 Text(0.5508021390374331, 0.4090909090909091, 'x[37] <= 3.015\ngini = 0.32\nsamples = 5
\nvalue = [0, 0, 0, 1, 0, 4, 0, 0, 0, 0]'),
 Text(0.5454545454545454, 0.3181818181818182, 'gini = 0.0\nsamples = 4\nvalue = [0, 0,
0, 0, 0, 4, 0, 0, 0, 0]'),
 Text(0.5561497326203209, 0.3181818181818182, 'gini = 0.0\nsamples = 1\nvalue = [0, 0,
0, 1, 0, 0, 0, 0, 0, 0]'),
 Text(0.5614973262032086, 0.4090909090909091, 'gini = 0.0\nsamples = 6\nvalue = [0, 0,
0, 0, 0, 0, 0, 0, 0, 6]'),
 Text(0.5828877005347594, 0.5, 'x[11] <= 0.006\ngini = 0.731\nsamples = 19\nvalue = [0,
0, 2, 8, 2, 0, 0, 3, 4, 0]'),
 Text(0.5721925133689839, 0.4090909090909091, 'x[15] <= 0.003\ngini = 0.32\nsamples = 1
0\nvalue = [0, 0, 2, 8, 0, 0, 0, 0, 0, 0]'),
 Text(0.5668449197860963, 0.3181818181818182, 'gini = 0.0\nsamples = 2\nvalue = [0, 0,
2, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.5775401069518716, 0.3181818181818182, 'gini = 0.0\nsamples = 8\nvalue = [0, 0,
0, 8, 0, 0, 0, 0, 0, 0]'),
 Text(0.5935828877005348, 0.4090909090909091, 'x[12] <= -0.0\ngini = 0.642\nsamples = 9
\nvalue = [0, 0, 0, 0, 2, 0, 0, 3, 4, 0]'),
 Text(0.5882352941176471, 0.3181818181818182, 'x[41] <= -0.189\ngini = 0.48\nsamples =
5\nvalue = [0, 0, 0, 0, 2, 0, 0, 3, 0, 0]'),

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 Text(0.5828877005347594, 0.22727272727272727, 'gini = 0.0\nsamples = 3\nvalue = [0, 0,
0, 0, 0, 0, 0, 3, 0, 0]'),
 Text(0.5935828877005348, 0.22727272727272727, 'gini = 0.0\nsamples = 2\nvalue = [0, 0,
0, 0, 2, 0, 0, 0, 0, 0]'),
 Text(0.5989304812834224, 0.3181818181818182, 'gini = 0.0\nsamples = 4\nvalue = [0, 0,
0, 0, 0, 0, 0, 0, 4, 0]'),
 Text(0.6283422459893048, 0.5909090909090909, 'x[28] <= 112.725\ngini = 0.323\nsamples
= 55\nvalue = [0, 0, 2, 3, 2, 2, 0, 45, 1, 0]'),
 Text(0.6096256684491979, 0.5, 'x[45] <= -3.632\ngini = 0.735\nsamples = 7\nvalue = [0,
0, 2, 2, 0, 2, 0, 1, 0, 0]'),
 Text(0.6042780748663101, 0.4090909090909091, 'gini = 0.0\nsamples = 2\nvalue = [0, 0,
0, 2, 0, 0, 0, 0, 0, 0]'),
 Text(0.6149732620320856, 0.4090909090909091, 'x[40] <= 64.732\ngini = 0.64\nsamples =
5\nvalue = [0, 0, 2, 0, 0, 2, 0, 1, 0, 0]'),
 Text(0.6096256684491979, 0.3181818181818182, 'x[25] <= 10.206\ngini = 0.444\nsamples =
3\nvalue = [0, 0, 2, 0, 0, 0, 0, 1, 0, 0]'),
 Text(0.6042780748663101, 0.22727272727272727, 'gini = 0.0\nsamples = 1\nvalue = [0, 0,
0, 0, 0, 0, 0, 1, 0, 0]'),
 Text(0.6149732620320856, 0.22727272727272727, 'gini = 0.0\nsamples = 2\nvalue = [0, 0,
2, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.6203208556149733, 0.3181818181818182, 'gini = 0.0\nsamples = 2\nvalue = [0, 0,
0, 0, 0, 2, 0, 0, 0, 0]'),
 Text(0.6470588235294118, 0.5, 'x[55] <= -5.371\ngini = 0.157\nsamples = 48\nvalue =
[0, 0, 0, 1, 2, 0, 0, 44, 1, 0]'),
 Text(0.6363636363636364, 0.4090909090909091, 'x[45] <= 0.091\ngini = 0.444\nsamples =
3\nvalue = [0, 0, 0, 0, 2, 0, 0, 0, 1, 0]'),
 Text(0.6310160427807486, 0.3181818181818182, 'gini = 0.0\nsamples = 2\nvalue = [0, 0,
0, 0, 2, 0, 0, 0, 0, 0]'),
 Text(0.6417112299465241, 0.3181818181818182, 'gini = 0.0\nsamples = 1\nvalue = [0, 0,
