```
import pandas as pd
from sklearn.model_selection import train_test_split
from matplotlib import pyplot as plt
import seaborn as sns
import tensorflow as tf
from sklearn import tree
from sklearn.metrics import accuracy_score
from sklearn.metrics import confusion_matrix, ConfusionMatrixDisplay
from sklearn.neighbors import KNeighborsClassifier
from sklearn.naive_bayes import GaussianNB
from keras.models import Sequential
from keras.layers import Dense
from sklearn.decomposition import PCA
from sklearn.preprocessing import MinMaxScaler
```

Rain in australia

This dataset contains about 10 years of daily weather observations from many locations across Australia. We are going to use this dataset to predict whether or not it will rain tomorrow by training classification models. link: dataset

```
data = pd.read_csv('weatherAUS.csv', sep=',')
```

Kolumny

- Date
- Location
- MinTemp
- MaxTemp
- Rainfall
- Evaporation
- Sunshine
- WindGustDir
- WindGustSpeed
- WindDir9am
- WindDir3pm
- WindSpeed9am
- WindSpeed3pm
- Humidity9am
- Humidity3pm
- Pressure9am
- Pressure3pm
- Cloud9am
- Cloud3pm
- Temp9am
- Temp3pm

- RainToday
- RainTomorrow

Delete rows with duplicated values

```
data = data.dropna(how='any')
if data.duplicated().any():
    data.drop_duplicates(inplace=True)

print(data.shape)
print(data.isnull().sum())
```

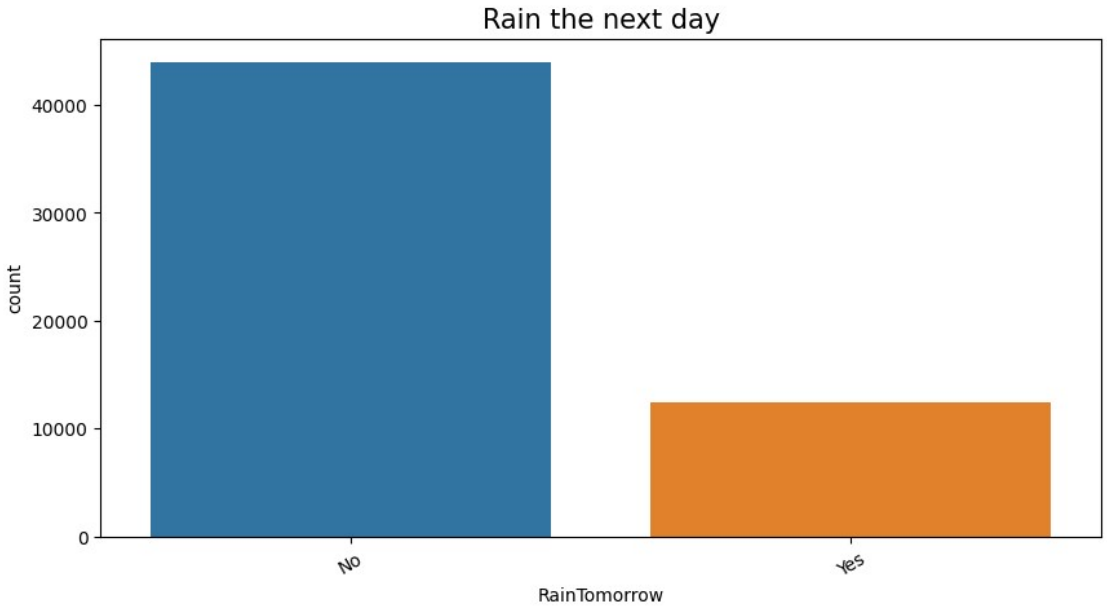
```
(56420, 23)
Date             0
Location         0
MinTemp          0
MaxTemp          0
Rainfall         0
Evaporation      0
Sunshine         0
WindGustDir      0
WindGustSpeed    0
WindDir9am       0
WindDir3pm       0
WindSpeed9am     0
WindSpeed3pm     0
Humidity9am      0
Humidity3pm      0
Pressure9am      0
Pressure3pm      0
Cloud9am         0
Cloud3pm         0
Temp9am          0
Temp3pm          0
RainToday        0
RainTomorrow     0
dtype: int64
```

delete rows with missing values

```
data = data.dropna()
print(data.shape)
```

```
(56420, 23)
```

```
plt.figure(figsize=(10,5))
plt.title('Rain the next day',fontsize=15)
sns.countplot(x=data['RainTomorrow'],data=data)
plt.xticks(rotation=30)
plt.show()
```



The graphs show us the amount of false and true news, the scale is insignificant (almost 1:3), so the database is reliable

```
res_data = data.drop(["WindGustDir", "Location",
"WindDir9am","WindDir3pm",'Sunshine','Evaporation','Cloud9am',
'Cloud3pm'], axis=1)

for i,row in res_data.iterrows():
    if row['RainToday']=='No':
        #dataframe.at[index,'column-name']='new value'
        res_data.at[i,'RainToday'] = 0
    elif row['RainToday']=='Yes':
        #at index i and column name
        res_data.at[i,'RainToday'] = 1
    #now seperately check other column still need elif cuz there are
null variables
    if row['RainTomorrow']=='No':
        res_data.at[i, 'RainTomorrow'] = 0
    elif row['RainTomorrow']=='Yes':
        res_data.at[i, 'RainTomorrow'] = 1

X = res_data.drop(['RainTomorrow', 'Date'], axis=1)
y = res_data['RainTomorrow'].astype('int')
X_train, X_test, y_train, y_test = train_test_split(X,y,test_size=0.2)

X_train, X_test, y_train, y_test = train_test_split(X, y,
train_size=0.7, random_state=278840)

clf = tree.DecisionTreeClassifier()
clf = clf.fit(X_train, y_train)
```

```
tree.plot_tree(clf)
```

```
[Text(0.6857664353819182, 0.984375, 'x[7] <= 69.5\ngini = 0.343\
nsamples = 39494\nvalue = [30795, 8699]'),
 Text(0.4523893018828638, 0.953125, 'x[7] <= 53.5\ngini = 0.242\
nsamples = 33251\nvalue = [28561, 4690]'),
 Text(0.24165156723104586, 0.921875, 'x[3] <= 56.5\ngini = 0.158\
nsamples = 22156\nvalue = [20242, 1914]'),
 Text(0.13741389642263657, 0.890625, 'x[7] <= 42.5\ngini = 0.121\
nsamples = 19596\nvalue = [18325, 1271]'),
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nsamples = 576\nvalue = [548, 28]'),
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nsamples = 22\nvalue = [21, 1]'),
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= [20, 0]'),
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= [0, 1]'),
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= [1, 0]'),
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nsamples = 313\nvalue = [309, 4]'),
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nsamples = 12\nvalue = [11, 1]'),
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= [0, 1]'),
 Text(0.001975843935771351, 0.578125, 'gini = 0.0\nsamples = 11\nvalue
```

= [11, 0]'),
 Text(0.003073535011199879, 0.609375, 'x[10] <= 32.15\ngini = 0.02\
nsamples = 301\nvalue = [298, 3]'),
 Text(0.0024149203659427623, 0.578125, 'x[7] <= 22.5\ngini = 0.008\
nsamples = 252\nvalue = [251, 1]'),
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nvalue = [210, 0]'),
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nsamples = 42\nvalue = [41, 1]'),
 Text(0.0024149203659427623, 0.515625, 'x[9] <= 1006.45\ngini = 0.245\
nsamples = 7\nvalue = [6, 1]'),
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= [41, 0]'),
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= [0, 1]'),
 Text(0.0058177626997712, 0.640625, 'x[8] <= 1010.75\ngini = 0.1\
nsamples = 151\nvalue = [143, 8]'),
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nsamples = 127\nvalue = [124, 3]'),
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nsamples = 21\nvalue = [19, 2]'),
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nsamples = 21\nvalue = [19, 2]'),
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= [1, 0]'),
 Text(0.0070252228827425815, 0.515625, 'x[10] <= 20.45\ngini = 0.1\
nsamples = 19\nvalue = [18, 1]'),
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 Text(0.00658614645257117, 0.453125, 'gini = 0.0\nsamples = 1\nvalue =
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= [0, 1]'),
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 Text(0.005214032608285509, 0.703125, 'gini = 0.0\nsamples = 1\nvalue
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 Text(0.005653109038456921, 0.703125, 'gini = 0.0\nsamples = 1\nvalue

```
= [1, 0]'),
 Text(0.008122913958171109, 0.765625, 'x[10] <= 29.65\ngini = 0.212\
nsamples = 83\nvalue = [73, 10]'),
 Text(0.007464299312913992, 0.734375, 'x[4] <= 37.0\ngini = 0.094\
nsamples = 61\nvalue = [58, 3]'),
 Text(0.007244761097828287, 0.703125, 'x[7] <= 20.5\ngini = 0.064\
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 Text(0.008781528603428226, 0.734375, 'x[5] <= 30.5\ngini = 0.434\
nsamples = 22\nvalue = [15, 7]'),
 Text(0.008561990388342522, 0.703125, 'x[5] <= 19.5\ngini = 0.375\
nsamples = 20\nvalue = [15, 5]'),
 Text(0.008342452173256815, 0.671875, 'x[8] <= 1009.85\ngini = 0.5\
nsamples = 10\nvalue = [5, 5]'),
 Text(0.008122913958171109, 0.640625, 'x[9] <= 1003.2\ngini = 0.469\
nsamples = 8\nvalue = [3, 5]'),
 Text(0.007903375743085405, 0.609375, 'gini = 0.0\nsamples = 2\nvalue
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= [1, 0]'),
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= [2, 0]'),
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 Text(0.009001066818513932, 0.703125, 'gini = 0.0\nsamples = 2\nvalue
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 Text(0.01849094919405463, 0.796875, 'x[8] <= 1011.35\ngini = 0.292\
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 Text(0.013765732142795887, 0.765625, 'x[9] <= 1002.85\ngini = 0.256\
```

```
nsamples = 510\nvalue = [433, 77]'),
 Text(0.01155319856888526, 0.734375, 'x[5] <= 23.0\ngini = 0.428\
nsamples = 87\nvalue = [60, 27]'),
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 Text(0.0116355253995424, 0.640625, 'x[7] <= 37.5\ngini = 0.198\
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 Text(0.0116355253995424, 0.578125, 'gini = 0.0\nsamples = 1\nvalue =
```

[1, 0]'),
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nsamples = 34\nvalue = [29, 5]'),
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nsamples = 20\nvalue = [15, 5]'),
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 Text(0.012513678259885223, 0.640625, 'x[9] <= 999.05\ngini = 0.469\
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 Text(0.012294140044799517, 0.609375, 'gini = 0.0\nsamples = 3\nvalue
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= [0, 5]'),
 Text(0.012733216474970927, 0.671875, 'gini = 0.0\nsamples = 14\nvalue
= [14, 0]'),
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nsamples = 423\nvalue = [373, 50]'),
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nsamples = 188\nvalue = [177, 11]'),
 Text(0.013872070965728027, 0.671875, 'x[0] <= 4.75\ngini = 0.101\
nsamples = 187\nvalue = [177, 10]'),
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 Text(0.012513678259885223, 0.578125, 'x[4] <= 3.0\ngini = 0.057\
nsamples = 170\nvalue = [165, 5]'),
 Text(0.01180017906085668, 0.546875, 'x[10] <= 20.2\ngini = 0.375\
nsamples = 8\nvalue = [6, 2]'),
 Text(0.011580640845770974, 0.515625, 'x[9] <= 1005.75\ngini = 0.444\
nsamples = 3\nvalue = [1, 2]'),
 Text(0.011361102630685268, 0.484375, 'gini = 0.0\nsamples = 1\nvalue
= [1, 0]'),
 Text(0.01180017906085668, 0.484375, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.012019717275942384, 0.515625, 'gini = 0.0\nsamples = 5\nvalue
= [5, 0]'),
 Text(0.013227177458913766, 0.546875, 'x[1] <= 38.6\ngini = 0.036\
nsamples = 162\nvalue = [159, 3]'),
 Text(0.012678331921199501, 0.515625, 'x[8] <= 1004.7\ngini = 0.025\
nsamples = 159\nvalue = [157, 2]'),
 Text(0.01223925549102809, 0.484375, 'x[10] <= 20.85\ngini = 0.375\
nsamples = 4\nvalue = [3, 1]'),
 Text(0.012019717275942384, 0.453125, 'x[0] <= 13.35\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.01180017906085668, 0.421875, 'gini = 0.0\nsamples = 1\nvalue =

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[1, 0]'),
 Text(0.01223925549102809, 0.421875, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.012458793706113797, 0.453125, 'gini = 0.0\nsamples = 2\nvalue
= [2, 0]'),
 Text(0.013117408351370914, 0.484375, 'x[0] <= 11.3\ngini = 0.013\
nsamples = 155\nvalue = [154, 1]'),
 Text(0.012897870136285208, 0.453125, 'x[0] <= 10.95\ngini = 0.124\
nsamples = 15\nvalue = [14, 1]'),
 Text(0.012678331921199501, 0.421875, 'gini = 0.0\nsamples = 13\nvalue
= [13, 0]'),
 Text(0.013117408351370914, 0.421875, 'x[7] <= 36.5\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.012897870136285208, 0.390625, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.013336946566456618, 0.390625, 'gini = 0.0\nsamples = 1\nvalue
= [1, 0]'),
 Text(0.013336946566456618, 0.453125, 'gini = 0.0\nsamples = 140\
nvalue = [140, 0]'),
 Text(0.01377602299662803, 0.515625, 'x[1] <= 38.9\ngini = 0.444\
nsamples = 3\nvalue = [2, 1]'),
 Text(0.013556484781542325, 0.484375, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.013995561211713735, 0.484375, 'gini = 0.0\nsamples = 2\nvalue
= [2, 0]'),
 Text(0.013885792104170883, 0.578125, 'x[8] <= 1008.5\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.013666253889085177, 0.546875, 'gini = 0.0\nsamples = 1\nvalue
= [1, 0]'),
 Text(0.01410533031925659, 0.546875, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.01498348317959941, 0.609375, 'x[7] <= 35.5\ngini = 0.337\
nsamples = 14\nvalue = [11, 3]'),
 Text(0.014763944964513706, 0.578125, 'x[2] <= 0.1\ngini = 0.48\
nsamples = 5\nvalue = [2, 3]'),
 Text(0.014544406749428, 0.546875, 'gini = 0.0\nsamples = 3\nvalue =
[0, 3]'),
 Text(0.01498348317959941, 0.546875, 'gini = 0.0\nsamples = 2\nvalue =
[2, 0]'),
 Text(0.015203021394685117, 0.578125, 'gini = 0.0\nsamples = 9\nvalue
= [9, 0]'),
 Text(0.014311147395899438, 0.671875, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.017864922252599297, 0.703125, 'x[8] <= 1010.05\ngini = 0.277\
nsamples = 235\nvalue = [196, 39]'),
 Text(0.016245827916342218, 0.671875, 'x[6] <= 29.5\ngini = 0.227\
nsamples = 184\nvalue = [160, 24]'),
 Text(0.015696982378627954, 0.640625, 'x[5] <= 25.0\ngini = 0.48\
nsamples = 5\nvalue = [2, 3]'),
 Text(0.015477444163542249, 0.609375, 'gini = 0.0\nsamples = 3\nvalue
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= [0, 3]'),
 Text(0.01591652059371366, 0.609375, 'gini = 0.0\nsamples = 2\nvalue =
[2, 0]'),
 Text(0.016794673454056483, 0.640625, 'x[0] <= 25.65\ngini = 0.207\
nsamples = 179\nvalue = [158, 21]'),
 Text(0.01635559702388507, 0.609375, 'x[8] <= 1002.55\ngini = 0.193\
nsamples = 176\nvalue = [157, 19]'),
 Text(0.016136058808799366, 0.578125, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.01657513523897078, 0.578125, 'x[9] <= 1003.55\ngini = 0.185\
nsamples = 175\nvalue = [157, 18]'),
 Text(0.015422559609770823, 0.546875, 'x[5] <= 21.0\ngini = 0.375\
nsamples = 20\nvalue = [15, 5]'),
 Text(0.015203021394685117, 0.515625, 'x[5] <= 15.0\ngini = 0.408\
nsamples = 7\nvalue = [2, 5]'),
 Text(0.01498348317959941, 0.484375, 'x[10] <= 19.95\ngini = 0.444\
nsamples = 3\nvalue = [2, 1]'),
 Text(0.014763944964513706, 0.453125, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.015203021394685117, 0.453125, 'gini = 0.0\nsamples = 2\nvalue
= [2, 0]'),
 Text(0.015422559609770823, 0.484375, 'gini = 0.0\nsamples = 4\nvalue
= [0, 4]'),
 Text(0.015642097824856527, 0.515625, 'gini = 0.0\nsamples = 13\nvalue
= [13, 0]'),
 Text(0.01772771086817073, 0.546875, 'x[7] <= 41.5\ngini = 0.154\
nsamples = 155\nvalue = [142, 13]'),
 Text(0.01695932711537076, 0.515625, 'x[3] <= 51.0\ngini = 0.129\
nsamples = 144\nvalue = [134, 10]'),
 Text(0.01608117425502794, 0.484375, 'x[5] <= 16.0\ngini = 0.059\
nsamples = 99\nvalue = [96, 3]'),
 Text(0.015642097824856527, 0.453125, 'x[9] <= 1007.25\ngini = 0.231\
nsamples = 15\nvalue = [13, 2]'),
 Text(0.015422559609770823, 0.421875, 'x[0] <= 12.0\ngini = 0.133\
nsamples = 14\nvalue = [13, 1]'),
 Text(0.015203021394685117, 0.390625, 'x[0] <= 10.25\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.01498348317959941, 0.359375, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.015422559609770823, 0.359375, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.015642097824856527, 0.390625, 'gini = 0.0\nsamples = 12\nvalue
= [12, 0]'),
 Text(0.015861636039942235, 0.421875, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.016520250685199352, 0.453125, 'x[1] <= 37.9\ngini = 0.024\
nsamples = 84\nvalue = [83, 1]'),
 Text(0.016300712470113644, 0.421875, 'gini = 0.0\nsamples = 79\nvalue
= [79, 0]'),
 Text(0.016739788900285057, 0.421875, 'x[3] <= 47.0\ngini = 0.32\

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nsamples = 5\nvalue = [4, 1]'),
 Text(0.016520250685199352, 0.390625, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.01695932711537076, 0.390625, 'gini = 0.0\nsamples = 4\nvalue =
[4, 0]'),
 Text(0.017837479975713586, 0.484375, 'x[6] <= 32.0\ngini = 0.263\
nsamples = 45\nvalue = [38, 7]'),
 Text(0.017617941760627878, 0.453125, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.01805701819079929, 0.453125, 'x[4] <= 21.0\ngini = 0.236\
nsamples = 44\nvalue = [38, 6]'),
 Text(0.017837479975713586, 0.421875, 'x[4] <= 18.0\ngini = 0.337\
nsamples = 28\nvalue = [22, 6]'),
 Text(0.017398403545542174, 0.390625, 'x[6] <= 37.5\ngini = 0.172\
nsamples = 21\nvalue = [19, 2]'),
 Text(0.01717886533045647, 0.359375, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.017617941760627878, 0.359375, 'x[4] <= 6.5\ngini = 0.095\
nsamples = 20\nvalue = [19, 1]'),
 Text(0.017398403545542174, 0.328125, 'x[1] <= 24.15\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.01717886533045647, 0.296875, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.017617941760627878, 0.296875, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.017837479975713586, 0.328125, 'gini = 0.0\nsamples = 18\nvalue
= [18, 0]'),
 Text(0.018276556405884995, 0.390625, 'x[7] <= 32.5\ngini = 0.49\
nsamples = 7\nvalue = [3, 4]'),
 Text(0.01805701819079929, 0.359375, 'gini = 0.0\nsamples = 3\nvalue =
[0, 3]'),
 Text(0.018496094620970703, 0.359375, 'x[7] <= 35.0\ngini = 0.375\
nsamples = 4\nvalue = [3, 1]'),
 Text(0.018276556405884995, 0.328125, 'gini = 0.0\nsamples = 3\nvalue
= [3, 0]'),
 Text(0.018715632836056408, 0.328125, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.018276556405884995, 0.421875, 'gini = 0.0\nsamples = 16\nvalue
= [16, 0]'),
 Text(0.018496094620970703, 0.515625, 'x[8] <= 1008.65\ngini = 0.397\
nsamples = 11\nvalue = [8, 3]'),
 Text(0.018276556405884995, 0.484375, 'gini = 0.0\nsamples = 7\nvalue
= [7, 0]'),
 Text(0.018715632836056408, 0.484375, 'x[8] <= 1009.5\ngini = 0.375\
nsamples = 4\nvalue = [1, 3]'),
 Text(0.018496094620970703, 0.453125, 'gini = 0.0\nsamples = 3\nvalue
= [0, 3]'),
 Text(0.018935171051142112, 0.453125, 'gini = 0.0\nsamples = 1\nvalue
= [1, 0]'),
 Text(0.017233749884227895, 0.609375, 'x[4] <= 8.0\ngini = 0.444\
```

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nsamples = 3\nvalue = [1, 2]'),
 Text(0.017014211669142187, 0.578125, 'gini = 0.0\nsamples = 1\nvalue
= [1, 0]'),
 Text(0.0174532880993136, 0.578125, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.019484016588856377, 0.671875, 'x[0] <= 12.75\ngini = 0.415\
nsamples = 51\nvalue = [36, 15]'),
 Text(0.018605863728513555, 0.640625, 'x[4] <= 11.0\ngini = 0.5\
nsamples = 18\nvalue = [9, 9]'),
 Text(0.018166787298342143, 0.609375, 'x[10] <= 11.55\ngini = 0.346\
nsamples = 9\nvalue = [2, 7]'),
 Text(0.01794724908325644, 0.578125, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.01838632551342785, 0.578125, 'x[7] <= 27.5\ngini = 0.219\
nsamples = 8\nvalue = [1, 7]'),
 Text(0.018166787298342143, 0.546875, 'gini = 0.0\nsamples = 1\nvalue
= [1, 0]'),
 Text(0.018605863728513555, 0.546875, 'gini = 0.0\nsamples = 7\nvalue
= [0, 7]'),
 Text(0.019044940158684968, 0.609375, 'x[9] <= 1006.95\ngini = 0.346\
nsamples = 9\nvalue = [7, 2]'),
 Text(0.01882540194359926, 0.578125, 'gini = 0.0\nsamples = 7\nvalue =
[7, 0]'),
 Text(0.019264478373770672, 0.578125, 'gini = 0.0\nsamples = 2\nvalue
= [0, 2]'),
 Text(0.0203621694491992, 0.640625, 'x[2] <= 0.3\ngini = 0.298\
nsamples = 33\nvalue = [27, 6]'),
 Text(0.01992309301902779, 0.609375, 'x[1] <= 33.15\ngini = 0.185\
nsamples = 29\nvalue = [26, 3]'),
 Text(0.019703554803942085, 0.578125, 'x[0] <= 18.55\ngini = 0.355\
nsamples = 13\nvalue = [10, 3]'),
 Text(0.019484016588856377, 0.546875, 'gini = 0.0\nsamples = 9\nvalue
= [9, 0]'),
 Text(0.01992309301902779, 0.546875, 'x[4] <= 28.0\ngini = 0.375\
nsamples = 4\nvalue = [1, 3]'),
 Text(0.019703554803942085, 0.515625, 'gini = 0.0\nsamples = 3\nvalue
= [0, 3]'),
 Text(0.020142631234113494, 0.515625, 'gini = 0.0\nsamples = 1\nvalue
= [1, 0]'),
 Text(0.020142631234113494, 0.578125, 'gini = 0.0\nsamples = 16\nvalue
= [16, 0]'),
 Text(0.02080124587937061, 0.609375, 'x[1] <= 30.35\ngini = 0.375\
nsamples = 4\nvalue = [1, 3]'),
 Text(0.020581707664284906, 0.578125, 'gini = 0.0\nsamples = 1\nvalue
= [1, 0]'),
 Text(0.02102078409445632, 0.578125, 'gini = 0.0\nsamples = 3\nvalue =
[0, 3]'),
 Text(0.023216166245313374, 0.765625, 'x[2] <= 0.5\ngini = 0.485\
nsamples = 58\nvalue = [34, 24]'),
 Text(0.02299662803022767, 0.734375, 'x[4] <= 29.0\ngini = 0.466\
```