0, 0, 0, 0, 0, 0, 1, 0]'),
 Text(0.6577540106951871, 0.4090909090909091, 'x[3] <= 0.002\ngini = 0.043\nsamples = 4
5\nvalue = [0, 0, 0, 1, 0, 0, 0, 44, 0, 0]'),
 Text(0.6524064171122995, 0.3181818181818182, 'x[51] <= 2.009\ngini = 0.5\nsamples = 2
\nvalue = [0, 0, 0, 1, 0, 0, 0, 1, 0, 0]'),
 Text(0.6470588235294118, 0.22727272727272727, 'gini = 0.0\nsamples = 1\nvalue = [0, 0,
0, 1, 0, 0, 0, 0, 0, 0]'),
 Text(0.6577540106951871, 0.22727272727272727, 'gini = 0.0\nsamples = 1\nvalue = [0, 0,
0, 0, 0, 0, 0, 1, 0, 0]'),
 Text(0.6631016042780749, 0.3181818181818182, 'gini = 0.0\nsamples = 43\nvalue = [0, 0,
0, 0, 0, 0, 0, 43, 0, 0]'),
 Text(0.8529411764705882, 0.7727272727272727, 'x[23] <= 50.889\ngini = 0.807\nsamples =
318\nvalue = [9, 0, 2, 42, 80, 3, 91, 35, 37, 19]'),
 Text(0.7754010695187166, 0.6818181818181818, 'x[26] <= 152.873\ngini = 0.801\nsamples
= 207\nvalue = [1, 0, 2, 40, 65, 2, 13, 35, 32, 17]'),
 Text(0.7292780748663101, 0.5909090909090909, 'x[15] <= 0.013\ngini = 0.788\nsamples =
76\nvalue = [1, 0, 1, 27, 7, 2, 12, 8, 3, 15]'),
 Text(0.7045454545454546, 0.5, 'x[26] <= 106.497\ngini = 0.742\nsamples = 66\nvalue =
[0, 0, 1, 27, 6, 2, 11, 1, 3, 15]'),
 Text(0.6871657754010695, 0.4090909090909091, 'x[47] <= 5.171\ngini = 0.73\nsamples = 2
7\nvalue = [0, 0, 1, 3, 0, 2, 9, 1, 1, 10]'),
 Text(0.6818181818181818, 0.3181818181818182, 'x[54] <= 36.619\ngini = 0.7\nsamples = 2
0\nvalue = [0, 0, 1, 3, 0, 2, 2, 1, 1, 10]'),
 Text(0.6684491978609626, 0.22727272727272727, 'x[20] <= 262.427\ngini = 0.459\nsamples
= 14\nvalue = [0, 0, 1, 0, 0, 0, 2, 0, 1, 10]'),
 Text(0.6577540106951871, 0.13636363636363635, 'x[25] <= -5.679\ngini = 0.625\nsamples
= 4\nvalue = [0, 0, 1, 0, 0, 0, 2, 0, 0, 1]'),
 Text(0.6524064171122995, 0.045454545454545456, 'gini = 0.444\nsamples = 3\nvalue = [0,
0, 0, 0, 0, 0, 2, 0, 0, 1]'),
 Text(0.6631016042780749, 0.045454545454545456, 'gini = 0.0\nsamples = 1\nvalue = [0,
0, 1, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.679144385026738, 0.13636363636363635, 'x[42] <= 44.579\ngini = 0.18\nsamples =
10\nvalue = [0, 0, 0, 0, 0, 0, 0, 0, 1, 9]'),
 Text(0.6737967914438503, 0.045454545454545456, 'gini = 0.0\nsamples = 9\nvalue = [0,
0, 0, 0, 0, 0, 0, 0, 0, 9]'),
 Text(0.6844919786096256, 0.045454545454545456, 'gini = 0.0\nsamples = 1\nvalue = [0,
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0, 0, 0, 0, 0, 0, 0, 1, 0]'),
 Text(0.6951871657754011, 0.22727272727272727, 'x[18] <= 1925.75\ngini = 0.611\nsamples
= 6\nvalue = [0, 0, 0, 3, 0, 2, 0, 1, 0, 0]'),
 Text(0.6898395721925134, 0.13636363636363635, 'gini = 0.0\nsamples = 3\nvalue = [0, 0,
0, 3, 0, 0, 0, 0, 0, 0]'),
 Text(0.7005347593582888, 0.13636363636363635, 'x[7] <= 94514.484\ngini = 0.444\nsample
s = 3\nvalue = [0, 0, 0, 0, 0, 2, 0, 1, 0, 0]'),
 Text(0.6951871657754011, 0.045454545454545456, 'gini = 0.0\nsamples = 1\nvalue = [0,
0, 0, 0, 0, 0, 0, 1, 0, 0]'),
 Text(0.7058823529411765, 0.045454545454545456, 'gini = 0.0\nsamples = 2\nvalue = [0,
0, 0, 0, 0, 2, 0, 0, 0, 0]'),
 Text(0.6925133689839572, 0.3181818181818182, 'gini = 0.0\nsamples = 7\nvalue = [0, 0,
0, 0, 0, 0, 7, 0, 0, 0]'),
 Text(0.7219251336898396, 0.4090909090909091, 'x[55] <= -2.95\ngini = 0.576\nsamples =
39\nvalue = [0, 0, 0, 24, 6, 0, 2, 0, 2, 5]'),
 Text(0.7165775401069518, 0.3181818181818182, 'gini = 0.0\nsamples = 4\nvalue = [0, 0,
0, 0, 0, 0, 0, 0, 0, 4]'),
 Text(0.7272727272727273, 0.3181818181818182, 'x[14] <= -0.0\ngini = 0.493\nsamples = 3
5\nvalue = [0, 0, 0, 24, 6, 0, 2, 0, 2, 1]'),
 Text(0.7165775401069518, 0.22727272727272727, 'x[7] <= 70031.039\ngini = 0.615\nsample
s = 13\nvalue = [0, 0, 0, 5, 6, 0, 0, 0, 2, 0]'),
 Text(0.7112299465240641, 0.13636363636363635, 'gini = 0.0\nsamples = 4\nvalue = [0, 0,
0, 0, 4, 0, 0, 0, 0, 0]'),
 Text(0.7219251336898396, 0.13636363636363635, 'x[6] <= 2846.639\ngini = 0.593\nsamples
= 9\nvalue = [0, 0, 0, 5, 2, 0, 0, 0, 2, 0]'),
 Text(0.7165775401069518, 0.045454545454545456, 'gini = 0.408\nsamples = 7\nvalue = [0,
0, 0, 5, 0, 0, 0, 0, 2, 0]'),
 Text(0.7272727272727273, 0.045454545454545456, 'gini = 0.0\nsamples = 2\nvalue = [0,
0, 0, 0, 2, 0, 0, 0, 0, 0]'),
 Text(0.7379679144385026, 0.22727272727272727, 'x[3] <= 0.001\ngini = 0.244\nsamples =
22\nvalue = [0, 0, 0, 19, 0, 0, 2, 0, 0, 1]'),
 Text(0.732620320855615, 0.13636363636363635, 'gini = 0.0\nsamples = 2\nvalue = [0, 0,
0, 0, 0, 0, 2, 0, 0, 0]'),
 Text(0.7433155080213903, 0.13636363636363635, 'x[11] <= 0.001\ngini = 0.095\nsamples =
20\nvalue = [0, 0, 0, 19, 0, 0, 0, 0, 0, 1]'),
 Text(0.7379679144385026, 0.045454545454545456, 'gini = 0.0\nsamples = 1\nvalue = [0,
0, 0, 0, 0, 0, 0, 0, 0, 1]'),
 Text(0.7486631016042781, 0.045454545454545456, 'gini = 0.0\nsamples = 19\nvalue = [0,
0, 0, 19, 0, 0, 0, 0, 0, 0]'),
 Text(0.7540106951871658, 0.5, 'x[45] <= -4.254\ngini = 0.48\nsamples = 10\nvalue = [1,
0, 0, 0, 1, 0, 1, 7, 0, 0]'),
 Text(0.7486631016042781, 0.4090909090909091, 'x[2] <= 0.211\ngini = 0.667\nsamples = 3
\nvalue = [1, 0, 0, 0, 1, 0, 1, 0, 0, 0]'),
 Text(0.7433155080213903, 0.3181818181818182, 'gini = 0.0\nsamples = 1\nvalue = [0, 0,
0, 0, 1, 0, 0, 0, 0, 0]'),
 Text(0.7540106951871658, 0.3181818181818182, 'x[7] <= 73451.67\ngini = 0.5\nsamples =
2\nvalue = [1, 0, 0, 0, 0, 0, 1, 0, 0, 0]'),
 Text(0.7486631016042781, 0.22727272727272727, 'gini = 0.0\nsamples = 1\nvalue = [1, 0,
0, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.7593582887700535, 0.22727272727272727, 'gini = 0.0\nsamples = 1\nvalue = [0, 0,
0, 0, 0, 0, 1, 0, 0, 0]'),
 Text(0.7593582887700535, 0.4090909090909091, 'gini = 0.0\nsamples = 7\nvalue = [0, 0,
0, 0, 0, 0, 0, 7, 0, 0]'),
 Text(0.821524064171123, 0.5909090909090909, 'x[6] <= 2956.36\ngini = 0.702\nsamples =
131\nvalue = [0, 0, 1, 13, 58, 0, 1, 27, 29, 2]'),
 Text(0.7927807486631016, 0.5, 'x[17] <= -220.732\ngini = 0.631\nsamples = 98\nvalue =
[0, 0, 0, 11, 52, 0, 1, 6, 26, 2]'),
 Text(0.7874331550802139, 0.4090909090909091, 'gini = 0.0\nsamples = 11\nvalue = [0, 0,
0, 0, 0, 0, 0, 0, 11, 0]'),
 Text(0.7981283422459893, 0.4090909090909091, 'x[49] <= 2.024\ngini = 0.592\nsamples =