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nsamples = 54\nvalue = [34, 20]'),
 Text(0.02277708981514196, 0.703125, 'x[7] <= 37.5\ngini = 0.435\
nsamples = 50\nvalue = [34, 16]'),
 Text(0.022338013384970552, 0.671875, 'x[5] <= 27.0\ngini = 0.375\
nsamples = 40\nvalue = [30, 10]'),
 Text(0.022118475169884844, 0.640625, 'x[5] <= 25.0\ngini = 0.437\
nsamples = 31\nvalue = [21, 10]'),
 Text(0.02189893695479914, 0.609375, 'x[9] <= 1006.9\ngini = 0.375\
nsamples = 28\nvalue = [21, 7]'),
 Text(0.021459860524627727, 0.578125, 'x[6] <= 47.5\ngini = 0.494\
nsamples = 9\nvalue = [4, 5]'),
 Text(0.021240322309542023, 0.546875, 'gini = 0.0\nsamples = 2\nvalue
= [2, 0]'),
 Text(0.021679398739713435, 0.546875, 'x[7] <= 28.0\ngini = 0.408\
nsamples = 7\nvalue = [2, 5]'),
 Text(0.021459860524627727, 0.515625, 'gini = 0.0\nsamples = 2\nvalue
= [2, 0]'),
 Text(0.02189893695479914, 0.515625, 'gini = 0.0\nsamples = 5\nvalue =
[0, 5]'),
 Text(0.022338013384970552, 0.578125, 'x[5] <= 21.0\ngini = 0.188\
nsamples = 19\nvalue = [17, 2]'),
 Text(0.022118475169884844, 0.546875, 'gini = 0.0\nsamples = 14\nvalue
= [14, 0]'),
 Text(0.022557551600056257, 0.546875, 'x[8] <= 1012.3\ngini = 0.48\
nsamples = 5\nvalue = [3, 2]'),
 Text(0.022338013384970552, 0.515625, 'gini = 0.0\nsamples = 2\nvalue
= [0, 2]'),
 Text(0.02277708981514196, 0.515625, 'gini = 0.0\nsamples = 3\nvalue =
[3, 0]'),
 Text(0.022338013384970552, 0.609375, 'gini = 0.0\nsamples = 3\nvalue
= [0, 3]'),
 Text(0.022557551600056257, 0.640625, 'gini = 0.0\nsamples = 9\nvalue
= [9, 0]'),
 Text(0.023216166245313374, 0.671875, 'x[6] <= 68.0\ngini = 0.48\
nsamples = 10\nvalue = [4, 6]'),
 Text(0.02299662803022767, 0.640625, 'gini = 0.0\nsamples = 6\nvalue =
[0, 6]'),
 Text(0.023435704460399078, 0.640625, 'gini = 0.0\nsamples = 4\nvalue
= [4, 0]'),
 Text(0.023216166245313374, 0.703125, 'gini = 0.0\nsamples = 4\nvalue
= [0, 4]'),
 Text(0.023435704460399078, 0.734375, 'gini = 0.0\nsamples = 4\nvalue
= [0, 4]'),
 Text(0.06548893528199941, 0.828125, 'x[7] <= 27.5\ngini = 0.069\
nsamples = 10831\nvalue = [10444, 387]'),
 Text(0.038353583446818586, 0.796875, 'x[7] <= 22.5\ngini = 0.029\
nsamples = 4572\nvalue = [4504, 68]'),
 Text(0.03236902315785141, 0.765625, 'x[6] <= 83.5\ngini = 0.021\
nsamples = 3042\nvalue = [3010, 32]'),
 Text(0.029982402639947038, 0.734375, 'x[0] <= 25.65\ngini = 0.02\
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nsamples = 3024\nvalue = [2994, 30]'),
 Text(0.026965467324823942, 0.703125, 'x[5] <= 14.0\ngini = 0.018\
nsamples = 3002\nvalue = [2974, 28]'),
 Text(0.024313857320741903, 0.671875, 'x[11] <= 37.05\ngini = 0.004\
nsamples = 1121\nvalue = [1119, 2]'),
 Text(0.02387478089057049, 0.640625, 'x[0] <= 7.85\ngini = 0.002\
nsamples = 1018\nvalue = [1017, 1]'),
 Text(0.023655242675484786, 0.609375, 'x[10] <= 21.15\ngini = 0.009\
nsamples = 211\nvalue = [210, 1]'),
 Text(0.023435704460399078, 0.578125, 'gini = 0.0\nsamples = 207\
nvalue = [207, 0]'),
 Text(0.02387478089057049, 0.578125, 'x[6] <= 26.5\ngini = 0.375\
nsamples = 4\nvalue = [3, 1]'),
 Text(0.023655242675484786, 0.546875, 'gini = 0.0\nsamples = 3\nvalue
= [3, 0]'),
 Text(0.024094319105656195, 0.546875, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.024094319105656195, 0.609375, 'gini = 0.0\nsamples = 807\
nvalue = [807, 0]'),
 Text(0.024752933750913312, 0.640625, 'x[1] <= 37.85\ngini = 0.019\
nsamples = 103\nvalue = [102, 1]'),
 Text(0.024533395535827607, 0.609375, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.02497247196599902, 0.609375, 'gini = 0.0\nsamples = 102\nvalue
= [102, 0]'),
 Text(0.02961707732890598, 0.671875, 'x[10] <= 17.35\ngini = 0.027\
nsamples = 1881\nvalue = [1855, 26]'),
 Text(0.026673893132913237, 0.640625, 'x[9] <= 1013.55\ngini = 0.052\
nsamples = 448\nvalue = [436, 12]'),
 Text(0.02541154839617043, 0.609375, 'x[11] <= 26.95\ngini = 0.142\
nsamples = 91\nvalue = [84, 7]'),
 Text(0.02497247196599902, 0.578125, 'x[9] <= 1013.4\ngini = 0.06\
nsamples = 65\nvalue = [63, 2]'),
 Text(0.024752933750913312, 0.546875, 'x[5] <= 16.0\ngini = 0.031\
nsamples = 64\nvalue = [63, 1]'),
 Text(0.024533395535827607, 0.515625, 'x[6] <= 43.0\ngini = 0.32\
nsamples = 5\nvalue = [4, 1]'),
 Text(0.024313857320741903, 0.484375, 'gini = 0.0\nsamples = 4\nvalue
= [4, 0]'),
 Text(0.024752933750913312, 0.484375, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.02497247196599902, 0.515625, 'gini = 0.0\nsamples = 59\nvalue
= [59, 0]'),
 Text(0.025192010181084724, 0.546875, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.02585062482634184, 0.578125, 'x[4] <= 24.0\ngini = 0.311\
nsamples = 26\nvalue = [21, 5]'),
 Text(0.025631086611256137, 0.546875, 'x[1] <= 27.65\ngini = 0.219\
nsamples = 24\nvalue = [21, 3]'),
 Text(0.02541154839617043, 0.515625, 'gini = 0.0\nsamples = 1\nvalue =
```

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[0, 1]'),
 Text(0.02585062482634184, 0.515625, 'x[9] <= 1009.2\ngini = 0.159\
nsamples = 23\nvalue = [21, 2]'),
 Text(0.025631086611256137, 0.484375, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.026070163041427546, 0.484375, 'x[8] <= 1017.85\ngini = 0.087\
nsamples = 22\nvalue = [21, 1]'),
 Text(0.02585062482634184, 0.453125, 'gini = 0.0\nsamples = 20\nvalue
= [20, 0]'),
 Text(0.026289701256513254, 0.453125, 'x[6] <= 62.5\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.026070163041427546, 0.421875, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.026509239471598958, 0.421875, 'gini = 0.0\nsamples = 1\nvalue
= [1, 0]'),
 Text(0.026070163041427546, 0.546875, 'gini = 0.0\nsamples = 2\nvalue
= [0, 2]'),
 Text(0.027936237869656044, 0.609375, 'x[3] <= 40.0\ngini = 0.028\
nsamples = 357\nvalue = [352, 5]'),
 Text(0.02771669965457034, 0.578125, 'x[5] <= 27.0\ngini = 0.055\
nsamples = 176\nvalue = [171, 5]'),
 Text(0.027497161439484635, 0.546875, 'x[7] <= 20.5\ngini = 0.045\
nsamples = 175\nvalue = [171, 4]'),
 Text(0.026728777686684663, 0.515625, 'x[0] <= 11.65\ngini = 0.015\
nsamples = 131\nvalue = [130, 1]'),
 Text(0.026509239471598958, 0.484375, 'gini = 0.0\nsamples = 124\
nvalue = [124, 0]'),
 Text(0.02694831590177037, 0.484375, 'x[0] <= 11.85\ngini = 0.245\
nsamples = 7\nvalue = [6, 1]'),
 Text(0.026728777686684663, 0.453125, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.027167854116856075, 0.453125, 'gini = 0.0\nsamples = 6\nvalue
= [6, 0]'),
 Text(0.028265545192284604, 0.515625, 'x[10] <= 14.1\ngini = 0.127\
nsamples = 44\nvalue = [41, 3]'),
 Text(0.028046006977198897, 0.484375, 'x[0] <= 7.95\ngini = 0.227\
nsamples = 23\nvalue = [20, 3]'),
 Text(0.027606930547027488, 0.453125, 'x[3] <= 30.5\ngini = 0.095\
nsamples = 20\nvalue = [19, 1]'),
 Text(0.02738739233194178, 0.421875, 'x[0] <= 2.9\ngini = 0.444\
nsamples = 3\nvalue = [2, 1]'),
 Text(0.027167854116856075, 0.390625, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.027606930547027488, 0.390625, 'gini = 0.0\nsamples = 2\nvalue
= [2, 0]'),
 Text(0.027826468762113192, 0.421875, 'gini = 0.0\nsamples = 17\nvalue
= [17, 0]'),
 Text(0.02848508340737031, 0.453125, 'x[3] <= 36.0\ngini = 0.444\
nsamples = 3\nvalue = [1, 2]'),
 Text(0.028265545192284604, 0.421875, 'gini = 0.0\nsamples = 1\nvalue
```

= [1, 0]'),
 Text(0.028704621622456017, 0.421875, 'gini = 0.0\nsamples = 2\nvalue
= [0, 2]'),
 Text(0.02848508340737031, 0.484375, 'gini = 0.0\nsamples = 21\nvalue
= [21, 0]'),
 Text(0.027936237869656044, 0.546875, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.028155776084741752, 0.578125, 'gini = 0.0\nsamples = 181\
nvalue = [181, 0]'),
 Text(0.03256026152489872, 0.640625, 'x[0] <= 22.05\ngini = 0.019\
nsamples = 1433\nvalue = [1419, 14]'),
 Text(0.0315860606954559, 0.609375, 'x[6] <= 28.5\ngini = 0.015\
nsamples = 1345\nvalue = [1335, 10]'),
 Text(0.030954888327084498, 0.578125, 'x[2] <= 1.2\ngini = 0.035\
nsamples = 502\nvalue = [493, 9]'),
 Text(0.030351158235598807, 0.546875, 'x[1] <= 26.55\ngini = 0.031\
nsamples = 500\nvalue = [492, 8]'),
 Text(0.029802312697884543, 0.515625, 'x[8] <= 1023.25\ngini = 0.278\
nsamples = 18\nvalue = [15, 3]'),
 Text(0.02958277448279884, 0.484375, 'x[1] <= 26.4\ngini = 0.208\
nsamples = 17\nvalue = [15, 2]'),
 Text(0.029363236267713134, 0.453125, 'x[0] <= 14.25\ngini = 0.117\
nsamples = 16\nvalue = [15, 1]'),
 Text(0.029143698052627426, 0.421875, 'gini = 0.0\nsamples = 11\nvalue
= [11, 0]'),
 Text(0.02958277448279884, 0.421875, 'x[6] <= 22.0\ngini = 0.32\
nsamples = 5\nvalue = [4, 1]'),
 Text(0.029363236267713134, 0.390625, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.029802312697884543, 0.390625, 'gini = 0.0\nsamples = 4\nvalue
= [4, 0]'),
 Text(0.029802312697884543, 0.453125, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.03002185091297025, 0.484375, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.030900003773313072, 0.515625, 'x[9] <= 1010.15\ngini = 0.021\
nsamples = 482\nvalue = [477, 5]'),
 Text(0.030680465558227368, 0.484375, 'x[9] <= 1010.05\ngini = 0.076\
nsamples = 126\nvalue = [121, 5]'),
 Text(0.030241389128055955, 0.453125, 'x[6] <= 21.5\ngini = 0.048\
nsamples = 121\nvalue = [118, 3]'),
 Text(0.03002185091297025, 0.421875, 'gini = 0.0\nsamples = 83\nvalue
= [83, 0]'),
 Text(0.03046092734314166, 0.421875, 'x[0] <= 15.05\ngini = 0.145\
nsamples = 38\nvalue = [35, 3]'),
 Text(0.030241389128055955, 0.390625, 'x[7] <= 11.5\ngini = 0.32\
nsamples = 15\nvalue = [12, 3]'),
 Text(0.03002185091297025, 0.359375, 'gini = 0.0\nsamples = 8\nvalue =
[8, 0]'),
 Text(0.03046092734314166, 0.359375, 'x[0] <= 12.5\ngini = 0.49\

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nsamples = 7\nvalue = [4, 3]'),
 Text(0.030241389128055955, 0.328125, 'gini = 0.0\nsamples = 3\nvalue
= [3, 0]'),
 Text(0.030680465558227368, 0.328125, 'x[5] <= 16.0\ngini = 0.375\
nsamples = 4\nvalue = [1, 3]'),
 Text(0.03046092734314166, 0.296875, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.030900003773313072, 0.296875, 'gini = 0.0\nsamples = 3\nvalue
= [0, 3]'),
 Text(0.030680465558227368, 0.390625, 'gini = 0.0\nsamples = 23\nvalue
= [23, 0]'),
 Text(0.031119541988398777, 0.453125, 'x[4] <= 16.0\ngini = 0.48\
nsamples = 5\nvalue = [3, 2]'),
 Text(0.030900003773313072, 0.421875, 'gini = 0.0\nsamples = 2\nvalue
= [0, 2]'),
 Text(0.031339080203484485, 0.421875, 'gini = 0.0\nsamples = 3\nvalue
= [3, 0]'),
 Text(0.031119541988398777, 0.484375, 'gini = 0.0\nsamples = 356\
nvalue = [356, 0]'),
 Text(0.03155861841857019, 0.546875, 'x[8] <= 1016.35\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.031339080203484485, 0.515625, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.031778156633655893, 0.515625, 'gini = 0.0\nsamples = 1\nvalue
= [1, 0]'),
 Text(0.0322172330638273, 0.578125, 'x[4] <= 30.5\ngini = 0.002\
nsamples = 843\nvalue = [842, 1]'),
 Text(0.0319976948487416, 0.546875, 'gini = 0.0\nsamples = 797\nvalue
= [797, 0]'),
 Text(0.032436771278913014, 0.546875, 'x[8] <= 1019.4\ngini = 0.043\
nsamples = 46\nvalue = [45, 1]'),
 Text(0.0322172330638273, 0.515625, 'gini = 0.0\nsamples = 36\nvalue =
[36, 0]'),
 Text(0.03265630949399872, 0.515625, 'x[8] <= 1019.55\ngini = 0.18\
nsamples = 10\nvalue = [9, 1]'),
 Text(0.032436771278913014, 0.484375, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.03287584770908442, 0.484375, 'gini = 0.0\nsamples = 9\nvalue =
[9, 0]'),
 Text(0.033534462354341536, 0.609375, 'x[0] <= 22.15\ngini = 0.087\
nsamples = 88\nvalue = [84, 4]'),
 Text(0.03309538592417013, 0.578125, 'x[3] <= 49.0\ngini = 0.444\
nsamples = 6\nvalue = [4, 2]'),
 Text(0.03287584770908442, 0.546875, 'gini = 0.0\nsamples = 4\nvalue =
[4, 0]'),
 Text(0.03331492413925583, 0.546875, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.03397353878451295, 0.578125, 'x[3] <= 40.0\ngini = 0.048\
nsamples = 82\nvalue = [80, 2]'),
 Text(0.03375400056942725, 0.546875, 'x[8] <= 1011.65\ngini = 0.18\
```

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nsamples = 20\nvalue = [18, 2]'),
 Text(0.033534462354341536, 0.515625, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.03397353878451295, 0.515625, 'x[6] <= 41.0\ngini = 0.1\
nsamples = 19\nvalue = [18, 1]'),
 Text(0.03375400056942725, 0.484375, 'gini = 0.0\nsamples = 16\nvalue
= [16, 0]'),
 Text(0.03419307699959866, 0.484375, 'x[9] <= 1012.25\ngini = 0.444\
nsamples = 3\nvalue = [2, 1]'),
 Text(0.03397353878451295, 0.453125, 'gini = 0.0\nsamples = 2\nvalue =
[2, 0]'),
 Text(0.03441261521468436, 0.453125, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.03419307699959866, 0.546875, 'gini = 0.0\nsamples = 62\nvalue
= [62, 0]'),
 Text(0.03299933795507013, 0.703125, 'x[6] <= 44.0\ngini = 0.165\
nsamples = 22\nvalue = [20, 2]'),
 Text(0.032779799739984426, 0.671875, 'gini = 0.0\nsamples = 19\nvalue
= [19, 0]'),
 Text(0.033218876170155835, 0.671875, 'x[3] <= 47.0\ngini = 0.444\
nsamples = 3\nvalue = [1, 2]'),
 Text(0.03299933795507013, 0.640625, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.03343841438524155, 0.640625, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.03475564367575578, 0.734375, 'x[4] <= 16.0\ngini = 0.198\
nsamples = 18\nvalue = [16, 2]'),
 Text(0.034316567245584365, 0.703125, 'x[6] <= 84.5\ngini = 0.117\
nsamples = 16\nvalue = [15, 1]'),
 Text(0.03409702903049866, 0.671875, 'x[1] <= 31.75\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.033877490815412956, 0.640625, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.034316567245584365, 0.640625, 'gini = 0.0\nsamples = 1\nvalue
= [1, 0]'),
 Text(0.03453610546067007, 0.671875, 'gini = 0.0\nsamples = 14\nvalue
= [14, 0]'),
 Text(0.03519472010592719, 0.703125, 'x[0] <= 11.4\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.034975181890841485, 0.671875, 'gini = 0.0\nsamples = 1\nvalue
= [1, 0]'),
 Text(0.035414258321012894, 0.671875, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.044338143735785755, 0.765625, 'x[9] <= 1016.55\ngini = 0.046\
nsamples = 1530\nvalue = [1494, 36]'),
 Text(0.04221651270405906, 0.734375, 'x[0] <= 15.75\ngini = 0.064\
nsamples = 911\nvalue = [881, 30]'),
 Text(0.040827247436719824, 0.703125, 'x[0] <= 15.65\ngini = 0.095\
nsamples = 521\nvalue = [495, 26]'),
 Text(0.03969525351518415, 0.671875, 'x[3] <= 40.0\ngini = 0.092\
```