87\nvalue = [0, 0, 0, 11, 52, 0, 1, 6, 15, 2]'),
 Text(0.7834224598930482, 0.3181818181818182, 'x[16] <= 105.513\ngini = 0.52\nsamples =
78\nvalue = [0, 0, 0, 11, 52, 0, 1, 3, 9, 2]'),
 Text(0.7700534759358288, 0.22727272727272727, 'x[5] <= 1811374.125\ngini = 0.156\nsamp
les = 36\nvalue = [0, 0, 0, 0, 33, 0, 0, 1, 2, 0]'),
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 Text(0.7647058823529411, 0.13636363636363635, 'x[46] <= 31.48\ngini = 0.057\nsamples =
34\nvalue = [0, 0, 0, 0, 33, 0, 0, 1, 0, 0]'),
 Text(0.7593582887700535, 0.045454545454545456, 'gini = 0.0\nsamples = 1\nvalue = [0,
0, 0, 0, 0, 0, 0, 1, 0, 0]'),
 Text(0.7700534759358288, 0.045454545454545456, 'gini = 0.0\nsamples = 33\nvalue = [0,
0, 0, 0, 33, 0, 0, 0, 0, 0]'),
 Text(0.7754010695187166, 0.13636363636363635, 'gini = 0.0\nsamples = 2\nvalue = [0, 0,
0, 0, 0, 0, 0, 0, 2, 0]'),
 Text(0.7967914438502673, 0.22727272727272727, 'x[18] <= 3737.54\ngini = 0.694\nsamples
= 42\nvalue = [0, 0, 0, 11, 19, 0, 1, 2, 7, 2]'),
 Text(0.786096256684492, 0.13636363636363635, 'x[47] <= 1.68\ngini = 0.485\nsamples = 2
0\nvalue = [0, 0, 0, 2, 14, 0, 1, 2, 0, 1]'),
 Text(0.7807486631016043, 0.045454545454545456, 'gini = 0.776\nsamples = 7\nvalue = [0,
0, 0, 2, 1, 0, 1, 2, 0, 1]'),
 Text(0.7914438502673797, 0.045454545454545456, 'gini = 0.0\nsamples = 13\nvalue = [0,
0, 0, 0, 13, 0, 0, 0, 0, 0]'),
 Text(0.8074866310160428, 0.13636363636363635, 'x[12] <= -0.0\ngini = 0.678\nsamples =
22\nvalue = [0, 0, 0, 9, 5, 0, 0, 0, 7, 1]'),
 Text(0.8021390374331551, 0.045454545454545456, 'gini = 0.473\nsamples = 13\nvalue =
[0, 0, 0, 9, 2, 0, 0, 0, 2, 0]'),
 Text(0.8128342245989305, 0.045454545454545456, 'gini = 0.568\nsamples = 9\nvalue = [0,
0, 0, 0, 3, 0, 0, 0, 5, 1]'),
 Text(0.8128342245989305, 0.3181818181818182, 'x[31] <= 6.956\ngini = 0.444\nsamples =
9\nvalue = [0, 0, 0, 0, 0, 0, 0, 3, 6, 0]'),
 Text(0.8074866310160428, 0.22727272727272727, 'gini = 0.0\nsamples = 3\nvalue = [0, 0,
0, 0, 0, 0, 0, 3, 0, 0]'),
 Text(0.8181818181818182, 0.22727272727272727, 'gini = 0.0\nsamples = 6\nvalue = [0, 0,
0, 0, 0, 0, 0, 0, 6, 0]'),
 Text(0.8502673796791443, 0.5, 'x[54] <= 60.02\ngini = 0.549\nsamples = 33\nvalue = [0,
0, 1, 2, 6, 0, 0, 21, 3, 0]'),
 Text(0.839572192513369, 0.4090909090909091, 'x[55] <= -4.029\ngini = 0.58\nsamples = 1
0\nvalue = [0, 0, 1, 2, 6, 0, 0, 0, 1, 0]'),
 Text(0.8342245989304813, 0.3181818181818182, 'x[4] <= 3464.062\ngini = 0.625\nsamples
= 4\nvalue = [0, 0, 1, 2, 0, 0, 0, 0, 1, 0]'),
 Text(0.8288770053475936, 0.22727272727272727, 'gini = 0.0\nsamples = 2\nvalue = [0, 0,
0, 2, 0, 0, 0, 0, 0, 0]'),
 Text(0.839572192513369, 0.22727272727272727, 'x[26] <= 211.55\ngini = 0.5\nsamples = 2
\nvalue = [0, 0, 1, 0, 0, 0, 0, 0, 1, 0]'),
 Text(0.8342245989304813, 0.13636363636363635, 'gini = 0.0\nsamples = 1\nvalue = [0, 0,
1, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.8449197860962567, 0.13636363636363635, 'gini = 0.0\nsamples = 1\nvalue = [0, 0,
0, 0, 0, 0, 0, 0, 1, 0]'),
 Text(0.8449197860962567, 0.3181818181818182, 'gini = 0.0\nsamples = 6\nvalue = [0, 0,
0, 0, 6, 0, 0, 0, 0, 0]'),
 Text(0.8609625668449198, 0.4090909090909091, 'x[49] <= -2.609\ngini = 0.159\nsamples =
23\nvalue = [0, 0, 0, 0, 0, 0, 0, 21, 2, 0]'),
 Text(0.8556149732620321, 0.3181818181818182, 'gini = 0.0\nsamples = 2\nvalue = [0, 0,
0, 0, 0, 0, 0, 0, 2, 0]'),
 Text(0.8663101604278075, 0.3181818181818182, 'gini = 0.0\nsamples = 21\nvalue = [0, 0,
0, 0, 0, 0, 0, 21, 0, 0]'),
 Text(0.93048128342246, 0.6818181818181818, 'x[38] <= 59.314\ngini = 0.48\nsamples = 11
1\nvalue = [8, 0, 0, 2, 15, 1, 78, 0, 5, 2]'),
 Text(0.9064171122994652, 0.5909090909090909, 'x[54] <= 67.279\ngini = 0.204\nsamples =
82\nvalue = [4, 0, 0, 0, 2, 1, 73, 0, 1, 1]'),
 Text(0.893048128342246, 0.5, 'x[35] <= 11.224\ngini = 0.145\nsamples = 79\nvalue = [2,
0, 0, 0, 2, 0, 73, 0, 1, 1]'),
 Text(0.8823529411764706, 0.4090909090909091, 'x[53] <= 0.361\ngini = 0.778\nsamples =
6\nvalue = [1, 0, 0, 0, 1, 0, 2, 0, 1, 1]'),
 Text(0.8770053475935828, 0.3181818181818182, 'x[30] <= 49.516\ngini = 0.75\nsamples =
4\nvalue = [1, 0, 0, 0, 1, 0, 0, 0, 1, 1]'),
 Text(0.8716577540106952, 0.22727272727272727, 'gini = 0.0\nsamples = 1\nvalue = [1, 0,
0, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.8823529411764706, 0.22727272727272727, 'x[43] <= 0.104\ngini = 0.667\nsamples =
3\nvalue = [0, 0, 0, 0, 1, 0, 0, 0, 1, 1]'),
 Text(0.8770053475935828, 0.13636363636363635, 'gini = 0.0\nsamples = 1\nvalue = [0, 0,
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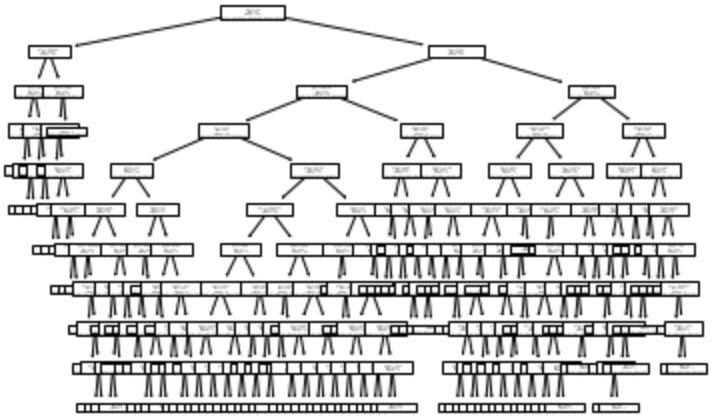
Text(0.8877005347593583, 0.13636363636363635, 'gini = 0.0\nsamples = 1\nvalue = [0, 0, 0, 0, 0, 0, 1, 0]'),
 Text(0.8877005347593583, 0.13636363636363635, 'x[45] <= -9.379\ngini = 0.5\nsamples = 2\nvalue = [0, 0, 0, 0, 1, 0, 0, 0, 0, 1]'),
 Text(0.8823529411764706, 0.045454545454545456, 'gini = 0.0\nsamples = 1\nvalue = [0, 0, 0, 0, 0, 0, 0, 0, 0, 1]'),
 Text(0.893048128342246, 0.045454545454545456, 'gini = 0.0\nsamples = 1\nvalue = [0, 0, 0, 0, 1, 0, 0, 0, 0, 0]'),
 Text(0.8877005347593583, 0.3181818181818182, 'gini = 0.0\nsamples = 2\nvalue = [0, 0, 0, 0, 0, 0, 2, 0, 0, 0]'),
 Text(0.9037433155080213, 0.4090909090909091, 'x[37] <= -6.78\ngini = 0.054\nsamples = 73\nvalue = [1, 0, 0, 0, 1, 0, 71, 0, 0, 0]'),
 Text(0.8983957219251337, 0.3181818181818182, 'gini = 0.0\nsamples = 68\nvalue = [0, 0, 0, 0, 0, 0, 68, 0, 0, 0]'),
 Text(0.9090909090909091, 0.3181818181818182, 'x[33] <= -10.652\ngini = 0.56\nsamples = 5\nvalue = [1, 0, 0, 0, 1, 0, 3, 0, 0, 0]'),
 Text(0.9037433155080213, 0.22727272727272727, 'x[0] <= 0.497\ngini = 0.5\nsamples = 2\nvalue = [1, 0, 0, 0, 1, 0, 0, 0, 0, 0]'),
 Text(0.8983957219251337, 0.13636363636363635, 'gini = 0.0\nsamples = 1\nvalue = [1, 0, 0, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.9090909090909091, 0.13636363636363635, 'gini = 0.0\nsamples = 1\nvalue = [0, 0, 0, 0, 1, 0, 0, 0, 0, 0]'),
 Text(0.9144385026737968, 0.22727272727272727, 'gini = 0.0\nsamples = 3\nvalue = [0, 0, 0, 0, 0, 0, 3, 0, 0, 0]'),