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nsamples = 519\nvalue = [494, 25]'),
 Text(0.038089880317369935, 0.640625, 'x[2] <= 4.7\ngini = 0.053\
nsamples = 291\nvalue = [283, 8]'),
 Text(0.03715684290325568, 0.609375, 'x[9] <= 1016.25\ngini = 0.047\
nsamples = 288\nvalue = [281, 7]'),
 Text(0.0359493827202843, 0.578125, 'x[5] <= 18.0\ngini = 0.036\
nsamples = 273\nvalue = [268, 5]'),
 Text(0.03507122985994148, 0.546875, 'x[0] <= 13.95\ngini = 0.01\
nsamples = 195\nvalue = [194, 1]'),
 Text(0.03485169164485578, 0.515625, 'gini = 0.0\nsamples = 162\nvalue
= [162, 0]'),
 Text(0.035290768075027186, 0.515625, 'x[10] <= 17.8\ngini = 0.059\
nsamples = 33\nvalue = [32, 1]'),
 Text(0.03507122985994148, 0.484375, 'x[5] <= 14.0\ngini = 0.375\
nsamples = 4\nvalue = [3, 1]'),
 Text(0.03485169164485578, 0.453125, 'gini = 0.0\nsamples = 3\nvalue =
[3, 0]'),
 Text(0.035290768075027186, 0.453125, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.03551030629011289, 0.484375, 'gini = 0.0\nsamples = 29\nvalue
= [29, 0]'),
 Text(0.036827535580627124, 0.546875, 'x[0] <= 14.55\ngini = 0.097\
nsamples = 78\nvalue = [74, 4]'),
 Text(0.03616892093537001, 0.515625, 'x[9] <= 1015.05\ngini = 0.058\
nsamples = 67\nvalue = [65, 2]'),
 Text(0.0359493827202843, 0.484375, 'gini = 0.0\nsamples = 54\nvalue =
[54, 0]'),
 Text(0.036388459150455715, 0.484375, 'x[6] <= 46.0\ngini = 0.26\
nsamples = 13\nvalue = [11, 2]'),
 Text(0.03616892093537001, 0.453125, 'x[11] <= 25.15\ngini = 0.48\
nsamples = 5\nvalue = [3, 2]'),
 Text(0.0359493827202843, 0.421875, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.036388459150455715, 0.421875, 'gini = 0.0\nsamples = 3\nvalue
= [3, 0]'),
 Text(0.03660799736554142, 0.453125, 'gini = 0.0\nsamples = 8\nvalue =
[8, 0]'),
 Text(0.037486150225884245, 0.515625, 'x[1] <= 29.35\ngini = 0.298\
nsamples = 11\nvalue = [9, 2]'),
 Text(0.03726661201079853, 0.484375, 'x[10] <= 19.5\ngini = 0.444\
nsamples = 3\nvalue = [1, 2]'),
 Text(0.03704707379571283, 0.453125, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.037486150225884245, 0.453125, 'gini = 0.0\nsamples = 2\nvalue
= [0, 2]'),
 Text(0.03770568844096995, 0.484375, 'gini = 0.0\nsamples = 8\nvalue =
[8, 0]'),
 Text(0.03836430308622706, 0.578125, 'x[5] <= 13.0\ngini = 0.231\
nsamples = 15\nvalue = [13, 2]'),
 Text(0.03814476487114136, 0.546875, 'x[4] <= 13.0\ngini = 0.48\
```

```
nsamples = 5\nvalue = [3, 2]'),
 Text(0.037925226656055654, 0.515625, 'gini = 0.0\nsamples = 3\nvalue
= [3, 0]'),
 Text(0.03836430308622706, 0.515625, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.03858384130131277, 0.546875, 'gini = 0.0\nsamples = 10\nvalue
= [10, 0]'),
 Text(0.03902291773148418, 0.609375, 'x[3] <= 32.0\ngini = 0.444\
nsamples = 3\nvalue = [2, 1]'),
 Text(0.03880337951639848, 0.578125, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.03924245594656989, 0.578125, 'gini = 0.0\nsamples = 2\nvalue =
[2, 0]'),
 Text(0.041300626712998376, 0.640625, 'x[4] <= 21.0\ngini = 0.138\
nsamples = 228\nvalue = [211, 17]'),
 Text(0.04108108849791267, 0.609375, 'x[10] <= 17.15\ngini = 0.196\
nsamples = 154\nvalue = [137, 17]'),
 Text(0.039681532376741296, 0.578125, 'x[0] <= 7.95\ngini = 0.094\
nsamples = 81\nvalue = [77, 4]'),
 Text(0.03946199416165559, 0.546875, 'x[0] <= 7.45\ngini = 0.252\
nsamples = 27\nvalue = [23, 4]'),
 Text(0.03902291773148418, 0.515625, 'x[4] <= 16.0\ngini = 0.153\
nsamples = 24\nvalue = [22, 2]'),
 Text(0.03880337951639848, 0.484375, 'gini = 0.0\nsamples = 19\nvalue
= [19, 0]'),
 Text(0.03924245594656989, 0.484375, 'x[1] <= 21.1\ngini = 0.48\
nsamples = 5\nvalue = [3, 2]'),
 Text(0.03902291773148418, 0.453125, 'gini = 0.0\nsamples = 3\nvalue =
[3, 0]'),
 Text(0.03946199416165559, 0.453125, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.039901070591827, 0.515625, 'x[4] <= 7.5\ngini = 0.444\nsamples
= 3\nvalue = [1, 2]'),
 Text(0.039681532376741296, 0.484375, 'gini = 0.0\nsamples = 1\nvalue
= [1, 0]'),
 Text(0.04012060880691271, 0.484375, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.039901070591827, 0.546875, 'gini = 0.0\nsamples = 54\nvalue =
[54, 0]'),
 Text(0.042480644619084046, 0.578125, 'x[5] <= 25.0\ngini = 0.293\
nsamples = 73\nvalue = [60, 13]'),
 Text(0.0415476072049698, 0.546875, 'x[8] <= 1015.5\ngini = 0.201\
nsamples = 53\nvalue = [47, 6]'),
 Text(0.04099876166725553, 0.515625, 'x[8] <= 1014.25\ngini = 0.401\
nsamples = 18\nvalue = [13, 5]'),
 Text(0.04055968523708412, 0.484375, 'x[10] <= 17.65\ngini = 0.142\
nsamples = 13\nvalue = [12, 1]'),
 Text(0.04034014702199842, 0.453125, 'x[9] <= 1009.0\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.04012060880691271, 0.421875, 'gini = 0.0\nsamples = 1\nvalue =
```

[1, 0]'),
 Text(0.04055968523708412, 0.421875, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.040779223452169826, 0.453125, 'gini = 0.0\nsamples = 11\nvalue
= [11, 0]'),
 Text(0.041437838097426946, 0.484375, 'x[0] <= 13.95\ngini = 0.32\
nsamples = 5\nvalue = [1, 4]'),
 Text(0.041218299882341235, 0.453125, 'gini = 0.0\nsamples = 4\nvalue
= [0, 4]'),
 Text(0.04165737631251265, 0.453125, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.04209645274268406, 0.515625, 'x[8] <= 1019.35\ngini = 0.056\
nsamples = 35\nvalue = [34, 1]'),
 Text(0.041876914527598355, 0.484375, 'gini = 0.0\nsamples = 33\nvalue
= [33, 0]'),
 Text(0.042315990957769764, 0.484375, 'x[0] <= 14.95\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.04209645274268406, 0.453125, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.04253552917285547, 0.453125, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.04341368203319829, 0.546875, 'x[1] <= 28.45\ngini = 0.455\
nsamples = 20\nvalue = [13, 7]'),
 Text(0.042974605603026884, 0.515625, 'x[4] <= 11.0\ngini = 0.18\
nsamples = 10\nvalue = [9, 1]'),
 Text(0.04275506738794118, 0.484375, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.04319414381811259, 0.484375, 'gini = 0.0\nsamples = 9\nvalue =
[9, 0]'),
 Text(0.0438527584633697, 0.515625, 'x[1] <= 32.4\ngini = 0.48\
nsamples = 10\nvalue = [4, 6]'),
 Text(0.043633220248284, 0.484375, 'gini = 0.0\nsamples = 5\nvalue =
[0, 5]'),
 Text(0.044072296678455414, 0.484375, 'x[8] <= 1013.8\ngini = 0.32\
nsamples = 5\nvalue = [4, 1]'),
 Text(0.0438527584633697, 0.453125, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.04429183489354112, 0.453125, 'gini = 0.0\nsamples = 4\nvalue =
[4, 0]'),
 Text(0.04152016492808408, 0.609375, 'gini = 0.0\nsamples = 74\nvalue
= [74, 0]'),
 Text(0.041959241358255496, 0.671875, 'x[11] <= 27.85\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.04173970314316979, 0.640625, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.0421787795733412, 0.640625, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.04360577797139829, 0.703125, 'x[5] <= 6.5\ngini = 0.02\
nsamples = 390\nvalue = [386, 4]'),
 Text(0.042837394218598314, 0.671875, 'x[1] <= 35.55\ngini = 0.298\

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nsamples = 11\nvalue = [9, 2]'),
 Text(0.04261785600351261, 0.640625, 'gini = 0.0\nsamples = 8\nvalue =
[8, 0]'),
 Text(0.043056932433684025, 0.640625, 'x[11] <= 35.55\ngini = 0.444\
nsamples = 3\nvalue = [1, 2]'),
 Text(0.042837394218598314, 0.609375, 'gini = 0.0\nsamples = 2\nvalue
= [0, 2]'),
 Text(0.04327647064876973, 0.609375, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.04437416172419826, 0.671875, 'x[11] <= 25.65\ngini = 0.01\
nsamples = 379\nvalue = [377, 2]'),
 Text(0.04393508529402684, 0.640625, 'x[9] <= 1010.5\ngini = 0.32\
nsamples = 5\nvalue = [4, 1]'),
 Text(0.04371554707894114, 0.609375, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.04415462350911255, 0.609375, 'gini = 0.0\nsamples = 4\nvalue =
[4, 0]'),
 Text(0.04481323815436967, 0.640625, 'x[11] <= 37.7\ngini = 0.005\
nsamples = 374\nvalue = [373, 1]'),
 Text(0.044593699939283964, 0.609375, 'gini = 0.0\nsamples = 369\
nvalue = [369, 0]'),
 Text(0.04503277636945537, 0.609375, 'x[9] <= 1008.75\ngini = 0.32\
nsamples = 5\nvalue = [4, 1]'),
 Text(0.04481323815436967, 0.578125, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.04525231458454108, 0.578125, 'gini = 0.0\nsamples = 4\nvalue =
[4, 0]'),
 Text(0.04645977476751246, 0.734375, 'x[10] <= 23.55\ngini = 0.019\
nsamples = 619\nvalue = [613, 6]'),
 Text(0.0459109292297982, 0.703125, 'x[3] <= 55.0\ngini = 0.013\
nsamples = 599\nvalue = [595, 4]'),
 Text(0.04547185279962679, 0.671875, 'x[7] <= 25.5\ngini = 0.01\
nsamples = 587\nvalue = [584, 3]'),
 Text(0.04525231458454108, 0.640625, 'gini = 0.0\nsamples = 345\nvalue
= [345, 0]'),
 Text(0.04569139101471249, 0.640625, 'x[5] <= 14.0\ngini = 0.024\
nsamples = 242\nvalue = [239, 3]'),
 Text(0.04547185279962679, 0.609375, 'gini = 0.0\nsamples = 120\nvalue
= [120, 0]'),
 Text(0.0459109292297982, 0.609375, 'x[3] <= 36.0\ngini = 0.048\
nsamples = 122\nvalue = [119, 3]'),
 Text(0.04569139101471249, 0.578125, 'x[3] <= 34.0\ngini = 0.115\
nsamples = 49\nvalue = [46, 3]'),
 Text(0.04503277636945537, 0.546875, 'x[8] <= 1027.4\ngini = 0.053\
nsamples = 37\nvalue = [36, 1]'),
 Text(0.04481323815436967, 0.515625, 'gini = 0.0\nsamples = 33\nvalue
= [33, 0]'),
 Text(0.04525231458454108, 0.515625, 'x[6] <= 53.5\ngini = 0.375\
nsamples = 4\nvalue = [3, 1]'),
 Text(0.04503277636945537, 0.484375, 'gini = 0.0\nsamples = 1\nvalue =
```

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[0, 1]'),
 Text(0.04547185279962679, 0.484375, 'gini = 0.0\nsamples = 3\nvalue =
[3, 0]'),
 Text(0.046350005659969606, 0.546875, 'x[0] <= 14.0\ngini = 0.278\
nsamples = 12\nvalue = [10, 2]'),
 Text(0.0461304674448839, 0.515625, 'x[5] <= 21.0\ngini = 0.165\
nsamples = 11\nvalue = [10, 1]'),
 Text(0.0459109292297982, 0.484375, 'gini = 0.0\nsamples = 9\nvalue =
[9, 0]'),
 Text(0.046350005659969606, 0.484375, 'x[11] <= 23.7\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.0461304674448839, 0.453125, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.04656954387505531, 0.453125, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.04656954387505531, 0.515625, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.0461304674448839, 0.578125, 'gini = 0.0\nsamples = 73\nvalue =
[73, 0]'),
 Text(0.046350005659969606, 0.671875, 'x[4] <= 23.5\ngini = 0.153\
nsamples = 12\nvalue = [11, 1]'),
 Text(0.0461304674448839, 0.640625, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.04656954387505531, 0.640625, 'gini = 0.0\nsamples = 11\nvalue
= [11, 0]'),
 Text(0.04700862030522673, 0.703125, 'x[10] <= 23.7\ngini = 0.18\
nsamples = 20\nvalue = [18, 2]'),
 Text(0.04678908209014102, 0.671875, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.04722815852031243, 0.671875, 'x[3] <= 50.0\ngini = 0.1\
nsamples = 19\nvalue = [18, 1]'),
 Text(0.04700862030522673, 0.640625, 'gini = 0.0\nsamples = 17\nvalue
= [17, 0]'),
 Text(0.047447696735398136, 0.640625, 'x[7] <= 26.5\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.04722815852031243, 0.609375, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.04766723495048384, 0.609375, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.09262428711718024, 0.796875, 'x[9] <= 1013.35\ngini = 0.097\
nsamples = 6259\nvalue = [5940, 319]'),
 Text(0.06627649546473496, 0.765625, 'x[10] <= 17.85\ngini = 0.164\
nsamples = 1803\nvalue = [1640, 163]'),
 Text(0.05460541436122955, 0.734375, 'x[8] <= 1013.45\ngini = 0.258\
nsamples = 558\nvalue = [473, 85]'),
 Text(0.050768212238569435, 0.703125, 'x[0] <= 0.5\ngini = 0.173\
nsamples = 230\nvalue = [208, 22]'),
 Text(0.05054867402348373, 0.671875, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.05098775045365514, 0.671875, 'x[10] <= 17.25\ngini = 0.167\
```

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nsamples = 229\nvalue = [208, 21]'),
 Text(0.04947842522494091, 0.640625, 'x[1] <= 20.35\ngini = 0.131\
nsamples = 198\nvalue = [184, 14]'),
 Text(0.04843561870328381, 0.609375, 'x[10] <= 16.6\ngini = 0.239\
nsamples = 72\nvalue = [62, 10]'),
 Text(0.04821608048819811, 0.578125, 'x[4] <= 23.0\ngini = 0.221\
nsamples = 71\nvalue = [62, 9]'),
 Text(0.047447696735398136, 0.546875, 'x[9] <= 1012.55\ngini = 0.16\
nsamples = 57\nvalue = [52, 5]'),
 Text(0.04700862030522673, 0.515625, 'x[10] <= 13.15\ngini = 0.107\
nsamples = 53\nvalue = [50, 3]'),
 Text(0.04678908209014102, 0.484375, 'gini = 0.0\nsamples = 34\nvalue
= [34, 0]'),
 Text(0.04722815852031243, 0.484375, 'x[11] <= 16.65\ngini = 0.266\
nsamples = 19\nvalue = [16, 3]'),
 Text(0.04700862030522673, 0.453125, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.047447696735398136, 0.453125, 'x[10] <= 14.45\ngini = 0.198\
nsamples = 18\nvalue = [16, 2]'),
 Text(0.04722815852031243, 0.421875, 'x[1] <= 20.25\ngini = 0.375\
nsamples = 8\nvalue = [6, 2]'),
 Text(0.04700862030522673, 0.390625, 'x[9] <= 1010.5\ngini = 0.245\
nsamples = 7\nvalue = [6, 1]'),
 Text(0.04678908209014102, 0.359375, 'gini = 0.0\nsamples = 6\nvalue =
[6, 0]'),
 Text(0.04722815852031243, 0.359375, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.047447696735398136, 0.390625, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.04766723495048384, 0.421875, 'gini = 0.0\nsamples = 10\nvalue
= [10, 0]'),
 Text(0.047886773165569545, 0.515625, 'x[6] <= 69.0\ngini = 0.5\
nsamples = 4\nvalue = [2, 2]'),
 Text(0.04766723495048384, 0.484375, 'gini = 0.0\nsamples = 2\nvalue =
[2, 0]'),
 Text(0.048106311380655256, 0.484375, 'gini = 0.0\nsamples = 2\nvalue
= [0, 2]'),
 Text(0.048984464240998074, 0.546875, 'x[5] <= 27.0\ngini = 0.408\
nsamples = 14\nvalue = [10, 4]'),
 Text(0.04876492602591237, 0.515625, 'x[9] <= 1010.8\ngini = 0.444\
nsamples = 6\nvalue = [2, 4]'),
 Text(0.048545387810826665, 0.484375, 'gini = 0.0\nsamples = 3\nvalue
= [0, 3]'),
 Text(0.048984464240998074, 0.484375, 'x[12] <= 0.5\ngini = 0.444\
nsamples = 3\nvalue = [2, 1]'),
 Text(0.04876492602591237, 0.453125, 'gini = 0.0\nsamples = 2\nvalue =
[2, 0]'),
 Text(0.04920400245608378, 0.453125, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.04920400245608378, 0.515625, 'gini = 0.0\nsamples = 8\nvalue =
```

[8, 0]'),
 Text(0.04865515691836952, 0.578125, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.05052123174659801, 0.609375, 'x[0] <= 5.55\ngini = 0.061\
nsamples = 126\nvalue = [122, 4]'),
 Text(0.0500821553164266, 0.578125, 'x[5] <= 23.0\ngini = 0.444\
nsamples = 6\nvalue = [4, 2]'),
 Text(0.0498626171013409, 0.546875, 'x[8] <= 1012.95\ngini = 0.444\
nsamples = 3\nvalue = [1, 2]'),
 Text(0.049643078886255194, 0.515625, 'gini = 0.0\nsamples = 2\nvalue
= [0, 2]'),
 Text(0.0500821553164266, 0.515625, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.05030169353151231, 0.546875, 'gini = 0.0\nsamples = 3\nvalue =
[3, 0]'),
 Text(0.05096030817676943, 0.578125, 'x[10] <= 16.65\ngini = 0.033\
nsamples = 120\nvalue = [118, 2]'),
 Text(0.050740769961683724, 0.546875, 'gini = 0.0\nsamples = 96\nvalue
= [96, 0]'),
 Text(0.05117984639185513, 0.546875, 'x[6] <= 51.0\ngini = 0.153\
nsamples = 24\nvalue = [22, 2]'),
 Text(0.050740769961683724, 0.515625, 'x[11] <= 23.6\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.05052123174659801, 0.484375, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.05096030817676943, 0.484375, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.05161892282202654, 0.515625, 'x[1] <= 21.55\ngini = 0.087\
nsamples = 22\nvalue = [21, 1]'),
 Text(0.05139938460694084, 0.484375, 'x[8] <= 1009.95\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.05117984639185513, 0.453125, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.05161892282202654, 0.453125, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.051838461037112246, 0.484375, 'gini = 0.0\nsamples = 20\nvalue
= [20, 0]'),
 Text(0.05249707568236937, 0.640625, 'x[6] <= 83.0\ngini = 0.35\
nsamples = 31\nvalue = [24, 7]'),
 Text(0.05227753746728366, 0.609375, 'x[4] <= 5.0\ngini = 0.285\
nsamples = 29\nvalue = [24, 5]'),
 Text(0.051838461037112246, 0.578125, 'x[5] <= 19.5\ngini = 0.444\
nsamples = 3\nvalue = [1, 2]'),
 Text(0.05161892282202654, 0.546875, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.05205799925219796, 0.546875, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.05271661389745507, 0.578125, 'x[0] <= 14.55\ngini = 0.204\
nsamples = 26\nvalue = [23, 3]'),
 Text(0.05249707568236937, 0.546875, 'gini = 0.0\nsamples = 19\nvalue