 Text(0.9197860962566845, 0.5, 'x[0] <= 0.433\ngini = 0.444\nsamples = 3\nvalue = [2, 0, 0, 0, 0, 1, 0, 0, 0, 0]'),
 Text(0.9144385026737968, 0.4090909090909091, 'gini = 0.0\nsamples = 1\nvalue = [0, 0, 0, 0, 0, 1, 0, 0, 0, 0]'),
 Text(0.9251336898395722, 0.4090909090909091, 'gini = 0.0\nsamples = 2\nvalue = [2, 0, 0, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.9545454545454546, 0.5909090909090909, 'x[3] <= 0.002\ngini = 0.725\nsamples = 29\nvalue = [4, 0, 0, 2, 13, 0, 5, 0, 4, 1]'),
 Text(0.9411764705882353, 0.5, 'x[10] <= 0.132\ngini = 0.64\nsamples = 10\nvalue = [1, 0, 0, 1, 0, 0, 5, 0, 3, 0]'),
 Text(0.9358288770053476, 0.4090909090909091, 'x[21] <= -15.601\ngini = 0.56\nsamples = 5\nvalue = [1, 0, 0, 1, 0, 0, 0, 0, 3, 0]'),
 Text(0.93048128342246, 0.3181818181818182, 'x[28] <= 74.138\ngini = 0.5\nsamples = 2\nvalue = [1, 0, 0, 1, 0, 0, 0, 0, 0, 0]'),
 Text(0.9251336898395722, 0.22727272727272727, 'gini = 0.0\nsamples = 1\nvalue = [1, 0, 0, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.9358288770053476, 0.22727272727272727, 'gini = 0.0\nsamples = 1\nvalue = [0, 0, 0, 1, 0, 0, 0, 0, 0, 0]'),
 Text(0.9411764705882353, 0.3181818181818182, 'gini = 0.0\nsamples = 3\nvalue = [0, 0, 0, 0, 0, 0, 0, 0, 3, 0]'),
 Text(0.946524064171123, 0.4090909090909091, 'gini = 0.0\nsamples = 5\nvalue = [0, 0, 0, 0, 0, 0, 5, 0, 0, 0]'),
 Text(0.9679144385026738, 0.5, 'x[19] <= 82.001\ngini = 0.499\nsamples = 19\nvalue = [3, 0, 0, 1, 13, 0, 0, 0, 1, 1]'),
 Text(0.9572192513368984, 0.4090909090909091, 'x[25] <= 13.032\ngini = 0.142\nsamples = 13\nvalue = [0, 0, 0, 0, 12, 0, 0, 0, 1, 0]'),
 Text(0.9518716577540107, 0.3181818181818182, 'gini = 0.0\nsamples = 12\nvalue = [0, 0, 0, 0, 12, 0, 0, 0, 0, 0]'),
 Text(0.9625668449197861, 0.3181818181818182, 'gini = 0.0\nsamples = 1\nvalue = [0, 0, 0, 0, 0, 0, 0, 0, 1, 0]'),
 Text(0.9786096256684492, 0.4090909090909091, 'x[33] <= -6.86\ngini = 0.667\nsamples = 6\nvalue = [3, 0, 0, 1, 1, 0, 0, 0, 0, 1]'),
 Text(0.9732620320855615, 0.3181818181818182, 'gini = 0.0\nsamples = 3\nvalue = [3, 0, 0, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.983957219251337, 0.3181818181818182, 'x[7] <= 152780.387\ngini = 0.667\nsamples = 3\nvalue = [0, 0, 0, 1, 1, 0, 0, 0, 0, 1]'),
 Text(0.9786096256684492, 0.22727272727272727, 'gini = 0.0\nsamples = 1\nvalue = [0, 0, 0, 0, 1, 0, 0, 0, 0, 0]'),
 Text(0.9893048128342246, 0.22727272727272727, 'x[53] <= -1.339\ngini = 0.5\nsamples = 2\nvalue = [0, 0, 0, 1, 0, 0, 0, 0, 0, 1]'),
 Text(0.983957219251337, 0.13636363636363635, 'gini = 0.0\nsamples = 1\nvalue = [0, 0,
```

Text(0.9946524064171123, 0.13636363636363635, 'gini = 0.0\nsamples = 1\nvalue = [0, 0, 0, 0, 0, 0, 0, 0, 0, 1]')]



In [9]:
```
model=tree.DecisionTreeClassifier(random_state=100,max_depth=15)
model.fit(data,labels)
tree.plot_tree(model)
```

Out[9]:
```
[Text(0.3643347966205738, 0.96875, 'x[15] <= 0.0\ngini = 0.9\nsamples = 1000\nvalue = [100, 100, 100, 100, 100, 100, 100, 100, 100, 100]'),
 Text(0.03308348410441975, 0.90625, 'x[9] <= 1649228.0\ngini = 0.423\nsamples = 109\nvalue = [0, 80, 3, 1, 0, 21, 0, 1, 1, 2]'),