= [19, 0]'),
 Text(0.052936152112540776, 0.546875, 'x[9] <= 1010.8\ngini = 0.49\
nsamples = 7\nvalue = [4, 3]'),
 Text(0.05271661389745507, 0.515625, 'x[7] <= 35.5\ngini = 0.375\
nsamples = 4\nvalue = [1, 3]'),
 Text(0.05249707568236937, 0.484375, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.052936152112540776, 0.484375, 'gini = 0.0\nsamples = 3\nvalue
= [0, 3]'),
 Text(0.05315569032762648, 0.515625, 'gini = 0.0\nsamples = 3\nvalue =
[3, 0]'),
 Text(0.05271661389745507, 0.609375, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.05844261648388967, 0.703125, 'x[9] <= 1010.25\ngini = 0.31\
nsamples = 328\nvalue = [265, 63]'),
 Text(0.05480222694076928, 0.671875, 'x[6] <= 51.0\ngini = 0.499\
nsamples = 48\nvalue = [23, 25]'),
 Text(0.05458268872568357, 0.640625, 'gini = 0.0\nsamples = 4\nvalue =
[4, 0]'),
 Text(0.05502176515585498, 0.640625, 'x[11] <= 25.8\ngini = 0.491\
nsamples = 44\nvalue = [19, 25]'),
 Text(0.05458268872568357, 0.609375, 'x[2] <= 2.8\ngini = 0.465\
nsamples = 38\nvalue = [14, 24]'),
 Text(0.05436315051059786, 0.578125, 'x[3] <= 53.0\ngini = 0.444\
nsamples = 36\nvalue = [12, 24]'),
 Text(0.0538143049728836, 0.546875, 'x[7] <= 34.5\ngini = 0.391\
nsamples = 30\nvalue = [8, 22]'),
 Text(0.053594766757797896, 0.515625, 'gini = 0.0\nsamples = 8\nvalue
= [0, 8]'),
 Text(0.054033843187969305, 0.515625, 'x[1] <= 23.25\ngini = 0.463\
nsamples = 22\nvalue = [8, 14]'),
 Text(0.053594766757797896, 0.484375, 'x[6] <= 92.5\ngini = 0.337\
nsamples = 14\nvalue = [3, 11]'),
 Text(0.05337522854271219, 0.453125, 'x[1] <= 15.95\ngini = 0.26\
nsamples = 13\nvalue = [2, 11]'),
 Text(0.05315569032762648, 0.421875, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.053594766757797896, 0.421875, 'x[5] <= 16.0\ngini = 0.153\
nsamples = 12\nvalue = [1, 11]'),
 Text(0.05337522854271219, 0.390625, 'x[10] <= 12.85\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.05315569032762648, 0.359375, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.053594766757797896, 0.359375, 'gini = 0.0\nsamples = 1\nvalue
= [1, 0]'),
 Text(0.0538143049728836, 0.390625, 'gini = 0.0\nsamples = 10\nvalue =
[0, 10]'),
 Text(0.0538143049728836, 0.453125, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.054472919618140714, 0.484375, 'x[0] <= 9.05\ngini = 0.469\

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nsamples = 8\nvalue = [5, 3]'),
 Text(0.05425338140305501, 0.453125, 'gini = 0.0\nsamples = 4\nvalue =
[4, 0]'),
 Text(0.054692457833226425, 0.453125, 'x[3] <= 23.0\ngini = 0.375\
nsamples = 4\nvalue = [1, 3]'),
 Text(0.054472919618140714, 0.421875, 'gini = 0.0\nsamples = 1\nvalue
= [1, 0]'),
 Text(0.05491199604831213, 0.421875, 'gini = 0.0\nsamples = 3\nvalue =
[0, 3]'),
 Text(0.05491199604831213, 0.546875, 'x[8] <= 1014.9\ngini = 0.444\
nsamples = 6\nvalue = [4, 2]'),
 Text(0.054692457833226425, 0.515625, 'gini = 0.0\nsamples = 3\nvalue
= [3, 0]'),
 Text(0.055131534263397834, 0.515625, 'x[6] <= 80.5\ngini = 0.444\
nsamples = 3\nvalue = [1, 2]'),
 Text(0.05491199604831213, 0.484375, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.05535107247848354, 0.484375, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.05480222694076928, 0.578125, 'gini = 0.0\nsamples = 2\nvalue =
[2, 0]'),
 Text(0.05546084158602639, 0.609375, 'x[3] <= 30.5\ngini = 0.278\
nsamples = 6\nvalue = [5, 1]'),
 Text(0.055241303370940686, 0.578125, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.055680379801112095, 0.578125, 'gini = 0.0\nsamples = 5\nvalue
= [5, 0]'),
 Text(0.062083006027010064, 0.671875, 'x[8] <= 1017.25\ngini = 0.235\
nsamples = 280\nvalue = [242, 38]'),
 Text(0.05816733614387986, 0.640625, 'x[3] <= 34.0\ngini = 0.188\
nsamples = 229\nvalue = [205, 24]'),
 Text(0.05655853266145492, 0.609375, 'x[11] <= 17.2\ngini = 0.058\
nsamples = 67\nvalue = [65, 2]'),
 Text(0.05611945623128351, 0.578125, 'x[11] <= 16.45\ngini = 0.444\
nsamples = 3\nvalue = [2, 1]'),
 Text(0.05589991801619781, 0.546875, 'gini = 0.0\nsamples = 2\nvalue =
[2, 0]'),
 Text(0.056338994446369216, 0.546875, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.05699760909162633, 0.578125, 'x[9] <= 1011.75\ngini = 0.031\
nsamples = 64\nvalue = [63, 1]'),
 Text(0.056778070876540625, 0.546875, 'x[9] <= 1011.6\ngini = 0.111\
nsamples = 17\nvalue = [16, 1]'),
 Text(0.05655853266145492, 0.515625, 'gini = 0.0\nsamples = 16\nvalue
= [16, 0]'),
 Text(0.05699760909162633, 0.515625, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.05721714730671204, 0.546875, 'gini = 0.0\nsamples = 47\nvalue
= [47, 0]'),
 Text(0.05977613962630479, 0.609375, 'x[8] <= 1014.35\ngini = 0.235\
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nsamples = 162\nvalue = [140, 22]'),
 Text(0.057875761951969154, 0.578125, 'x[4] <= 27.0\ngini = 0.044\
nsamples = 44\nvalue = [43, 1]'),
 Text(0.05765622373688345, 0.546875, 'gini = 0.0\nsamples = 37\nvalue
= [37, 0]'),
 Text(0.05809530016705486, 0.546875, 'x[9] <= 1011.85\ngini = 0.245\
nsamples = 7\nvalue = [6, 1]'),
 Text(0.057875761951969154, 0.515625, 'x[6] <= 52.5\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.05765622373688345, 0.484375, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.05809530016705486, 0.484375, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.05831483838214056, 0.515625, 'gini = 0.0\nsamples = 5\nvalue =
[5, 0]'),
 Text(0.061676517300640436, 0.578125, 'x[7] <= 38.5\ngini = 0.293\
nsamples = 118\nvalue = [97, 21]'),
 Text(0.05976927905708337, 0.546875, 'x[9] <= 1010.95\ngini = 0.221\
nsamples = 95\nvalue = [83, 12]'),
 Text(0.05875391481231198, 0.515625, 'x[9] <= 1010.55\ngini = 0.459\
nsamples = 14\nvalue = [9, 5]'),
 Text(0.058534376597226274, 0.484375, 'gini = 0.0\nsamples = 8\nvalue
= [8, 0]'),
 Text(0.05897345302739768, 0.484375, 'x[5] <= 25.5\ngini = 0.278\
nsamples = 6\nvalue = [1, 5]'),
 Text(0.05875391481231198, 0.453125, 'gini = 0.0\nsamples = 5\nvalue =
[0, 5]'),
 Text(0.05919299124248339, 0.453125, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.060784643301854756, 0.515625, 'x[6] <= 48.0\ngini = 0.158\
nsamples = 81\nvalue = [74, 7]'),
 Text(0.05985160588774051, 0.484375, 'x[9] <= 1011.6\ngini = 0.355\
nsamples = 13\nvalue = [10, 3]'),
 Text(0.0596320676726548, 0.453125, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.06007114410282621, 0.453125, 'x[10] <= 15.45\ngini = 0.278\
nsamples = 12\nvalue = [10, 2]'),
 Text(0.05985160588774051, 0.421875, 'x[4] <= 28.5\ngini = 0.5\
nsamples = 4\nvalue = [2, 2]'),
 Text(0.0596320676726548, 0.390625, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.06007114410282621, 0.390625, 'gini = 0.0\nsamples = 2\nvalue =
[2, 0]'),
 Text(0.06029068231791192, 0.421875, 'gini = 0.0\nsamples = 8\nvalue =
[8, 0]'),
 Text(0.061717680715969, 0.484375, 'x[5] <= 14.0\ngini = 0.111\
nsamples = 68\nvalue = [64, 4]'),
 Text(0.06094929696316903, 0.453125, 'x[10] <= 12.75\ngini = 0.375\
nsamples = 8\nvalue = [6, 2]'),
 Text(0.060729758748083326, 0.421875, 'gini = 0.0\nsamples = 1\nvalue
```

= [0, 1]'),
 Text(0.06116883517825474, 0.421875, 'x[9] <= 1011.3\ngini = 0.245\
nsamples = 7\nvalue = [6, 1]'),
 Text(0.06094929696316903, 0.390625, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.06138837339334045, 0.390625, 'gini = 0.0\nsamples = 6\nvalue =
[6, 0]'),
 Text(0.062486064468768976, 0.453125, 'x[10] <= 17.65\ngini = 0.064\
nsamples = 60\nvalue = [58, 2]'),
 Text(0.06204698803859756, 0.421875, 'x[9] <= 1013.15\ngini = 0.034\
nsamples = 57\nvalue = [56, 1]'),
 Text(0.061827449823511856, 0.390625, 'gini = 0.0\nsamples = 49\nvalue
= [49, 0]'),
 Text(0.06226652625368327, 0.390625, 'x[10] <= 15.65\ngini = 0.219\
nsamples = 8\nvalue = [7, 1]'),
 Text(0.06204698803859756, 0.359375, 'gini = 0.0\nsamples = 7\nvalue =
[7, 0]'),
 Text(0.062486064468768976, 0.359375, 'gini = 0.0\nsamples = 1\nvalue
= [0, 1]'),
 Text(0.06292514089894038, 0.421875, 'x[9] <= 1012.65\ngini = 0.444\
nsamples = 3\nvalue = [2, 1]'),
 Text(0.06270560268385468, 0.390625, 'gini = 0.0\nsamples = 2\nvalue =
[2, 0]'),
 Text(0.06314467911402609, 0.390625, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.0635837555441975, 0.546875, 'x[3] <= 40.0\ngini = 0.476\
nsamples = 23\nvalue = [14, 9]'),
 Text(0.06314467911402609, 0.515625, 'x[6] <= 46.5\ngini = 0.337\
nsamples = 14\nvalue = [11, 3]'),
 Text(0.06292514089894038, 0.484375, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.0633642173291118, 0.484375, 'x[10] <= 16.3\ngini = 0.26\
nsamples = 13\nvalue = [11, 2]'),
 Text(0.06314467911402609, 0.453125, 'gini = 0.0\nsamples = 8\nvalue =
[8, 0]'),
 Text(0.0635837555441975, 0.453125, 'x[10] <= 16.55\ngini = 0.48\
nsamples = 5\nvalue = [3, 2]'),
 Text(0.0633642173291118, 0.421875, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.0638032937592832, 0.421875, 'gini = 0.0\nsamples = 3\nvalue =
[3, 0]'),
 Text(0.06402283197436891, 0.515625, 'x[0] <= 7.3\ngini = 0.444\
nsamples = 9\nvalue = [3, 6]'),
 Text(0.0638032937592832, 0.484375, 'gini = 0.0\nsamples = 4\nvalue =
[0, 4]'),
 Text(0.06424237018945463, 0.484375, 'x[8] <= 1014.55\ngini = 0.48\
nsamples = 5\nvalue = [3, 2]'),
 Text(0.06402283197436891, 0.453125, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.06446190840454033, 0.453125, 'gini = 0.0\nsamples = 3\nvalue =

```
[3, 0]'),
 Text(0.06599867591014026, 0.640625, 'x[10] <= 17.5\ngini = 0.398\
nsamples = 51\nvalue = [37, 14]'),
 Text(0.06577913769505456, 0.609375, 'x[1] <= 23.75\ngini = 0.37\
nsamples = 49\nvalue = [37, 12]'),
 Text(0.06534006126488315, 0.578125, 'x[10] <= 15.65\ngini = 0.452\
nsamples = 29\nvalue = [19, 10]'),
 Text(0.06512052304979744, 0.546875, 'x[8] <= 1017.8\ngini = 0.393\
nsamples = 26\nvalue = [19, 7]'),
 Text(0.06490098483471174, 0.515625, 'gini = 0.0\nsamples = 7\nvalue =
[7, 0]'),
 Text(0.06534006126488315, 0.515625, 'x[3] <= 44.5\ngini = 0.465\
nsamples = 19\nvalue = [12, 7]'),
 Text(0.06512052304979744, 0.484375, 'x[3] <= 40.0\ngini = 0.497\
nsamples = 13\nvalue = [6, 7]'),
 Text(0.06490098483471174, 0.453125, 'x[9] <= 1012.2\ngini = 0.444\
nsamples = 9\nvalue = [6, 3]'),
 Text(0.06468144661962603, 0.421875, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.06512052304979744, 0.421875, 'x[4] <= 9.0\ngini = 0.375\
nsamples = 8\nvalue = [6, 2]'),
 Text(0.06490098483471174, 0.390625, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.06534006126488315, 0.390625, 'x[9] <= 1012.85\ngini = 0.245\
nsamples = 7\nvalue = [6, 1]'),
 Text(0.06512052304979744, 0.359375, 'x[7] <= 32.0\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.06490098483471174, 0.328125, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.06534006126488315, 0.328125, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.06555959947996885, 0.359375, 'gini = 0.0\nsamples = 5\nvalue =
[5, 0]'),
 Text(0.06534006126488315, 0.453125, 'gini = 0.0\nsamples = 4\nvalue =
[0, 4]'),
 Text(0.06555959947996885, 0.484375, 'gini = 0.0\nsamples = 6\nvalue =
[6, 0]'),
 Text(0.06555959947996885, 0.546875, 'gini = 0.0\nsamples = 3\nvalue =
[0, 3]'),
 Text(0.06621821412522597, 0.578125, 'x[6] <= 52.0\ngini = 0.18\
nsamples = 20\nvalue = [18, 2]'),
 Text(0.06599867591014026, 0.546875, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.06643775234031167, 0.546875, 'x[11] <= 26.65\ngini = 0.1\
nsamples = 19\nvalue = [18, 1]'),
 Text(0.06621821412522597, 0.515625, 'gini = 0.0\nsamples = 17\nvalue
= [17, 0]'),
 Text(0.06665729055539737, 0.515625, 'x[1] <= 28.25\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.06643775234031167, 0.484375, 'gini = 0.0\nsamples = 1\nvalue =
```

[0, 1]'),
 Text(0.0668768287704831, 0.484375, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.06621821412522597, 0.609375, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.07794757656824036, 0.734375, 'x[3] <= 53.0\ngini = 0.117\
nsamples = 1245\nvalue = [1167, 78]'),
 Text(0.07310180377228398, 0.703125, 'x[6] <= 99.0\ngini = 0.105\
nsamples = 1191\nvalue = [1125, 66]'),
 Text(0.07288226555719828, 0.671875, 'x[8] <= 1018.75\ngini = 0.103\
nsamples = 1190\nvalue = [1125, 65]'),
 Text(0.07266272734211257, 0.640625, 'x[5] <= 12.0\ngini = 0.102\
nsamples = 1189\nvalue = [1125, 64]'),
 Text(0.06912709547511157, 0.609375, 'x[3] <= 47.0\ngini = 0.196\
nsamples = 173\nvalue = [154, 19]'),
 Text(0.06852336538362588, 0.578125, 'x[2] <= 6.7\ngini = 0.157\
nsamples = 163\nvalue = [149, 14]'),
 Text(0.06797451984591162, 0.546875, 'x[10] <= 28.15\ngini = 0.139\
nsamples = 160\nvalue = [148, 12]'),
 Text(0.0675354434157402, 0.515625, 'x[4] <= 31.5\ngini = 0.119\
nsamples = 157\nvalue = [147, 10]'),
 Text(0.0673159052006545, 0.484375, 'x[3] <= 36.0\ngini = 0.109\
nsamples = 156\nvalue = [147, 9]'),
 Text(0.0668768287704831, 0.453125, 'x[3] <= 34.0\ngini = 0.02\
nsamples = 97\nvalue = [96, 1]'),
 Text(0.06665729055539737, 0.421875, 'gini = 0.0\nsamples = 80\nvalue
= [80, 0]'),
 Text(0.0670963669855688, 0.421875, 'x[4] <= 8.0\ngini = 0.111\
nsamples = 17\nvalue = [16, 1]'),
 Text(0.0668768287704831, 0.390625, 'x[0] <= 19.4\ngini = 0.375\
nsamples = 4\nvalue = [3, 1]'),
 Text(0.06665729055539737, 0.359375, 'gini = 0.0\nsamples = 3\nvalue =
[3, 0]'),
 Text(0.0670963669855688, 0.359375, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.0673159052006545, 0.390625, 'gini = 0.0\nsamples = 13\nvalue =
[13, 0]'),
 Text(0.06775498163082591, 0.453125, 'x[4] <= 3.0\ngini = 0.234\
nsamples = 59\nvalue = [51, 8]'),
 Text(0.0675354434157402, 0.421875, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.06797451984591162, 0.421875, 'x[8] <= 1013.05\ngini = 0.212\
nsamples = 58\nvalue = [51, 7]'),
 Text(0.06775498163082591, 0.390625, 'gini = 0.0\nsamples = 22\nvalue
= [22, 0]'),
 Text(0.06819405806099732, 0.390625, 'x[4] <= 16.0\ngini = 0.313\
nsamples = 36\nvalue = [29, 7]'),
 Text(0.06775498163082591, 0.359375, 'x[11] <= 31.9\ngini = 0.469\
nsamples = 16\nvalue = [10, 6]'),
 Text(0.0675354434157402, 0.328125, 'x[1] <= 31.6\ngini = 0.444\

```
nsamples = 9\nvalue = [3, 6]'),
 Text(0.0673159052006545, 0.296875, 'x[10] <= 19.5\ngini = 0.375\
nsamples = 4\nvalue = [3, 1]'),
 Text(0.0670963669855688, 0.265625, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.0675354434157402, 0.265625, 'gini = 0.0\nsamples = 3\nvalue =
[3, 0]'),
 Text(0.06775498163082591, 0.296875, 'gini = 0.0\nsamples = 5\nvalue =
[0, 5]'),
 Text(0.06797451984591162, 0.328125, 'gini = 0.0\nsamples = 7\nvalue =
[7, 0]'),
 Text(0.06863313449116873, 0.359375, 'x[6] <= 37.0\ngini = 0.095\
nsamples = 20\nvalue = [19, 1]'),
 Text(0.06841359627608302, 0.328125, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.06885267270625443, 0.328125, 'gini = 0.0\nsamples = 19\nvalue
= [19, 0]'),
 Text(0.06775498163082591, 0.484375, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.06841359627608302, 0.515625, 'x[4] <= 14.0\ngini = 0.444\
nsamples = 3\nvalue = [1, 2]'),
 Text(0.06819405806099732, 0.484375, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.06863313449116873, 0.484375, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.06907221092134014, 0.546875, 'x[10] <= 20.95\ngini = 0.444\
nsamples = 3\nvalue = [1, 2]'),
 Text(0.06885267270625443, 0.515625, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.06929174913642584, 0.515625, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.06973082556659727, 0.578125, 'x[10] <= 21.55\ngini = 0.5\
nsamples = 10\nvalue = [5, 5]'),
 Text(0.06951128735151156, 0.546875, 'gini = 0.0\nsamples = 5\nvalue =
[5, 0]'),
 Text(0.06995036378168297, 0.546875, 'gini = 0.0\nsamples = 5\nvalue =
[0, 5]'),
 Text(0.07619835920911358, 0.609375, 'x[6] <= 24.5\ngini = 0.085\
nsamples = 1016\nvalue = [971, 45]'),
 Text(0.07197766198661502, 0.578125, 'x[0] <= 15.05\ngini = 0.355\
nsamples = 13\nvalue = [10, 3]'),
 Text(0.07175812377152932, 0.546875, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.07219720020170073, 0.546875, 'x[9] <= 1010.35\ngini = 0.165\
nsamples = 11\nvalue = [10, 1]'),
 Text(0.07197766198661502, 0.515625, 'x[11] <= 32.3\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.07175812377152932, 0.484375, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.07219720020170073, 0.484375, 'gini = 0.0\nsamples = 1\nvalue =
```

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[1, 0]'),
 Text(0.07241673841678645, 0.515625, 'gini = 0.0\nsamples = 9\nvalue =
[9, 0]'),
 Text(0.08041905643161214, 0.578125, 'x[8] <= 1018.3\ngini = 0.08\
nsamples = 1003\nvalue = [961, 42]'),
 Text(0.07859360903674179, 0.546875, 'x[4] <= 30.5\ngini = 0.077\
nsamples = 996\nvalue = [956, 40]'),
 Text(0.0756013288922582, 0.515625, 'x[4] <= 3.0\ngini = 0.073\
nsamples = 980\nvalue = [943, 37]'),
 Text(0.07263627663187215, 0.484375, 'x[0] <= 14.05\ngini = 0.346\
nsamples = 9\nvalue = [7, 2]'),
 Text(0.07241673841678645, 0.453125, 'x[10] <= 18.3\ngini = 0.444\
nsamples = 3\nvalue = [1, 2]'),
 Text(0.07219720020170073, 0.421875, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.07263627663187215, 0.421875, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.07285581484695786, 0.453125, 'gini = 0.0\nsamples = 6\nvalue =
[6, 0]'),
 Text(0.07856638115264424, 0.484375, 'x[6] <= 76.5\ngini = 0.069\
nsamples = 971\nvalue = [936, 35]'),
 Text(0.07598594955423452, 0.453125, 'x[11] <= 35.65\ngini = 0.061\
nsamples = 917\nvalue = [888, 29]'),
 Text(0.07307535306204356, 0.421875, 'x[8] <= 1011.95\ngini = 0.058\
nsamples = 908\nvalue = [881, 27]'),
 Text(0.06995036378168297, 0.390625, 'x[1] <= 30.7\ngini = 0.119\
nsamples = 158\nvalue = [148, 10]'),
 Text(0.06951128735151156, 0.359375, 'x[7] <= 41.5\ngini = 0.025\
nsamples = 79\nvalue = [78, 1]'),
 Text(0.06929174913642584, 0.328125, 'gini = 0.0\nsamples = 69\nvalue
= [69, 0]'),
 Text(0.06973082556659727, 0.328125, 'x[1] <= 25.55\ngini = 0.18\
nsamples = 10\nvalue = [9, 1]'),
 Text(0.06951128735151156, 0.296875, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.06995036378168297, 0.296875, 'gini = 0.0\nsamples = 9\nvalue =
[9, 0]'),
 Text(0.07038944021185438, 0.359375, 'x[8] <= 1008.2\ngini = 0.202\
nsamples = 79\nvalue = [70, 9]'),
 Text(0.07016990199676867, 0.328125, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.07060897842694008, 0.328125, 'x[9] <= 1008.05\ngini = 0.184\
nsamples = 78\nvalue = [70, 8]'),
 Text(0.07038944021185438, 0.296875, 'gini = 0.0\nsamples = 25\nvalue
= [25, 0]'),
 Text(0.07082851664202579, 0.296875, 'x[6] <= 67.0\ngini = 0.256\
nsamples = 53\nvalue = [45, 8]'),
 Text(0.07016990199676867, 0.265625, 'x[0] <= 22.95\ngini = 0.198\
nsamples = 45\nvalue = [40, 5]'),
 Text(0.06951128735151156, 0.234375, 'x[8] <= 1011.75\ngini = 0.105\
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nsamples = 36\nvalue = [34, 2]'),
 Text(0.06929174913642584, 0.203125, 'gini = 0.0\nsamples = 29\nvalue
= [29, 0]'),
 Text(0.06973082556659727, 0.203125, 'x[5] <= 23.0\ngini = 0.408\
nsamples = 7\nvalue = [5, 2]'),
 Text(0.06951128735151156, 0.171875, 'gini = 0.0\nsamples = 4\nvalue =
[4, 0]'),
 Text(0.06995036378168297, 0.171875, 'x[1] <= 36.0\ngini = 0.444\
nsamples = 3\nvalue = [1, 2]'),
 Text(0.06973082556659727, 0.140625, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.07016990199676867, 0.140625, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.07082851664202579, 0.234375, 'x[6] <= 44.5\ngini = 0.444\
nsamples = 9\nvalue = [6, 3]'),
 Text(0.07060897842694008, 0.203125, 'x[9] <= 1009.7\ngini = 0.375\
nsamples = 4\nvalue = [1, 3]'),
 Text(0.07038944021185438, 0.171875, 'gini = 0.0\nsamples = 3\nvalue =
[0, 3]'),
 Text(0.07082851664202579, 0.171875, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.07104805485711149, 0.203125, 'gini = 0.0\nsamples = 5\nvalue =
[5, 0]'),
 Text(0.0714871312872829, 0.265625, 'x[6] <= 70.5\ngini = 0.469\
nsamples = 8\nvalue = [5, 3]'),
 Text(0.0712675930721972, 0.234375, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.0717066695023686, 0.234375, 'x[7] <= 33.5\ngini = 0.278\
nsamples = 6\nvalue = [5, 1]'),
 Text(0.0714871312872829, 0.203125, 'x[7] <= 31.0\ngini = 0.5\nsamples
= 2\nvalue = [1, 1]'),
 Text(0.0712675930721972, 0.171875, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.0717066695023686, 0.171875, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.07192620771745432, 0.203125, 'gini = 0.0\nsamples = 4\nvalue =
[4, 0]'),
 Text(0.07620034234240415, 0.390625, 'x[6] <= 59.5\ngini = 0.044\
nsamples = 750\nvalue = [733, 17]'),
 Text(0.07460182971381135, 0.359375, 'x[5] <= 25.0\ngini = 0.063\
nsamples = 459\nvalue = [444, 15]'),
 Text(0.07438229149872565, 0.328125, 'x[3] <= 38.0\ngini = 0.083\
nsamples = 344\nvalue = [329, 15]'),
 Text(0.07280436057779714, 0.296875, 'x[9] <= 1007.95\ngini = 0.025\
nsamples = 155\nvalue = [153, 2]'),
 Text(0.07236528414762573, 0.265625, 'x[3] <= 33.0\ngini = 0.444\
nsamples = 3\nvalue = [2, 1]'),
 Text(0.07214574593254003, 0.234375, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.07258482236271144, 0.234375, 'gini = 0.0\nsamples = 2\nvalue =

```
[2, 0]'),
 Text(0.07324343700796855, 0.265625, 'x[8] <= 1017.55\ngini = 0.013\
nsamples = 152\nvalue = [151, 1]'),
 Text(0.07302389879288285, 0.234375, 'gini = 0.0\nsamples = 149\nvalue
= [149, 0]'),
 Text(0.07346297522305426, 0.234375, 'x[10] <= 20.0\ngini = 0.444\
nsamples = 3\nvalue = [2, 1]'),
 Text(0.07324343700796855, 0.203125, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.07368251343813996, 0.203125, 'gini = 0.0\nsamples = 2\nvalue =
[2, 0]'),
 Text(0.07596022241965415, 0.296875, 'x[7] <= 40.5\ngini = 0.128\
nsamples = 189\nvalue = [176, 13]'),
 Text(0.0747802045135685, 0.265625, 'x[4] <= 5.0\ngini = 0.099\
nsamples = 173\nvalue = [164, 9]'),
 Text(0.07434112808339707, 0.234375, 'x[1] <= 33.25\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.07412158986831137, 0.203125, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.07456066629848279, 0.203125, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.0752192809437399, 0.234375, 'x[9] <= 1010.25\ngini = 0.089\
nsamples = 171\nvalue = [163, 8]'),
 Text(0.0749997427286542, 0.203125, 'gini = 0.0\nsamples = 54\nvalue =
[54, 0]'),
 Text(0.07543881915882561, 0.203125, 'x[9] <= 1010.65\ngini = 0.127\
nsamples = 117\nvalue = [109, 8]'),
 Text(0.07450578174471136, 0.171875, 'x[1] <= 34.0\ngini = 0.375\
nsamples = 16\nvalue = [12, 4]'),
 Text(0.07406670531453995, 0.140625, 'x[3] <= 40.0\ngini = 0.26\
nsamples = 13\nvalue = [11, 2]'),
 Text(0.07384716709945424, 0.109375, 'x[7] <= 29.5\ngini = 0.444\
nsamples = 3\nvalue = [1, 2]'),
 Text(0.07362762888436854, 0.078125, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.07406670531453995, 0.078125, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.07428624352962565, 0.109375, 'gini = 0.0\nsamples = 10\nvalue
= [10, 0]'),
 Text(0.07494485817488276, 0.140625, 'x[10] <= 24.6\ngini = 0.444\
nsamples = 3\nvalue = [1, 2]'),
 Text(0.07472531995979706, 0.109375, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.07516439638996848, 0.109375, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.07637185657293985, 0.171875, 'x[3] <= 45.0\ngini = 0.076\
nsamples = 101\nvalue = [97, 4]'),
 Text(0.0758230110352256, 0.140625, 'x[9] <= 1010.85\ngini = 0.027\
nsamples = 73\nvalue = [72, 1]'),
 Text(0.07560347282013989, 0.109375, 'x[11] <= 30.65\ngini = 0.278\
```

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nsamples = 6\nvalue = [5, 1]'),
 Text(0.07538393460505419, 0.078125, 'gini = 0.0\nsamples = 5\nvalue =
[5, 0]'),
 Text(0.0758230110352256, 0.078125, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.0760425492503113, 0.109375, 'gini = 0.0\nsamples = 67\nvalue =
[67, 0]'),
 Text(0.07692070211065412, 0.140625, 'x[8] <= 1016.1\ngini = 0.191\
nsamples = 28\nvalue = [25, 3]'),
 Text(0.07648162568048271, 0.109375, 'x[11] <= 24.45\ngini = 0.083\
nsamples = 23\nvalue = [22, 1]'),
 Text(0.076262087465397, 0.078125, 'x[0] <= 16.6\ngini = 0.444\
nsamples = 3\nvalue = [2, 1]'),
 Text(0.0760425492503113, 0.046875, 'gini = 0.0\nsamples = 2\nvalue =
[2, 0]'),
 Text(0.07648162568048271, 0.046875, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.07670116389556841, 0.078125, 'gini = 0.0\nsamples = 20\nvalue
= [20, 0]'),
 Text(0.07735977854082553, 0.109375, 'x[9] <= 1012.1\ngini = 0.48\
nsamples = 5\nvalue = [3, 2]'),
 Text(0.07714024032573982, 0.078125, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.07757931675591123, 0.078125, 'gini = 0.0\nsamples = 3\nvalue =
[3, 0]'),
 Text(0.07714024032573982, 0.265625, 'x[5] <= 16.0\ngini = 0.375\
nsamples = 16\nvalue = [12, 4]'),
 Text(0.07670116389556841, 0.234375, 'x[3] <= 44.5\ngini = 0.444\
nsamples = 3\nvalue = [1, 2]'),
 Text(0.07648162568048271, 0.203125, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.07692070211065412, 0.203125, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.07757931675591123, 0.234375, 'x[4] <= 25.0\ngini = 0.26\
nsamples = 13\nvalue = [11, 2]'),
 Text(0.07735977854082553, 0.203125, 'x[5] <= 23.0\ngini = 0.153\
nsamples = 12\nvalue = [11, 1]'),
 Text(0.07714024032573982, 0.171875, 'gini = 0.0\nsamples = 10\nvalue
= [10, 0]'),
 Text(0.07757931675591123, 0.171875, 'x[7] <= 41.5\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.07735977854082553, 0.140625, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.07779885497099695, 0.140625, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.07779885497099695, 0.203125, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.07482136792889706, 0.328125, 'gini = 0.0\nsamples = 115\nvalue
= [115, 0]'),
 Text(0.07779885497099695, 0.359375, 'x[0] <= 10.0\ngini = 0.014\
```

```
nsamples = 291\nvalue = [289, 2]'),
 Text(0.07735977854082553, 0.328125, 'x[10] <= 18.15\ngini = 0.444\
nsamples = 3\nvalue = [2, 1]'),
 Text(0.07714024032573982, 0.296875, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.07757931675591123, 0.296875, 'gini = 0.0\nsamples = 2\nvalue =
[2, 0]'),
 Text(0.07823793140116836, 0.328125, 'x[10] <= 28.85\ngini = 0.007\
nsamples = 288\nvalue = [287, 1]'),
 Text(0.07801839318608265, 0.296875, 'gini = 0.0\nsamples = 259\nvalue
= [259, 0]'),
 Text(0.07845746961625406, 0.296875, 'x[10] <= 28.95\ngini = 0.067\
nsamples = 29\nvalue = [28, 1]'),
 Text(0.07823793140116836, 0.265625, 'x[5] <= 20.5\ngini = 0.375\
nsamples = 4\nvalue = [3, 1]'),
 Text(0.07801839318608265, 0.234375, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.07845746961625406, 0.234375, 'gini = 0.0\nsamples = 3\nvalue =
[3, 0]'),
 Text(0.07867700783133977, 0.265625, 'gini = 0.0\nsamples = 25\nvalue
= [25, 0]'),
 Text(0.07889654604642547, 0.421875, 'x[12] <= 0.5\ngini = 0.346\
nsamples = 9\nvalue = [7, 2]'),
 Text(0.07867700783133977, 0.390625, 'x[4] <= 23.0\ngini = 0.219\
nsamples = 8\nvalue = [7, 1]'),
 Text(0.07845746961625406, 0.359375, 'gini = 0.0\nsamples = 6\nvalue =
[6, 0]'),
 Text(0.07889654604642547, 0.359375, 'x[1] <= 37.75\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.07867700783133977, 0.328125, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.07911608426151118, 0.328125, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.07911608426151118, 0.390625, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.08114681275105395, 0.453125, 'x[0] <= 26.0\ngini = 0.198\
nsamples = 54\nvalue = [48, 6]'),
 Text(0.08092727453596825, 0.421875, 'x[9] <= 1013.05\ngini = 0.171\
nsamples = 53\nvalue = [48, 5]'),
 Text(0.08032354444448256, 0.390625, 'x[10] <= 18.85\ngini = 0.145\
nsamples = 51\nvalue = [47, 4]'),
 Text(0.07977469890676829, 0.359375, 'x[2] <= 0.1\ngini = 0.408\
nsamples = 7\nvalue = [5, 2]'),
 Text(0.07955516069168259, 0.328125, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.079994237121854, 0.328125, 'gini = 0.0\nsamples = 5\nvalue =
[5, 0]'),
 Text(0.08087238998219683, 0.359375, 'x[9] <= 1012.55\ngini = 0.087\
nsamples = 44\nvalue = [42, 2]'),
 Text(0.08043331355202542, 0.328125, 'x[4] <= 18.0\ngini = 0.048\
```

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nsamples = 41\nvalue = [40, 1]'),
 Text(0.0802137753369397, 0.296875, 'gini = 0.0\nsamples = 36\nvalue =
[36, 0]'),
 Text(0.08065285176711112, 0.296875, 'x[9] <= 1010.85\ngini = 0.32\
nsamples = 5\nvalue = [4, 1]'),
 Text(0.08043331355202542, 0.265625, 'gini = 0.0\nsamples = 4\nvalue =
[4, 0]'),
 Text(0.08087238998219683, 0.265625, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.08131146641236824, 0.328125, 'x[1] <= 33.4\ngini = 0.444\
nsamples = 3\nvalue = [2, 1]'),
 Text(0.08109192819728253, 0.296875, 'gini = 0.0\nsamples = 2\nvalue =
[2, 0]'),
 Text(0.08153100462745394, 0.296875, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.08153100462745394, 0.390625, 'x[11] <= 31.75\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.08131146641236824, 0.359375, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.08175054284253964, 0.359375, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.08136635096613966, 0.421875, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.08158588918122536, 0.515625, 'x[9] <= 1008.35\ngini = 0.305\
nsamples = 16\nvalue = [13, 3]'),
 Text(0.08136635096613966, 0.484375, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.08180542739631107, 0.484375, 'x[7] <= 31.5\ngini = 0.231\
nsamples = 15\nvalue = [13, 2]'),
 Text(0.08158588918122536, 0.453125, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.08202496561139677, 0.453125, 'x[7] <= 41.0\ngini = 0.133\
nsamples = 14\nvalue = [13, 1]'),
 Text(0.08180542739631107, 0.421875, 'gini = 0.0\nsamples = 13\nvalue
= [13, 0]'),
 Text(0.08224450382648249, 0.421875, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.08224450382648249, 0.546875, 'x[3] <= 41.5\ngini = 0.408\
nsamples = 7\nvalue = [5, 2]'),
 Text(0.08202496561139677, 0.515625, 'gini = 0.0\nsamples = 5\nvalue =
[5, 0]'),
 Text(0.0824640420415682, 0.515625, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.07310180377228398, 0.640625, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.0733213419873697, 0.671875, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.08279334936419674, 0.703125, 'x[5] <= 18.0\ngini = 0.346\
nsamples = 54\nvalue = [42, 12]'),
 Text(0.08224450382648249, 0.671875, 'x[8] <= 1014.25\ngini = 0.497\
```

nsamples = 13\nvalue = [6, 7]'),
 Text(0.08202496561139677, 0.640625, 'x[8] <= 1011.95\ngini = 0.375\
nsamples = 8\nvalue = [6, 2]'),
 Text(0.08180542739631107, 0.609375, 'x[11] <= 25.3\ngini = 0.444\
nsamples = 3\nvalue = [1, 2]'),
 Text(0.08158588918122536, 0.578125, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.08202496561139677, 0.578125, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.08224450382648249, 0.609375, 'gini = 0.0\nsamples = 5\nvalue =
[5, 0]'),
 Text(0.0824640420415682, 0.640625, 'gini = 0.0\nsamples = 5\nvalue =
[0, 5]'),
 Text(0.08334219490191101, 0.671875, 'x[2] <= 0.1\ngini = 0.214\
nsamples = 41\nvalue = [36, 5]'),
 Text(0.0829031184717396, 0.640625, 'x[9] <= 1009.45\ngini = 0.111\
nsamples = 34\nvalue = [32, 2]'),
 Text(0.0826835802566539, 0.609375, 'x[4] <= 23.0\ngini = 0.375\
nsamples = 8\nvalue = [6, 2]'),
 Text(0.0824640420415682, 0.578125, 'gini = 0.0\nsamples = 5\nvalue =
[5, 0]'),
 Text(0.0829031184717396, 0.578125, 'x[10] <= 24.8\ngini = 0.444\
nsamples = 3\nvalue = [1, 2]'),
 Text(0.0826835802566539, 0.546875, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.08312265668682531, 0.546875, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.08312265668682531, 0.609375, 'gini = 0.0\nsamples = 26\nvalue
= [26, 0]'),
 Text(0.08378127133208242, 0.640625, 'x[6] <= 59.5\ngini = 0.49\
nsamples = 7\nvalue = [4, 3]'),
 Text(0.08356173311699672, 0.609375, 'gini = 0.0\nsamples = 4\nvalue =
[4, 0]'),
 Text(0.08400080954716813, 0.609375, 'gini = 0.0\nsamples = 3\nvalue =
[0, 3]'),
 Text(0.11897207876962551, 0.765625, 'x[0] <= 23.2\ngini = 0.068\
nsamples = 4456\nvalue = [4300, 156]'),
 Text(0.10884475303665946, 0.734375, 'x[2] <= 37.0\ngini = 0.066\
nsamples = 4450\nvalue = [4297, 153]'),
 Text(0.10862521482157375, 0.703125, 'x[9] <= 1017.45\ngini = 0.066\
nsamples = 4449\nvalue = [4297, 152]'),
 Text(0.08902917800089874, 0.671875, 'x[0] <= 0.4\ngini = 0.097\
nsamples = 1678\nvalue = [1592, 86]'),
 Text(0.08465942419242524, 0.640625, 'x[10] <= 6.8\ngini = 0.444\
nsamples = 15\nvalue = [10, 5]'),
 Text(0.08443988597733953, 0.609375, 'gini = 0.0\nsamples = 5\nvalue =
[5, 0]'),
 Text(0.08487896240751096, 0.609375, 'x[1] <= 16.5\ngini = 0.5\
nsamples = 10\nvalue = [5, 5]'),
 Text(0.08465942419242524, 0.578125, 'gini = 0.0\nsamples = 4\nvalue =