 Text(0.016541742052209873, 0.84375, 'x[1] <= 0.09\ngini = 0.19\nsamples = 86\nvalue = [0, 77, 0, 1, 0, 8, 0, 0, 0, 0]'),
 Text(0.008270871026104937, 0.78125, 'x[14] <= 0.0\ngini = 0.077\nsamples = 75\nvalue = [0, 72, 0, 0, 0, 3, 0, 0, 0, 0]'),
 Text(0.004135435513052468, 0.71875, 'gini = 0.0\nsamples = 67\nvalue = [0, 67, 0, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.012406306539157405, 0.71875, 'x[13] <= 0.002\ngini = 0.469\nsamples = 8\nvalue = [0, 5, 0, 0, 0, 3, 0, 0, 0, 0]'),
 Text(0.008270871026104937, 0.65625, 'gini = 0.0\nsamples = 5\nvalue = [0, 5, 0, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.016541742052209873, 0.65625, 'gini = 0.0\nsamples = 3\nvalue = [0, 0, 0, 0, 0, 3, 0, 0, 0, 0]'),
 Text(0.02481261307831481, 0.78125, 'x[32] <= 67.397\ngini = 0.579\nsamples = 11\nvalue = [0, 5, 0, 1, 0, 5, 0, 0, 0, 0]'),
 Text(0.020677177565262342, 0.71875, 'gini = 0.0\nsamples = 5\nvalue = [0, 0, 0, 0, 0, 5, 0, 0, 0, 0]'),
 Text(0.02894804859136728, 0.71875, 'x[13] <= 0.002\ngini = 0.278\nsamples = 6\nvalue = [0, 5, 0, 1, 0, 0, 0, 0, 0, 0]'),
 Text(0.02481261307831481, 0.65625, 'gini = 0.0\nsamples = 5\nvalue = [0, 5, 0, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.03308348410441975, 0.65625, 'gini = 0.0\nsamples = 1\nvalue = [0, 0, 0, 1, 0, 0, 0, 0, 0, 0]'),
 Text(0.04962522615662962, 0.84375, 'x[45] <= -0.802\ngini = 0.635\nsamples = 23\nvalue = [0, 3, 3, 0, 0, 13, 0, 1, 1, 2]'),
 Text(0.04548979064357715, 0.78125, 'x[17] <= -366.733\ngini = 0.806\nsamples = 12\nvalue = [0, 3, 3, 0, 0, 2, 0, 1, 1, 2]'),
 Text(0.041354355130524684, 0.71875, 'gini = 0.0\nsamples = 3\nvalue = [0, 3, 0, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.04962522615662962, 0.71875, 'x[55] <= -2.304\ngini = 0.765\nsamples = 9\nvalue = [0, 0, 3, 0, 0, 2, 0, 1, 1, 2]'),
 Text(0.041354355130524684, 0.65625, 'x[46] <= 62.149\ngini = 0.375\nsamples = 4\nvalue = [0, 0, 3, 0, 0, 0, 0, 0, 1, 0]'),
 Text(0.037218919617472215, 0.59375, 'gini = 0.0\nsamples = 1\nvalue = [0, 0, 0, 0, 0, 0, 0, 0, 1, 0]'),
 Text(0.04548979064357715, 0.59375, 'gini = 0.0\nsamples = 3\nvalue = [0, 0, 3, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.05789609718273456, 0.65625, 'x[8] <= 2828.868\ngini = 0.64\nsamples = 5\nvalue = [0, 0, 0, 0, 0, 2, 0, 1, 0, 2]'),
```

```
 Text(0.05376066166968209, 0.59375, 'gini = 0.0\nsamples = 2\nvalue = [0, 0, 0, 0, 0,
2, 0, 0, 0, 0]'),
 Text(0.062031532695787026, 0.59375, 'x[54] <= 107.647\ngini = 0.444\nsamples = 3\nvalu
e = [0, 0, 0, 0, 0, 0, 0, 1, 0, 2]'),
 Text(0.05789609718273456, 0.53125, 'gini = 0.0\nsamples = 2\nvalue = [0, 0, 0, 0, 0,
0, 0, 0, 0, 2]'),
 Text(0.0661669682088395, 0.53125, 'gini = 0.0\nsamples = 1\nvalue = [0, 0, 0, 0, 0, 0,
0, 1, 0, 0]'),
 Text(0.05376066166968209, 0.78125, 'gini = 0.0\nsamples = 11\nvalue = [0, 0, 0, 0, 0,
11, 0, 0, 0, 0]'),
 Text(0.6955861091367278, 0.90625, 'x[0] <= 0.422\ngini = 0.893\nsamples = 891\nvalue =
[100, 20, 97, 99, 100, 79, 100, 99, 99, 98]'),
 Text(0.5011812645386404, 0.84375, 'x[6] <= 2848.267\ngini = 0.874\nsamples = 573\nvalu