```
[0, 4]'),
 Text(0.08509850062259666, 0.578125, 'x[11] <= 19.65\ngini = 0.278\
nsamples = 6\nvalue = [5, 1]'),
 Text(0.08487896240751096, 0.546875, 'gini = 0.0\nsamples = 5\nvalue =
[5, 0]'),
 Text(0.08531803883768237, 0.546875, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.09339893180937223, 0.640625, 'x[8] <= 1018.85\ngini = 0.093\
nsamples = 1663\nvalue = [1582, 81]'),
 Text(0.08803653939167333, 0.609375, 'x[6] <= 31.0\ngini = 0.054\
nsamples = 964\nvalue = [937, 27]'),
 Text(0.08597665348293948, 0.578125, 'x[11] <= 25.15\ngini = 0.32\
nsamples = 10\nvalue = [8, 2]'),
 Text(0.08575711526785378, 0.546875, 'gini = 0.0\nsamples = 7\nvalue =
[7, 0]'),
 Text(0.08619619169802518, 0.546875, 'x[7] <= 39.0\ngini = 0.444\
nsamples = 3\nvalue = [1, 2]'),
 Text(0.08597665348293948, 0.515625, 'gini = 0.0\nsamples = 2\nvalue =
[0, 2]'),
 Text(0.08641572991311089, 0.515625, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.09009642530040718, 0.578125, 'x[4] <= 32.0\ngini = 0.051\
nsamples = 954\nvalue = [929, 25]'),
 Text(0.08879634743294651, 0.546875, 'x[11] <= 20.85\ngini = 0.048\
nsamples = 941\nvalue = [918, 23]'),
 Text(0.0868548063432823, 0.515625, 'x[10] <= 16.95\ngini = 0.093\
nsamples = 265\nvalue = [252, 13]'),
 Text(0.08531803883768237, 0.484375, 'x[9] <= 1014.75\ngini = 0.07\
nsamples = 246\nvalue = [237, 9]'),
 Text(0.08400080954716813, 0.453125, 'x[4] <= 29.0\ngini = 0.145\
nsamples = 89\nvalue = [82, 7]'),
 Text(0.08378127133208242, 0.421875, 'x[8] <= 1017.75\ngini = 0.127\
nsamples = 88\nvalue = [82, 6]'),
 Text(0.0826835802566539, 0.390625, 'x[4] <= 5.0\ngini = 0.055\
nsamples = 71\nvalue = [69, 2]'),
 Text(0.08224450382648249, 0.359375, 'x[6] <= 75.0\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.08202496561139677, 0.328125, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.0824640420415682, 0.328125, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.08312265668682531, 0.359375, 'x[9] <= 1014.65\ngini = 0.029\
nsamples = 69\nvalue = [68, 1]'),
 Text(0.0829031184717396, 0.328125, 'gini = 0.0\nsamples = 66\nvalue =
[66, 0]'),
 Text(0.08334219490191101, 0.328125, 'x[8] <= 1016.65\ngini = 0.444\
nsamples = 3\nvalue = [2, 1]'),
 Text(0.08312265668682531, 0.296875, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.08356173311699672, 0.296875, 'gini = 0.0\nsamples = 2\nvalue =
```

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[2, 0]'),
 Text(0.08487896240751096, 0.390625, 'x[10] <= 13.0\ngini = 0.36\
nsamples = 17\nvalue = [13, 4]'),
 Text(0.08443988597733953, 0.359375, 'x[6] <= 52.5\ngini = 0.153\
nsamples = 12\nvalue = [11, 1]'),
 Text(0.08422034776225383, 0.328125, 'x[6] <= 49.5\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.08400080954716813, 0.296875, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.08443988597733953, 0.296875, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.08465942419242524, 0.328125, 'gini = 0.0\nsamples = 10\nvalue
= [10, 0]'),
 Text(0.08531803883768237, 0.359375, 'x[1] <= 20.05\ngini = 0.48\
nsamples = 5\nvalue = [2, 3]'),
 Text(0.08509850062259666, 0.328125, 'gini = 0.0\nsamples = 2\nvalue =
[2, 0]'),
 Text(0.08553757705276807, 0.328125, 'gini = 0.0\nsamples = 3\nvalue =
[0, 3]'),
 Text(0.08422034776225383, 0.421875, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.0866352681281966, 0.453125, 'x[7] <= 29.5\ngini = 0.025\
nsamples = 157\nvalue = [155, 2]'),
 Text(0.08619619169802518, 0.421875, 'x[0] <= 8.4\ngini = 0.198\
nsamples = 9\nvalue = [8, 1]'),
 Text(0.08597665348293948, 0.390625, 'x[9] <= 1016.2\ngini = 0.5\
nsamples = 2\nvalue = [1, 1]'),
 Text(0.08575711526785378, 0.359375, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.08619619169802518, 0.359375, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.08641572991311089, 0.390625, 'gini = 0.0\nsamples = 7\nvalue =
[7, 0]'),
 Text(0.087074344558368, 0.421875, 'x[9] <= 1017.25\ngini = 0.013\
nsamples = 148\nvalue = [147, 1]'),
 Text(0.0868548063432823, 0.390625, 'gini = 0.0\nsamples = 139\nvalue
= [139, 0]'),
 Text(0.08729388277345371, 0.390625, 'x[0] <= 12.15\ngini = 0.198\
nsamples = 9\nvalue = [8, 1]'),
 Text(0.087074344558368, 0.359375, 'gini = 0.0\nsamples = 7\nvalue =
[7, 0]'),
 Text(0.08751342098853943, 0.359375, 'x[2] <= 1.1\ngini = 0.5\nsamples
= 2\nvalue = [1, 1]'),
 Text(0.08729388277345371, 0.328125, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.08773295920362513, 0.328125, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.08839157384888224, 0.484375, 'x[10] <= 17.85\ngini = 0.332\
nsamples = 19\nvalue = [15, 4]'),
 Text(0.08817203563379654, 0.453125, 'x[8] <= 1016.25\ngini = 0.48\
```
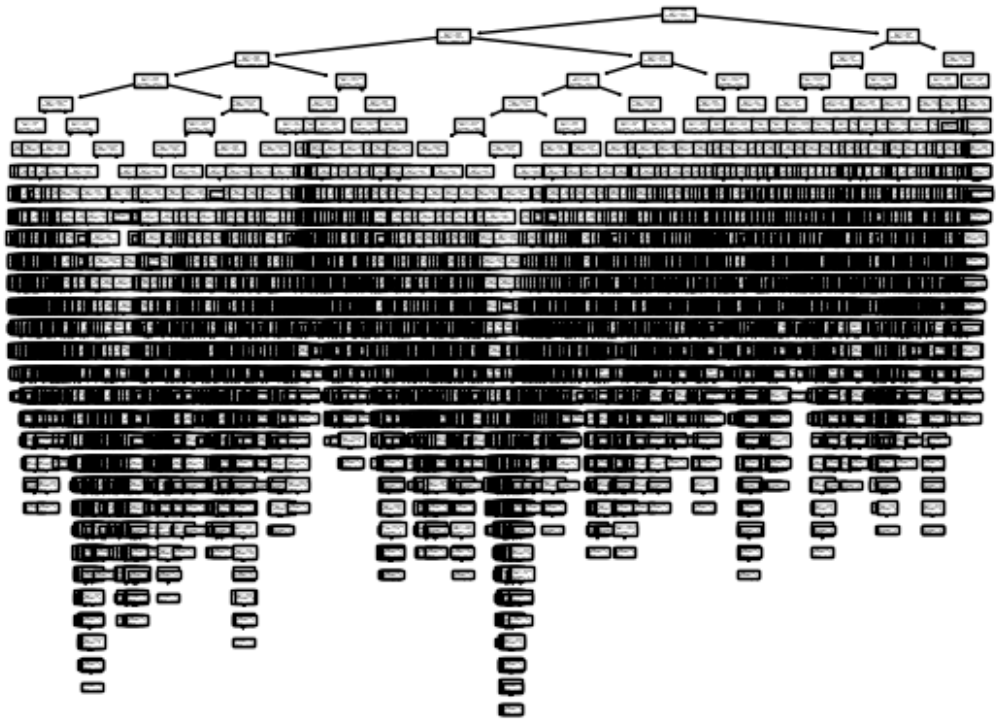

```
nsamples = 10\nvalue = [6, 4]'),
 Text(0.08795249741871083, 0.421875, 'x[5] <= 28.0\ngini = 0.32\
nsamples = 5\nvalue = [1, 4]'),
 Text(0.08773295920362513, 0.390625, 'gini = 0.0\nsamples = 4\nvalue =
[0, 4]'),
 Text(0.08817203563379654, 0.390625, 'gini = 0.0\nsamples = 1\nvalue =
[1, 0]'),
 Text(0.08839157384888224, 0.421875, 'gini = 0.0\nsamples = 5\nvalue =
[5, 0]'),
 Text(0.08861111206396795, 0.453125, 'gini = 0.0\nsamples = 9\nvalue =
[9, 0]'),
 Text(0.09073788852261072, 0.515625, 'x[0] <= 22.25\ngini = 0.029\
nsamples = 676\nvalue = [666, 10]'),
 Text(0.0899557836313679, 0.484375, 'x[0] <= 6.75\ngini = 0.027\
nsamples = 670\nvalue = [661, 9]'),
 Text(0.08905018849413936, 0.453125, 'x[3] <= 23.0\ngini = 0.137\
nsamples = 27\nvalue = [25, 2]'),
 Text(0.08883065027905365, 0.421875, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.08926972670922506, 0.421875, 'x[3] <= 51.0\ngini = 0.074\
nsamples = 26\nvalue = [25, 1]'),
 Text(0.08905018849413936, 0.390625, 'gini = 0.0\nsamples = 25\nvalue
= [25, 0]'),
 Text(0.08948926492431077, 0.390625, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.09086137876859643, 0.453125, 'x[9] <= 1016.95\ngini = 0.022\
nsamples = 643\nvalue = [636, 7]'),
 Text(0.09014787956956789, 0.421875, 'x[0] <= 15.05\ngini = 0.019\
nsamples = 630\nvalue = [624, 6]'),
 Text(0.08992834135448217, 0.390625, 'x[0] <= 14.55\ngini = 0.03\
nsamples = 390\nvalue = [384, 6]'),
 Text(0.08915995760168222, 0.359375, 'x[4] <= 27.0\ngini = 0.016\
nsamples = 365\nvalue = [362, 3]'),
 Text(0.08872088117151081, 0.328125, 'x[7] <= 30.5\ngini = 0.011\
nsamples = 350\nvalue = [348, 2]'),
 Text(0.08850134295642509, 0.296875, 'x[8] <= 1016.05\ngini = 0.052\
nsamples = 75\nvalue = [73, 2]'),
 Text(0.08806226652625368, 0.265625, 'x[5] <= 25.0\ngini = 0.444\
nsamples = 3\nvalue = [2, 1]'),
 Text(0.08784272831116798, 0.234375, 'gini = 0.0\nsamples = 2\nvalue =
[2, 0]'),
 Text(0.08828180474133938, 0.234375, 'gini = 0.0\nsamples = 1\nvalue =
[0, 1]'),
 Text(0.08894041938659651, 0.265625, 'x[0] <= 14.15\ngini = 0.027\
nsamples = 72\nvalue = [71, 1]'),
 Text(0.08872088117151081, 0.234375, 'gini = 0.0\nsamples = 61\nvalue
= [61, 0]'),
 Text(0.08915995760168222, 0.234375, 'x[10] <= 16.3\ngini = 0.165\
nsamples = 11\nvalue = [10, 1]'),
 Text(0.08894041938659651, 0.203125, 'gini = 0.0\nsamples = 1\nvalue =
```

```
[0, 1]'),
 Text(0.08937949581676792, 0.203125, 'gini = 0.0\nsamples = 10\nvalue
= [10, 0]'),
 ...]
```



Accuracy of the tree classifier:

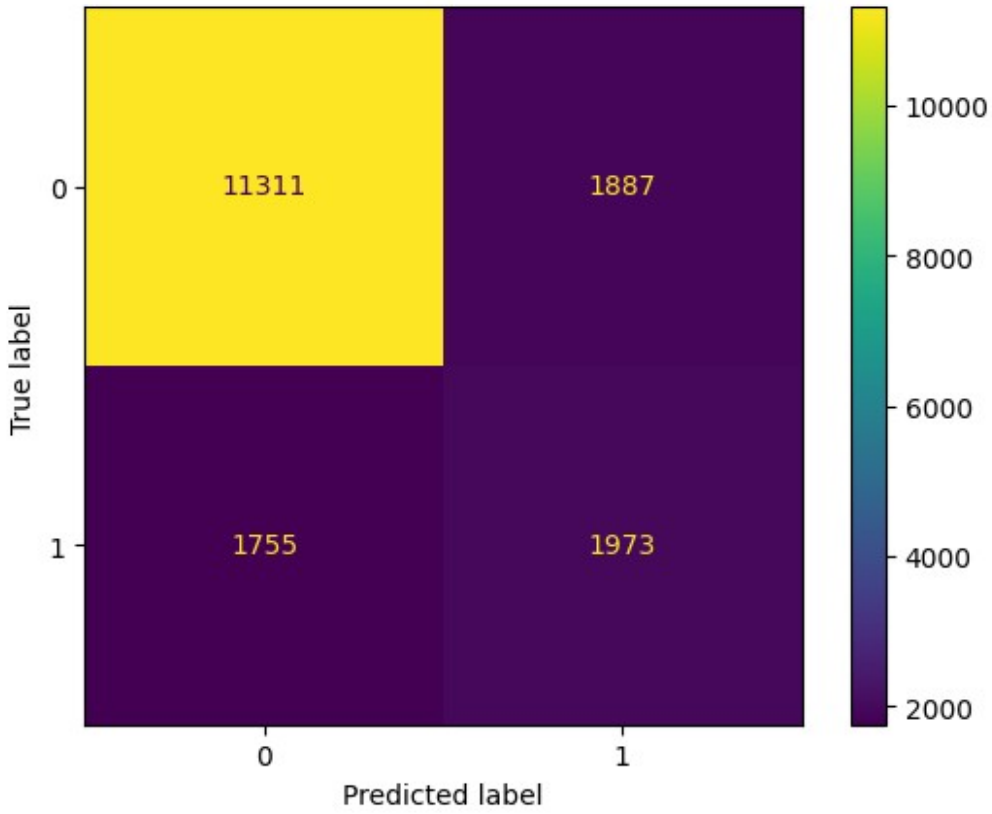
```
clf.score(X_test, y_test)
```

```
0.7848280751506558
```

Confusion matrix:

```
predictions = clf.predict(X_test)
cm = confusion_matrix(y_test, predictions)
disp = ConfusionMatrixDisplay(confusion_matrix=cm,
display_labels=clf.classes_)
disp.plot()
```

```
<sklearn.metrics._plot.confusion_matrix.ConfusionMatrixDisplay at
0x12b76bd0bd0>
```



Bayes classifier:

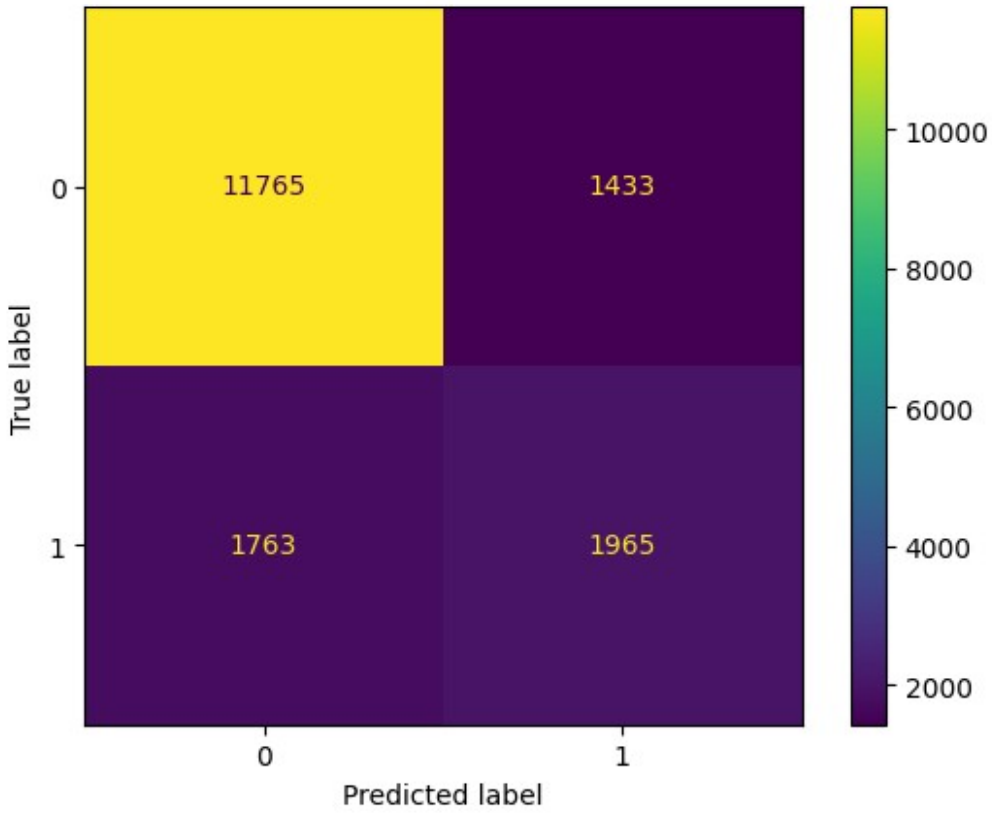
```
model = GaussianNB()
model.fit(X_train, y_train)
model.score(X_test, y_test)
```

```
0.8111780692425854
```

Confusion matrix:

```
predictions = model.predict(X_test)
cm = confusion_matrix(y_test, predictions)
disp = ConfusionMatrixDisplay(confusion_matrix=cm,
display_labels=clf.classes_)
disp.plot()
```

```
<sklearn.metrics._plot.confusion_matrix.ConfusionMatrixDisplay at
0x12b7787c690>
```



k nearest neighbors classifier with 3 neighbors:

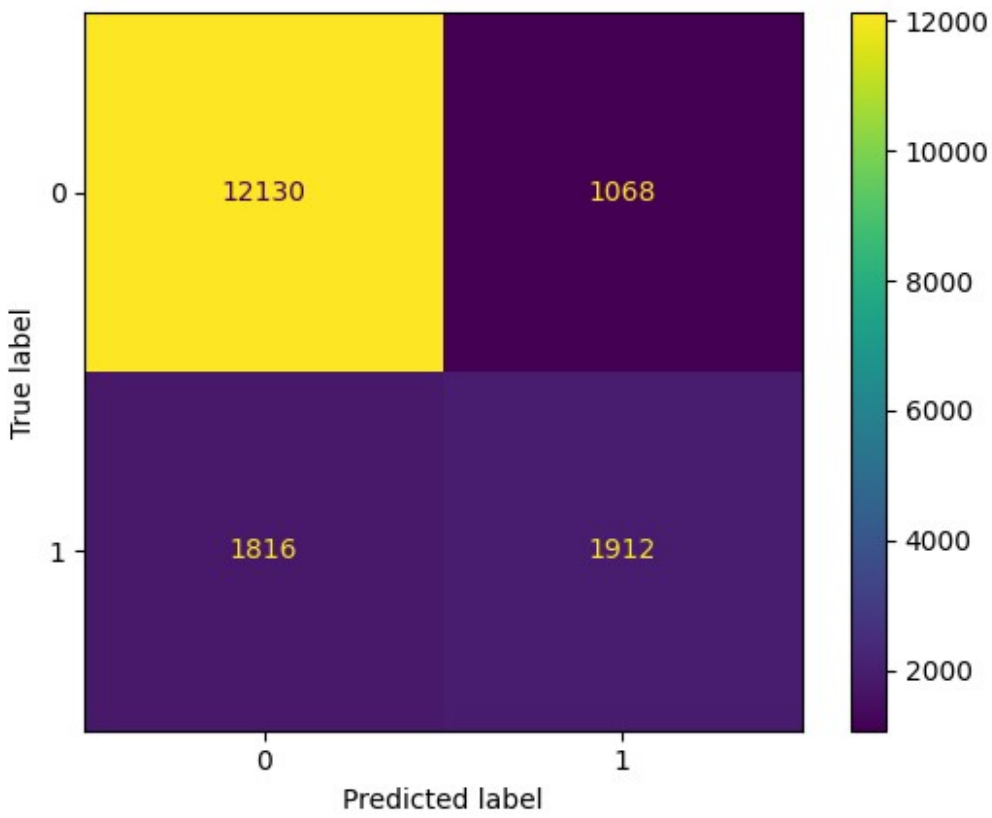
```
knn = KNeighborsClassifier(n_neighbors=3, metric='euclidean')
knn.fit(X_train, y_train)
knn.score(X_test, y_test)
```

```
0.8296112489660876
```

Confusion matrix:

```
predictions = knn.predict(X_test)
cm = confusion_matrix(y_test, predictions)
disp = ConfusionMatrixDisplay(confusion_matrix=cm,
display_labels=clf.classes_)
disp.plot()
```

```
<sklearn.metrics._plot.confusion_matrix.ConfusionMatrixDisplay at
0x12b77727a50>
```



k nearest neighbors classifier with 5 neighbors:

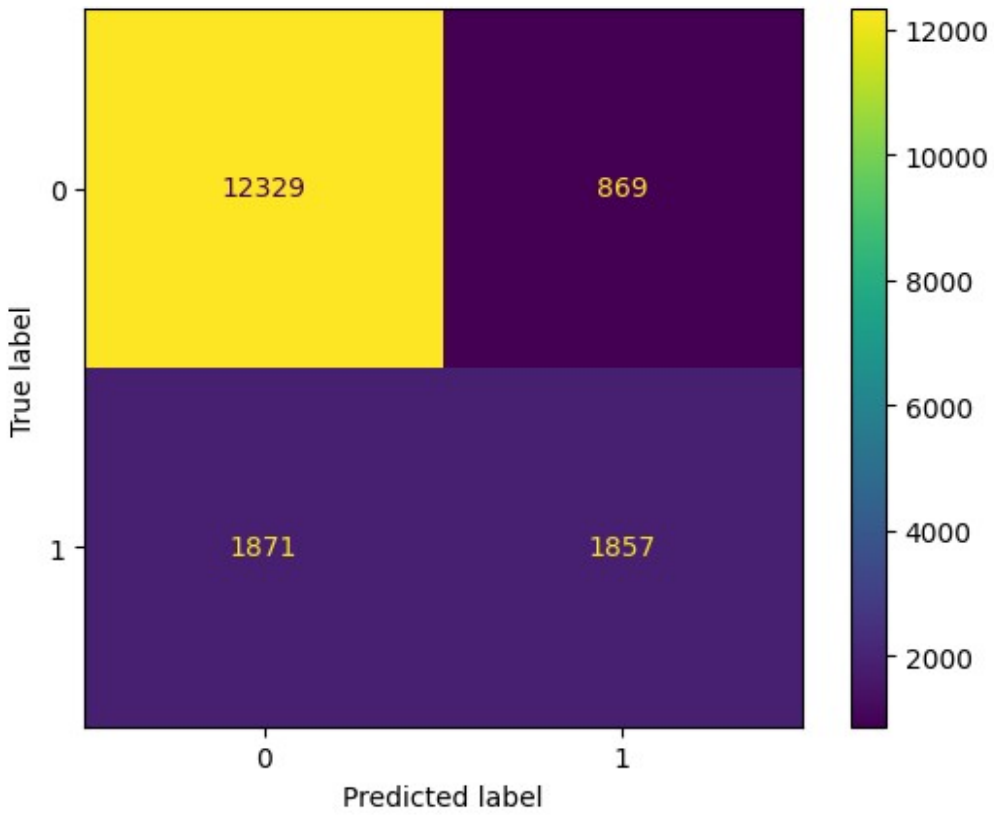
```
knn = KNeighborsClassifier(n_neighbors=5, metric='euclidean')
knn.fit(X_train, y_train)
knn.score(X_test, y_test)
```

```
0.8381188703769349
```

confusion matrix:

```
predictions = knn.predict(X_test)
cm = confusion_matrix(y_test, predictions)
disp = ConfusionMatrixDisplay(confusion_matrix=cm,
display_labels=clf.classes_)
disp.plot()
```

```
<sklearn.metrics._plot.confusion_matrix.ConfusionMatrixDisplay at
0x12b772a2610>
```



splitting the data into training and testing sets

```
X = res_data.drop(['RainTomorrow', 'Date'], axis=1)
y = res_data['RainTomorrow'].astype('int')

X_train, X_test, y_train, y_test = train_test_split(X, y,
train_size=0.7, random_state=278823)

X_train = tf.convert_to_tensor(X_train, dtype=tf.float32)
X_test = tf.convert_to_tensor(X_test, dtype=tf.float32)
y_train = tf.convert_to_tensor(y_train, dtype=tf.float32)
y_test = tf.convert_to_tensor(y_test, dtype=tf.float32)
```

creating the neural network

```
model = Sequential()
model.add(Dense(8, input_dim=X_train.shape[1], activation='relu'))
model.add(Dense(6, activation='relu'))
model.add(Dense(4, activation='relu'))
model.add(Dense(1, activation='sigmoid'))

model.compile(loss='binary_crossentropy', optimizer='adam',
metrics=['accuracy'])

history = model.fit(X_train, y_train, epochs=250, verbose=0,
validation_data=(X_test, y_test))
```

accuracy of the neural network

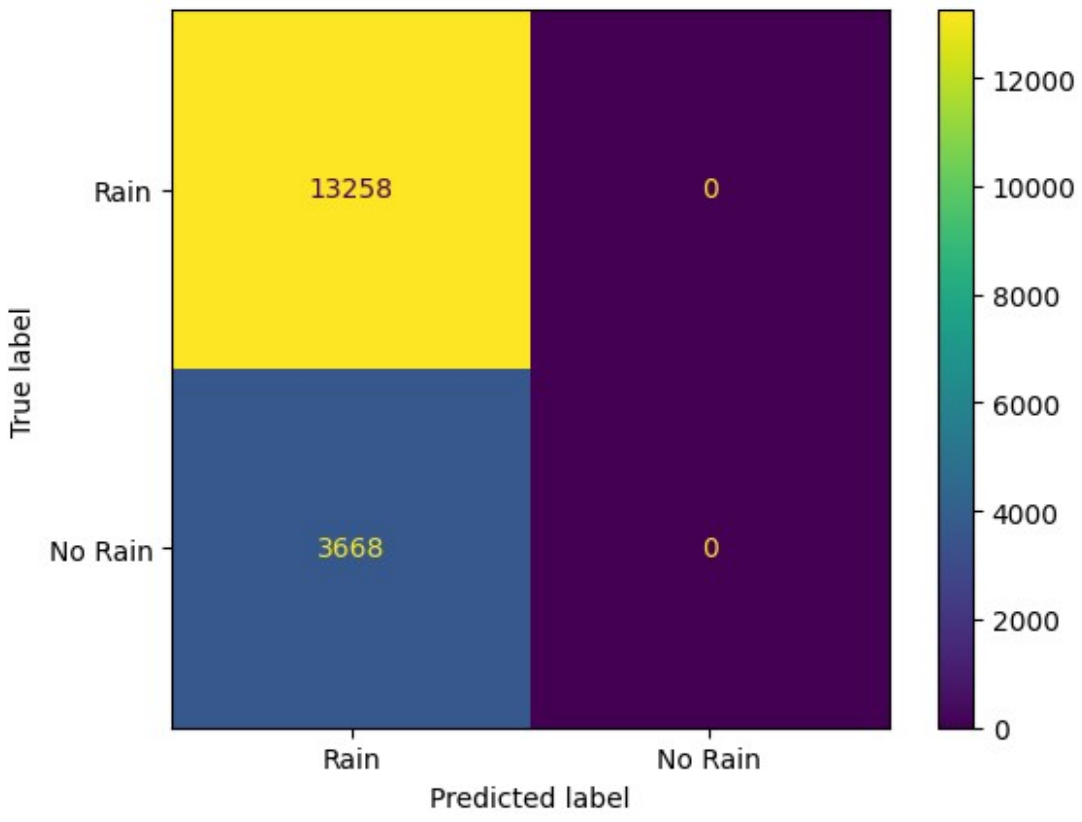
```
predictions_train = model.predict(X_train).round()
print(accuracy_score(predictions_train, y_train))

predictions_test = model.predict(X_test).round()
print(accuracy_score(predictions_test, y_test))
```

```
1235/1235 [==============================] - 2s 1ms/step
0.7782194763761584
529/529 [==============================] - 1s 2ms/step
0.7832919768403639
```

confusion matrix

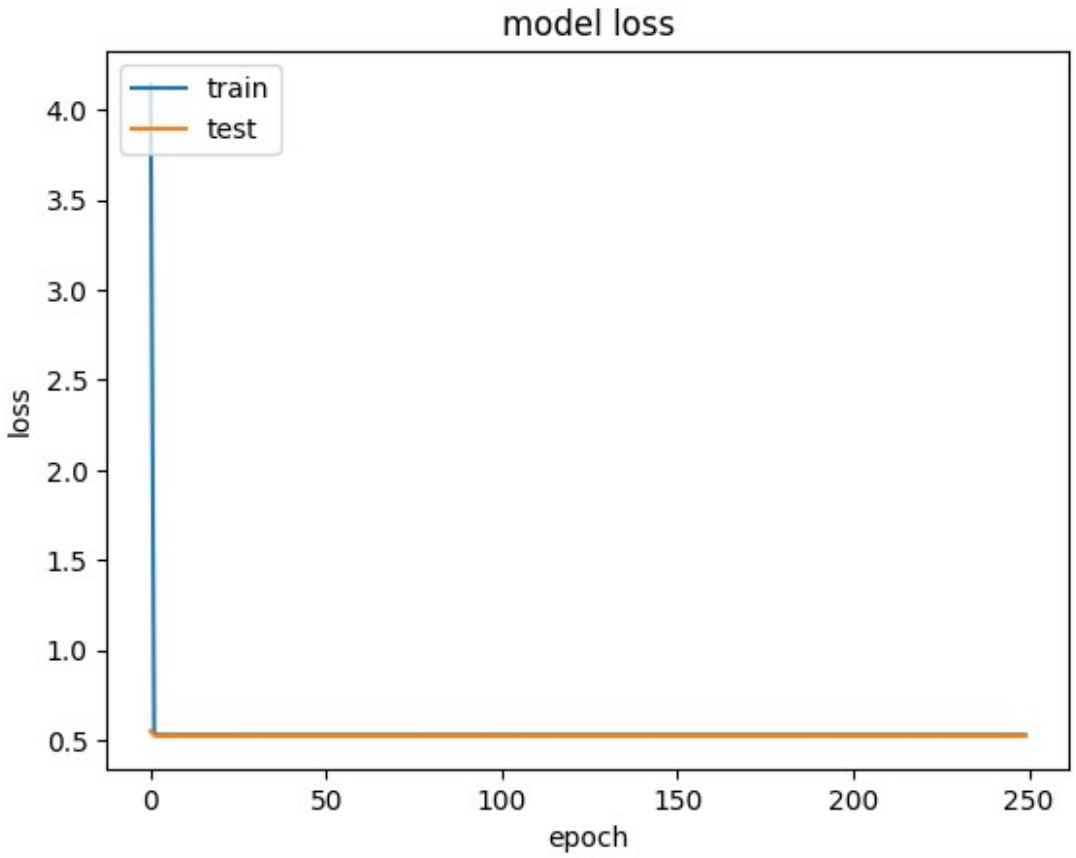
```
cm = confusion_matrix(y_test, predictions_test)
disp = ConfusionMatrixDisplay(confusion_matrix=cm,
display_labels=['Rain', 'No Rain'])
disp.plot()
```

```
<sklearn.metrics._plot.confusion_matrix.ConfusionMatrixDisplay at
0x12b6b19d6d0>
```



plotting the model loss

```
plt.plot(history.history['loss'])
plt.plot(history.history['val_loss'])
plt.title('model loss')
plt.ylabel('loss')
plt.xlabel('epoch')
plt.legend(['train', 'test'], loc='upper left')
plt.show()
```



Preprocessing

removing columns with all 0 values

```
zero_cols = [col for col in res_data.columns if (res_data[col] ==
0).all()]

print(zero_cols)
print(res_data.shape)
```

```
[]
(56420, 15)
```

```
res_data = res_data.drop(zero_cols, axis=1)
res_data = res_data.drop(['Date'], axis=1)
print(res_data.shape)
```

```
(56420, 14)
```

normalizing the data into a range of 0 to 1

```
scaler = MinMaxScaler()

scaler.fit(res_data)

res_data_scaled = scaler.transform(res_data)

res_data = pd.DataFrame(res_data_scaled, columns=res_data.columns)

res_data.head()
```

```
    MinTemp   MaxTemp  Rainfall  WindGustSpeed  WindSpeed9am
WindSpeed3pm  \
0  0.645669  0.706818       0.0       0.339130      0.061538
0.243243
1  0.658793  0.563636       0.0       0.243478      0.261538
0.229730
2  0.685039  0.761364       0.0       0.321739      0.430769
0.175676
3  0.750656  0.779545       0.0       0.191304      0.061538
0.054054
4  0.811024  0.838636       0.0       0.226087      0.230769
0.148649

   Humidity9am  Humidity3pm  Pressure9am  Pressure3pm   Temp9am
Temp3pm  \
0         0.20         0.13     0.430718     0.441748  0.680798
0.700472
1         0.30         0.08     0.540902     0.566343  0.523691
0.549528
2         0.42         0.22     0.530885     0.519417  0.733167
0.735849
3         0.37         0.22     0.537563     0.517799  0.743142
0.752358
4         0.19         0.15     0.504174     0.490291  0.855362
0.799528

   RainToday  RainTomorrow
0        0.0           0.0
1        0.0           0.0
2        0.0           0.0
3        0.0           0.0
4        0.0           0.0
```

using PCA to reduce the number of features

```
X = res_data.drop(['RainTomorrow'], axis=1)
y = res_data['RainTomorrow'].astype('int')
```

```
X_train, X_test, y_train, y_test = train_test_split(X, y,
train_size=0.7, random_state=278823)

X_train = tf.convert_to_tensor(X_train, dtype=tf.float32)
X_test = tf.convert_to_tensor(X_test, dtype=tf.float32)
y_train = tf.convert_to_tensor(y_train, dtype=tf.float32)
y_test = tf.convert_to_tensor(y_test, dtype=tf.float32)
```

creating the neural network

```
model = Sequential()
model.add(Dense(20, input_dim=X_train.shape[1], activation='relu'))
model.add(Dense(1, activation='sigmoid'))

model.compile(loss='binary_crossentropy', optimizer='adam',
metrics=['accuracy'])

history = model.fit(X_train, y_train, epochs=250, verbose=0,
validation_data=(X_test, y_test))
```

accuracy of the neural network

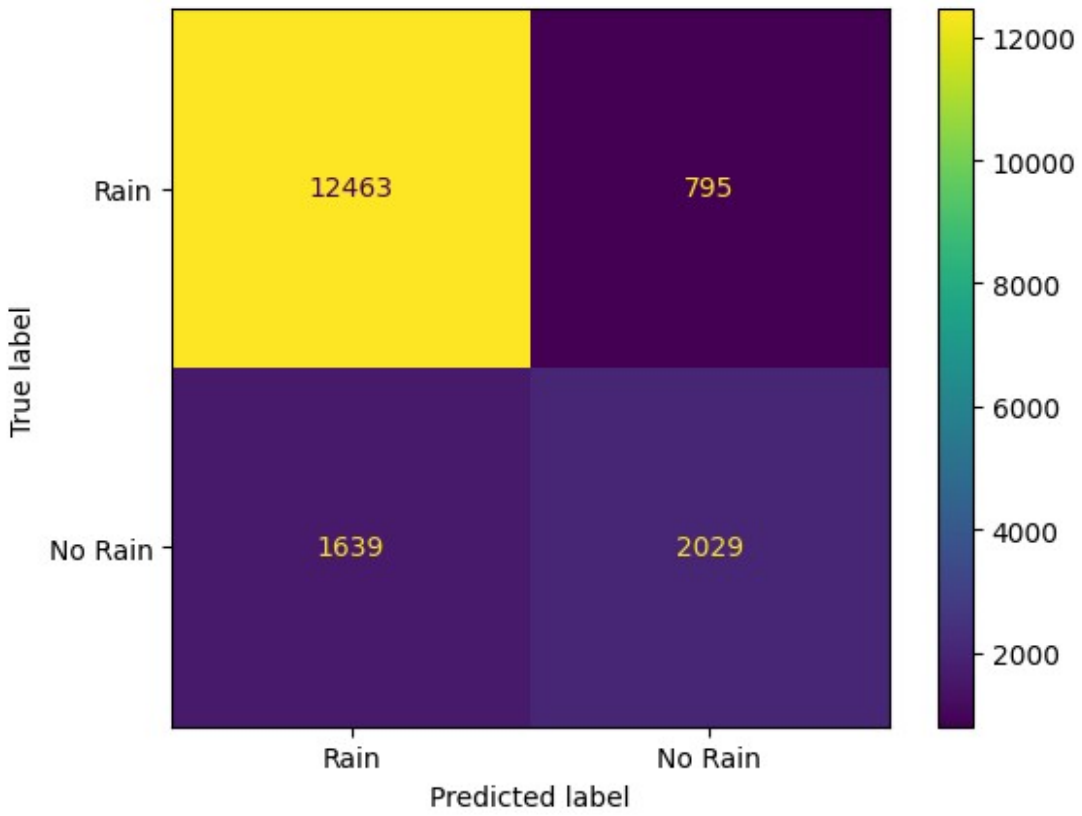
```
predictions_train = model.predict(X_train).round()
print(accuracy_score(predictions_train, y_train))

predictions_test = model.predict(X_test).round()
print(accuracy_score(predictions_test, y_test))
```

```
1235/1235 [==============================] - 2s 1ms/step
0.8534460930774295
529/529 [==============================] - 1s 1ms/step
0.8561975658749852
```

confusion matrix

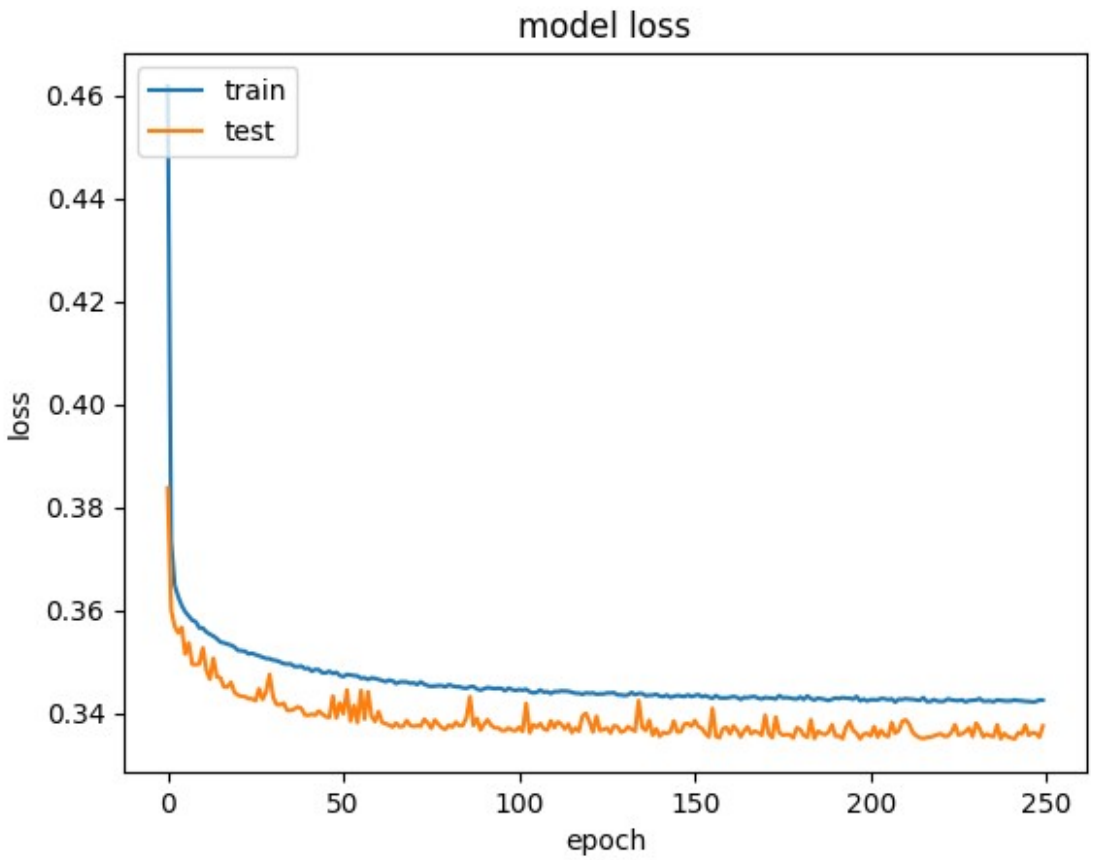
```
cm = confusion_matrix(y_test, predictions_test)
disp = ConfusionMatrixDisplay(confusion_matrix=cm,
display_labels=['Rain', 'No Rain'])
disp.plot()
```

```
<sklearn.metrics._plot.confusion_matrix.ConfusionMatrixDisplay at
0x12b7fe36610>
```



plotting the model loss

```
plt.plot(history.history['loss'])
plt.plot(history.history['val_loss'])
plt.title('model loss')
plt.ylabel('loss')
plt.xlabel('epoch')
plt.legend(['train', 'test'], loc='upper left')
plt.show()
```



tree classifier

```
clf = tree.DecisionTreeClassifier()
clf = clf.fit(X_train, y_train)

tree.plot_tree(clf)
```

```
[Text(0.6737990237122152, 0.9857142857142858, 'x[7] <= 0.695\ngini =
0.345\nsamples = 39494\nvalue = [30735, 8759]'),
 Text(0.43975663431741563, 0.9571428571428572, 'x[7] <= 0.535\ngini =
0.241\nsamples = 33180\nvalue = [28520, 4660]'),
 Text(0.23964973107470428, 0.9285714285714286, 'x[3] <= 0.413\ngini =
0.157\nsamples = 22207\nvalue = [20301, 1906]'),
 Text(0.14006035305517314, 0.9, 'x[7] <= 0.425\ngini = 0.122\nsamples
= 19646\nvalue = [18363, 1283]'),
 Text(0.0454350313940252, 0.8714285714285714, 'x[9] <= 0.494\ngini =
0.081\nsamples = 12053\nvalue = [11543, 510]'),
 Text(0.015243698378913833, 0.8428571428571429, 'x[7] <= 0.275\ngini =
0.193\nsamples = 1149\nvalue = [1025, 124]'),
 Text(0.008165669384094347, 0.8142857142857143, 'x[6] <= 0.815\ngini =
0.097\nsamples = 665\nvalue = [631, 34]'),
 Text(0.006993025715165389, 0.7857142857142857, 'x[4] <= 0.492\ngini =
0.09\nsamples = 658\nvalue = [627, 31]'),
 Text(0.005333119151841291, 0.7571428571428571, 'x[3] <= 0.348\ngini =
```

0.082\nsamples = 650\nvalue = [622, 28]'),
 Text(0.0026986867997269184, 0.7285714285714285, 'x[0] <= 0.5\ngini =
0.047\nsamples = 452\nvalue = [441, 11]'),
 Text(0.0009138410327117608, 0.7, 'x[9] <= 0.414\ngini = 0.183\
nsamples = 49\nvalue = [44, 5]'),
 Text(0.0004569205163558804, 0.6714285714285714, 'x[5] <= 0.203\ngini
= 0.444\nsamples = 3\nvalue = [1, 2]'),
 Text(0.0002284602581779402, 0.6428571428571429, 'gini = 0.0\nsamples
= 1\nvalue = [1, 0]'),
 Text(0.0006853807745338206, 0.6428571428571429, 'gini = 0.0\nsamples
= 2\nvalue = [0, 2]'),
 Text(0.0013707615490676413, 0.6714285714285714, 'x[3] <= 0.3\ngini =
0.122\nsamples = 46\nvalue = [43, 3]'),
 Text(0.001142301290889701, 0.6428571428571429, 'gini = 0.0\nsamples =
34\nvalue = [34, 0]'),
 Text(0.0015992218072455814, 0.6428571428571429, 'x[7] <= 0.195\ngini
= 0.375\nsamples = 12\nvalue = [9, 3]'),
 Text(0.0013707615490676413, 0.6142857142857143, 'gini = 0.0\nsamples
= 9\nvalue = [9, 0]'),
 Text(0.0018276820654235216, 0.6142857142857143, 'gini = 0.0\nsamples
= 3\nvalue = [0, 3]'),
 Text(0.004483532566742076, 0.7, 'x[8] <= 0.555\ngini = 0.029\nsamples
= 403\nvalue = [397, 6]'),
 Text(0.0037124791953915283, 0.6714285714285714, 'x[5] <= 0.162\ngini
= 0.025\nsamples = 400\nvalue = [395, 5]'),
 Text(0.0028557532272242524, 0.6428571428571429, 'x[3] <= 0.33\ngini =
0.055\nsamples = 141\nvalue = [137, 4]'),
 Text(0.002284602581779402, 0.6142857142857143, 'x[10] <= 0.819\ngini
= 0.044\nsamples = 134\nvalue = [131, 3]'),
 Text(0.0018276820654235216, 0.5857142857142857, 'x[0] <= 0.576\ngini
= 0.018\nsamples = 112\nvalue = [111, 1]'),
 Text(0.0015992218072455814, 0.5571428571428572, 'x[0] <= 0.573\ngini
= 0.133\nsamples = 14\nvalue = [13, 1]'),
 Text(0.0013707615490676413, 0.5285714285714286, 'gini = 0.0\nsamples
= 13\nvalue = [13, 0]'),
 Text(0.0018276820654235216, 0.5285714285714286, 'gini = 0.0\nsamples
= 1\nvalue = [0, 1]'),
 Text(0.002056142323601462, 0.5571428571428572, 'gini = 0.0\nsamples =
98\nvalue = [98, 0]'),
 Text(0.0027415230981352825, 0.5857142857142857, 'x[10] <= 0.822\ngini
= 0.165\nsamples = 22\nvalue = [20, 2]'),
 Text(0.0025130628399573423, 0.5571428571428572, 'gini = 0.0\nsamples
= 1\nvalue = [0, 1]'),
 Text(0.0029699833563132227, 0.5571428571428572, 'x[6] <= 0.255\ngini
= 0.091\nsamples = 21\nvalue = [20, 1]'),
 Text(0.0027415230981352825, 0.5285714285714286, 'gini = 0.0\nsamples
= 17\nvalue = [17, 0]'),
 Text(0.0031984436144911163, 0.5285714285714286, 'x[10] <= 0.843\ngini
= 0.375\nsamples = 4\nvalue = [3, 1]'),
 Text(0.0029699833563132227, 0.5, 'gini = 0.0\nsamples = 3\nvalue =

```
[3, 0]'),
 Text(0.003426903872669103, 0.5, 'gini = 0.0\nsamples = 1\nvalue = [0,
1]'),
 Text(0.003426903872669103, 0.6142857142857143, 'x[10] <= 0.613\ngini
= 0.245\nsamples = 7\nvalue = [6, 1]'),
 Text(0.003198443614491163, 0.5857142857142857, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.003655364130847043, 0.5857142857142857, 'gini = 0.0\nsamples =
6\nvalue = [6, 0]'),
 Text(0.004569205163558804, 0.6428571428571429, 'x[9] <= 0.396\ngini =
0.008\nsamples = 259\nvalue = [258, 1]'),
 Text(0.004340744905380864, 0.6142857142857143, 'x[8] <= 0.427\ngini =
0.153\nsamples = 12\nvalue = [11, 1]'),
 Text(0.004112284647202924, 0.5857142857142857, 'gini = 0.0\nsamples =
11\nvalue = [11, 0]'),
 Text(0.004569205163558804, 0.5857142857142857, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.004797665421736744, 0.6142857142857143, 'gini = 0.0\nsamples =
247\nvalue = [247, 0]'),
 Text(0.005254585938092624, 0.6714285714285714, 'x[0] <= 0.612\ngini =
0.444\nsamples = 3\nvalue = [2, 1]'),
 Text(0.005026125679914685, 0.6428571428571429, 'gini = 0.0\nsamples =
2\nvalue = [2, 0]'),
 Text(0.005483046196270565, 0.6428571428571429, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.007967551503955665, 0.7285714285714285, 'x[7] <= 0.165\ngini =
0.157\nsamples = 198\nvalue = [181, 17]'),
 Text(0.006625347487160265, 0.7, 'x[10] <= 0.842\ngini = 0.078\
nsamples = 99\nvalue = [95, 4]'),
 Text(0.006168426970804385, 0.6714285714285714, 'x[9] <= 0.413\ngini =
0.029\nsamples = 69\nvalue = [68, 1]'),
 Text(0.005939966712626445, 0.6428571428571429, 'x[8] <= 0.467\ngini =
0.165\nsamples = 11\nvalue = [10, 1]'),
 Text(0.005711506454448505, 0.6142857142857143, 'gini = 0.0\nsamples =
10\nvalue = [10, 0]'),
 Text(0.006168426970804385, 0.6142857142857143, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.006396887228982326, 0.6428571428571429, 'gini = 0.0\nsamples =
58\nvalue = [58, 0]'),
 Text(0.007082268003516146, 0.6714285714285714, 'x[5] <= 0.405\ngini =
0.18\nsamples = 30\nvalue = [27, 3]'),
 Text(0.006853807745338206, 0.6428571428571429, 'x[10] <= 0.86\ngini =
0.128\nsamples = 29\nvalue = [27, 2]'),
 Text(0.006625347487160265, 0.6142857142857143, 'x[4] <= 0.285\ngini =
0.408\nsamples = 7\nvalue = [5, 2]'),
 Text(0.006396887228982326, 0.5857142857142857, 'gini = 0.0\nsamples =
5\nvalue = [5, 0]'),
 Text(0.006853807745338206, 0.5857142857142857, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.007082268003516146, 0.6142857142857143, 'gini = 0.0\nsamples =
```