e = [91, 20, 95, 57, 20, 76, 9, 64, 62, 79]'),
 Text(0.31872334582579476, 0.78125, 'x[0] <= 0.321\ngini = 0.861\nsamples = 488\nvalue
= [91, 20, 91, 45, 16, 70, 9, 16, 57, 73]'),
 Text(0.1320754716981132, 0.71875, 'x[12] <= -0.0\ngini = 0.765\nsamples = 151\nvalue =
[42, 17, 29, 0, 0, 49, 0, 5, 3, 6]'),
 Text(0.097182734556733, 0.65625, 'x[10] <= 0.086\ngini = 0.587\nsamples = 52\nvalue =
[2, 11, 2, 0, 0, 31, 0, 0, 1, 5]'),
 Text(0.0785732747479969, 0.59375, 'x[5] <= 382529.531\ngini = 0.23\nsamples = 32\nvalu
e = [1, 1, 1, 0, 0, 28, 0, 0, 0, 1]'),
 Text(0.07443783923494443, 0.53125, 'gini = 0.0\nsamples = 27\nvalue = [0, 0, 0, 0, 0,
27, 0, 0, 0, 0]'),
 Text(0.08270871026104937, 0.53125, 'x[41] <= -7.675\ngini = 0.8\nsamples = 5\nvalue =
[1, 1, 1, 0, 0, 1, 0, 0, 0, 1]'),
 Text(0.0785732747479969, 0.46875, 'gini = 0.0\nsamples = 1\nvalue = [0, 0, 0, 0, 0, 1,
0, 0, 0, 0]'),
 Text(0.08684414577410184, 0.46875, 'x[1] <= 0.087\ngini = 0.75\nsamples = 4\nvalue =
[1, 1, 1, 0, 0, 0, 0, 0, 0, 1]'),
 Text(0.08270871026104937, 0.40625, 'gini = 0.0\nsamples = 1\nvalue = [0, 0, 0, 0, 0,
0, 0, 0, 0, 1]'),
 Text(0.0909795812871543, 0.40625, 'x[9] <= 2221025.25\ngini = 0.667\nsamples = 3\nvalu
e = [1, 1, 1, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.08684414577410184, 0.34375, 'gini = 0.0\nsamples = 1\nvalue = [0, 0, 1, 0, 0,
0, 0, 0, 0, 0]'),
 Text(0.09511501680020677, 0.34375, 'x[16] <= 106.075\ngini = 0.5\nsamples = 2\nvalue =
[1, 1, 0, 0, 0, 0, 0, 0, 0, 0]'),
 Text(0.0909795812871543, 0.28125, 'gini = 0.0\nsamples = 1\nvalue = [0, 1, 0, 0, 0, 0,
0, 0, 0, 0]'),
 Text(0.09925045231325924, 0.28125, 'gini = 0.0\nsamples = 1\nvalue = [1, 0, 0, 0, 0,
0, 0, 0, 0, 0]'),
 Text(0.11579219436546911, 0.59375, 'x[8] <= 4657.687\ngini = 0.68\nsamples = 20\nvalue
= [1, 10, 1, 0, 0, 3, 0, 0, 1, 4]'),
 Text(0.10752132333936418, 0.53125, 'x[53] <= -1.367\ngini = 0.507\nsamples = 15\nvalue
= [0, 10, 1, 0, 0, 3, 0, 0, 1, 0]'),
 Text(0.10338588782631171, 0.46875, 'gini = 0.0\nsamples = 10\nvalue = [0, 10, 0, 0, 0,
0, 0, 0, 0, 0]'),
 Text(0.11165675885241665, 0.46875, 'x[46] <= 62.062\ngini = 0.56\nsamples = 5\nvalue =
[0, 0, 1, 0, 0, 3, 0, 0, 1, 0]'),
 Text(0.10752132333936418, 0.40625, 'x[45] <= -0.53\ngini = 0.5\nsamples = 2\nvalue =
[0, 0, 1, 0, 0, 0, 0, 0, 1, 0]'),
 Text(0.10338588782631171, 0.34375, 'gini = 0.0\nsamples = 1\nvalue = [0, 0, 0, 0, 0,
0, 0, 0, 1, 0]'),
 Text(0.11165675885241665, 0.34375, 'gini = 0.0\nsamples = 1\nvalue = [0, 0, 1, 0, 0,
0, 0, 0, 0, 0]'),
 Text(0.11579219436546911, 0.40625, 'gini = 0.0\nsamples = 3\nvalue = [0, 0, 0, 0, 0,
3, 0, 0, 0, 0]'),
 Text(0.12406306539157405, 0.53125, 'x[37] <= -16.543\ngini = 0.32\nsamples = 5\nvalue
= [1, 0, 0, 0, 0, 0, 0, 0, 0, 4]'),
 Text(0.11992762987852158, 0.46875, 'gini = 0.0\nsamples = 1\nvalue = [1, 0, 0, 0, 0,
0, 0, 0, 0, 0]'),
 Text(0.1281985009046265, 0.46875, 'gini = 0.0\nsamples = 4\nvalue = [0, 0, 0, 0, 0, 0,
0, 0, 0, 4]'),
 Text(0.1669682088394934, 0.65625, 'x[12] <= -0.0\ngini = 0.723\nsamples = 99\nvalue =
```