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22\nvalue = [22, 0]'),
 Text(0.007310728261694086, 0.6428571428571429, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.009309755520751063, 0.7, 'x[11] <= 0.824\ngini = 0.228\
nsamples = 99\nvalue = [86, 13]'),
 Text(0.008567259681672757, 0.6714285714285714, 'x[6] <= 0.245\ngini =
0.192\nsamples = 93\nvalue = [83, 10]'),
 Text(0.007767648778049967, 0.6428571428571429, 'x[6] <= 0.2\ngini =
0.49\nsamples = 7\nvalue = [4, 3]'),
 Text(0.007539188519872027, 0.6142857142857143, 'gini = 0.0\nsamples =
3\nvalue = [3, 0]'),
 Text(0.007996109036227907, 0.6142857142857143, 'x[7] <= 0.175\ngini =
0.375\nsamples = 4\nvalue = [1, 3]'),
 Text(0.007767648778049967, 0.5857142857142857, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.008224569294405848, 0.5857142857142857, 'gini = 0.0\nsamples =
3\nvalue = [0, 3]'),
 Text(0.009366870585295548, 0.6428571428571429, 'x[1] <= 0.699\ngini =
0.15\nsamples = 86\nvalue = [79, 7]'),
 Text(0.008909950068939668, 0.6142857142857143, 'x[10] <= 0.662\ngini
= 0.231\nsamples = 45\nvalue = [39, 6]'),
 Text(0.008681489810761727, 0.5857142857142857, 'x[11] <= 0.65\ngini =
0.169\nsamples = 43\nvalue = [39, 4]'),
 Text(0.008224569294405848, 0.5571428571428572, 'x[5] <= 0.176\ngini =
0.062\nsamples = 31\nvalue = [30, 1]'),
 Text(0.007996109036227907, 0.5285714285714286, 'x[9] <= 0.408\ngini =
0.444\nsamples = 3\nvalue = [2, 1]'),
 Text(0.007767648778049967, 0.5, 'gini = 0.0\nsamples = 1\nvalue = [0,
1]'),
 Text(0.008224569294405848, 0.5, 'gini = 0.0\nsamples = 2\nvalue = [2,
0]'),
 Text(0.008453029552583787, 0.5285714285714286, 'gini = 0.0\nsamples =
28\nvalue = [28, 0]'),
 Text(0.009138410327117609, 0.5571428571428572, 'x[6] <= 0.46\ngini =
0.375\nsamples = 12\nvalue = [9, 3]'),
 Text(0.008909950068939668, 0.5285714285714286, 'gini = 0.0\nsamples =
6\nvalue = [6, 0]'),
 Text(0.009366870585295548, 0.5285714285714286, 'x[0] <= 0.702\ngini =
0.5\nsamples = 6\nvalue = [3, 3]'),
 Text(0.009138410327117609, 0.5, 'x[1] <= 0.677\ngini = 0.375\nsamples
= 4\nvalue = [1, 3]'),
 Text(0.008909950068939668, 0.4714285714285714, 'gini = 0.0\nsamples =
3\nvalue = [0, 3]'),
 Text(0.009366870585295548, 0.4714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.009595330843473488, 0.5, 'gini = 0.0\nsamples = 2\nvalue = [2,
0]'),
 Text(0.009138410327117609, 0.5857142857142857, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.009823791101651429, 0.6142857142857143, 'x[0] <= 0.828\ngini =
```

0.048\nsamples = 41\nvalue = [40, 1]'),
 Text(0.009595330843473488, 0.5857142857142857, 'gini = 0.0\nsamples =
36\nvalue = [36, 0]'),
 Text(0.01005225135982937, 0.5857142857142857, 'x[10] <= 0.759\ngini =
0.32\nsamples = 5\nvalue = [4, 1]'),
 Text(0.009823791101651429, 0.5571428571428572, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.010280711618007308, 0.5571428571428572, 'gini = 0.0\nsamples =
4\nvalue = [4, 0]'),
 Text(0.01005225135982937, 0.6714285714285714, 'x[7] <= 0.195\ngini =
0.5\nsamples = 6\nvalue = [3, 3]'),
 Text(0.009823791101651429, 0.6428571428571429, 'gini = 0.0\nsamples =
3\nvalue = [0, 3]'),
 Text(0.010280711618007308, 0.6428571428571429, 'gini = 0.0\nsamples =
3\nvalue = [3, 0]'),
 Text(0.008652932278489485, 0.7571428571428571, 'x[0] <= 0.735\ngini =
0.469\nsamples = 8\nvalue = [5, 3]'),
 Text(0.008424472020311545, 0.7285714285714285, 'gini = 0.0\nsamples =
3\nvalue = [0, 3]'),
 Text(0.008881392536667426, 0.7285714285714285, 'gini = 0.0\nsamples =
5\nvalue = [5, 0]'),
 Text(0.009338313053023305, 0.7857142857142857, 'x[11] <= 0.643\ngini
= 0.49\nsamples = 7\nvalue = [4, 3]'),
 Text(0.009109852794845365, 0.7571428571428571, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.009566773311201246, 0.7571428571428571, 'x[3] <= 0.27\ngini =
0.32\nsamples = 5\nvalue = [4, 1]'),
 Text(0.009338313053023305, 0.7285714285714285, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.009795233569379187, 0.7285714285714285, 'gini = 0.0\nsamples =
4\nvalue = [4, 0]'),
 Text(0.022321727373733318, 0.8142857142857143, 'x[3] <= 0.4\ngini =
0.303\nsamples = 484\nvalue = [394, 90]'),
 Text(0.019541383880165457, 0.7857142857142857, 'x[8] <= 0.54\ngini =
0.282\nsamples = 460\nvalue = [382, 78]'),
 Text(0.015351458442097373, 0.7571428571428571, 'x[9] <= 0.43\ngini =
0.265\nsamples = 446\nvalue = [376, 70]'),
 Text(0.01256531419978671, 0.7285714285714285, 'x[8] <= 0.433\ngini =
0.385\nsamples = 96\nvalue = [71, 25]'),
 Text(0.01165147316707495, 0.7, 'x[9] <= 0.361\ngini = 0.278\nsamples
= 66\nvalue = [55, 11]'),
 Text(0.01096609239254113, 0.6714285714285714, 'x[5] <= 0.162\ngini =
0.492\nsamples = 16\nvalue = [9, 7]'),
 Text(0.01073763213436319, 0.6428571428571429, 'gini = 0.0\nsamples =
3\nvalue = [0, 3]'),
 Text(0.011194552650719069, 0.6428571428571429, 'x[2] <= 0.015\ngini =
0.426\nsamples = 13\nvalue = [9, 4]'),
 Text(0.01096609239254113, 0.6142857142857143, 'x[7] <= 0.34\ngini =
0.494\nsamples = 9\nvalue = [5, 4]'),
 Text(0.01073763213436319, 0.5857142857142857, 'gini = 0.0\nsamples =

4\nvalue = [4, 0]'),
 Text(0.011194552650719069, 0.5857142857142857, 'x[4] <= 0.338\ngini =
0.32\nsamples = 5\nvalue = [1, 4]'),
 Text(0.01096609239254113, 0.5571428571428572, 'gini = 0.0\nsamples =
4\nvalue = [0, 4]'),
 Text(0.01142301290889701, 0.5571428571428572, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.01142301290889701, 0.6142857142857143, 'gini = 0.0\nsamples =
4\nvalue = [4, 0]'),
 Text(0.01233685394160877, 0.6714285714285714, 'x[11] <= 0.798\ngini =
0.147\nsamples = 50\nvalue = [46, 4]'),
 Text(0.012108393683430831, 0.6428571428571429, 'x[2] <= 0.002\ngini =
0.115\nsamples = 49\nvalue = [46, 3]'),
 Text(0.01187993342525289, 0.6142857142857143, 'gini = 0.0\nsamples =
35\nvalue = [35, 0]'),
 Text(0.01233685394160877, 0.6142857142857143, 'x[6] <= 0.62\ngini =
0.337\nsamples = 14\nvalue = [11, 3]'),
 Text(0.012108393683430831, 0.5857142857142857, 'x[11] <= 0.422\ngini
= 0.48\nsamples = 5\nvalue = [2, 3]'),
 Text(0.01187993342525289, 0.5571428571428572, 'gini = 0.0\nsamples =
2\nvalue = [2, 0]'),
 Text(0.01233685394160877, 0.5571428571428572, 'gini = 0.0\nsamples =
3\nvalue = [0, 3]'),
 Text(0.01256531419978671, 0.5857142857142857, 'gini = 0.0\nsamples =
9\nvalue = [9, 0]'),
 Text(0.01256531419978671, 0.6428571428571429, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.013479155232498471, 0.7, 'x[1] <= 0.718\ngini = 0.498\nsamples
= 30\nvalue = [16, 14]'),
 Text(0.01325069497432053, 0.6714285714285714, 'x[6] <= 0.36\ngini =
0.493\nsamples = 25\nvalue = [11, 14]'),
 Text(0.013022234716142592, 0.6428571428571429, 'gini = 0.0\nsamples =
3\nvalue = [3, 0]'),
 Text(0.013479155232498471, 0.6428571428571429, 'x[10] <= 0.329\ngini
= 0.463\nsamples = 22\nvalue = [8, 14]'),
 Text(0.01325069497432053, 0.6142857142857143, 'gini = 0.0\nsamples =
3\nvalue = [3, 0]'),
 Text(0.013707615490676412, 0.6142857142857143, 'x[4] <= 0.092\ngini =
0.388\nsamples = 19\nvalue = [5, 14]'),
 Text(0.01325069497432053, 0.5857142857142857, 'x[5] <= 0.108\ngini =
0.444\nsamples = 3\nvalue = [2, 1]'),
 Text(0.013022234716142592, 0.5571428571428572, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.013479155232498471, 0.5571428571428572, 'gini = 0.0\nsamples =
2\nvalue = [2, 0]'),
 Text(0.014164536007032292, 0.5857142857142857, 'x[5] <= 0.405\ngini =
0.305\nsamples = 16\nvalue = [3, 13]'),
 Text(0.013936075748854353, 0.5571428571428572, 'x[9] <= 0.428\ngini =
0.231\nsamples = 15\nvalue = [2, 13]'),
 Text(0.013479155232498471, 0.5285714285714286, 'x[0] <= 0.756\ngini =

0.142\nsamples = 13\nvalue = [1, 12]'),
 Text(0.01325069497432053, 0.5, 'gini = 0.0\nsamples = 11\nvalue = [0,
11]'),
 Text(0.013707615490676412, 0.5, 'x[7] <= 0.36\ngini = 0.5\nsamples =
2\nvalue = [1, 1]'),
 Text(0.013479155232498471, 0.4714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.013936075748854353, 0.4714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.014392996265210232, 0.5285714285714286, 'x[0] <= 0.573\ngini =
0.5\nsamples = 2\nvalue = [1, 1]'),
 Text(0.014164536007032292, 0.5, 'gini = 0.0\nsamples = 1\nvalue = [1,
0]'),
 Text(0.014621456523388173, 0.5, 'gini = 0.0\nsamples = 1\nvalue = [0,
1]'),
 Text(0.014392996265210232, 0.5571428571428572, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.013707615490676412, 0.6714285714285714, 'gini = 0.0\nsamples =
5\nvalue = [5, 0]'),
 Text(0.018137602684408033, 0.7285714285714285, 'x[8] <= 0.403\ngini =
0.224\nsamples = 350\nvalue = [305, 45]'),
 Text(0.016120726967680906, 0.7, 'x[10] <= 0.455\ngini = 0.5\nsamples
= 8\nvalue = [4, 4]'),
 Text(0.015892266709502965, 0.6714285714285714, 'x[8] <= 0.398\ngini =
0.32\nsamples = 5\nvalue = [4, 1]'),
 Text(0.015663806451325025, 0.6428571428571429, 'gini = 0.0\nsamples =
4\nvalue = [4, 0]'),
 Text(0.016120726967680906, 0.6428571428571429, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.016349187225858847, 0.6714285714285714, 'gini = 0.0\nsamples =
3\nvalue = [0, 3]'),
 Text(0.020154478401135163, 0.7, 'x[8] <= 0.492\ngini = 0.211\nsamples
= 342\nvalue = [301, 41]'),
 Text(0.016806107742214724, 0.6714285714285714, 'x[10] <= 0.223\ngini
= 0.149\nsamples = 235\nvalue = [216, 19]'),
 Text(0.016577647484036787, 0.6428571428571429, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.017034568000392665, 0.6428571428571429, 'x[6] <= 0.355\ngini =
0.142\nsamples = 234\nvalue = [216, 18]'),
 Text(0.015535297556099933, 0.6142857142857143, 'x[0] <= 0.735\ngini =
0.375\nsamples = 24\nvalue = [18, 6]'),
 Text(0.015078377039744054, 0.5857142857142857, 'x[8] <= 0.413\ngini =
0.124\nsamples = 15\nvalue = [14, 1]'),
 Text(0.014849916781566113, 0.5571428571428572, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.015306837297921993, 0.5571428571428572, 'gini = 0.0\nsamples =
14\nvalue = [14, 0]'),
 Text(0.015992218072455815, 0.5857142857142857, 'x[10] <= 0.777\ngini
= 0.494\nsamples = 9\nvalue = [4, 5]'),
 Text(0.015763757814277874, 0.5571428571428572, 'gini = 0.0\nsamples =

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3\nvalue = [0, 3]'),
 Text(0.016220678330633755, 0.5571428571428572, 'x[9] <= 0.457\ngini =
0.444\nsamples = 6\nvalue = [4, 2]'),
 Text(0.015992218072455815, 0.5285714285714286, 'x[9] <= 0.452\ngini =
0.444\nsamples = 3\nvalue = [1, 2]'),
 Text(0.015763757814277874, 0.5, 'gini = 0.0\nsamples = 1\nvalue = [1,
0]'),
 Text(0.016220678330633755, 0.5, 'gini = 0.0\nsamples = 2\nvalue = [0,
2]'),
 Text(0.016449138588811696, 0.5285714285714286, 'gini = 0.0\nsamples =
3\nvalue = [3, 0]'),
 Text(0.0185338384446854, 0.6142857142857143, 'x[1] <= 0.27\ngini =
0.108\nsamples = 210\nvalue = [198, 12]'),
 Text(0.017362979621523455, 0.5857142857142857, 'x[12] <= 0.5\ngini =
0.5\nsamples = 2\nvalue = [1, 1]'),
 Text(0.017134519363345514, 0.5571428571428572, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.017591439879701395, 0.5571428571428572, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.01970469726784734, 0.5857142857142857, 'x[5] <= 0.189\ngini =
0.1\nsamples = 208\nvalue = [197, 11]'),
 Text(0.018048360396057277, 0.5571428571428572, 'x[4] <= 0.092\ngini =
0.209\nsamples = 59\nvalue = [52, 7]'),
 Text(0.017134519363345514, 0.5285714285714286, 'x[6] <= 0.67\ngini =
0.426\nsamples = 13\nvalue = [9, 4]'),
 Text(0.016677598846989633, 0.5, 'x[7] <= 0.39\ngini = 0.198\nsamples
= 9\nvalue = [8, 1]'),
 Text(0.016449138588811696, 0.4714285714285714, 'gini = 0.0\nsamples =
7\nvalue = [7, 0]'),
 Text(0.016906059105167574, 0.4714285714285714, 'x[8] <= 0.455\ngini =
0.5\nsamples = 2\nvalue = [1, 1]'),
 Text(0.016677598846989633, 0.44285714285714284, 'gini = 0.0\nsamples
= 1\nvalue = [1, 0]'),
 Text(0.017134519363345514, 0.44285714285714284, 'gini = 0.0\nsamples
= 1\nvalue = [0, 1]'),
 Text(0.017591439879701395, 0.5, 'x[8] <= 0.45\ngini = 0.375\nsamples
= 4\nvalue = [1, 3]'),
 Text(0.017362979621523455, 0.4714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.017819900137879336, 0.4714285714285714, 'gini = 0.0\nsamples =
3\nvalue = [0, 3]'),
 Text(0.018962201428769036, 0.5285714285714286, 'x[3] <= 0.348\ngini =
0.122\nsamples = 46\nvalue = [43, 3]'),
 Text(0.018505280912413154, 0.5, 'x[0] <= 0.472\ngini = 0.048\nsamples
= 41\nvalue = [40, 1]'),
 Text(0.018276820654235217, 0.4714285714285714, 'x[12] <= 0.5\ngini =
0.5\nsamples = 2\nvalue = [1, 1]'),
 Text(0.018048360396057277, 0.44285714285714284, 'gini = 0.0\nsamples
= 1\nvalue = [0, 1]'),
 Text(0.018505280912413154, 0.44285714285714284, 'gini = 0.0\nsamples
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= 1\nvalue = [1, 0]'),
 Text(0.018733741170591095, 0.4714285714285714, 'gini = 0.0\nsamples =
39\nvalue = [39, 0]'),
 Text(0.019419121945124917, 0.5, 'x[8] <= 0.463\ngini = 0.48\nsamples
= 5\nvalue = [3, 2]'),
 Text(0.019190661686946976, 0.4714285714285714, 'gini = 0.0\nsamples =
3\nvalue = [3, 0]'),
 Text(0.019647582203302857, 0.4714285714285714, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.02136103413963741, 0.5571428571428572, 'x[1] <= 0.785\ngini =
0.052\nsamples = 149\nvalue = [145, 4]'),
 Text(0.020789883494192557, 0.5285714285714286, 'x[8] <= 0.427\ngini =
0.04\nsamples = 146\nvalue = [143, 3]'),
 Text(0.02033296297783668, 0.5, 'x[0] <= 0.486\ngini = 0.278\nsamples
= 12\nvalue = [10, 2]'),
 Text(0.02010450271965874, 0.4714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.020561423236014616, 0.4714285714285714, 'x[9] <= 0.436\ngini =
0.165\nsamples = 11\nvalue = [10, 1]'),
 Text(0.02033296297783668, 0.44285714285714284, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.020789883494192557, 0.44285714285714284, 'gini = 0.0\nsamples
= 10\nvalue = [10, 0]'),
 Text(0.021246804010548438, 0.5, 'x[6] <= 0.785\ngini = 0.015\nsamples
= 134\nvalue = [133, 1]'),
 Text(0.021018343752370498, 0.4714285714285714, 'gini = 0.0\nsamples =
127\nvalue = [127, 0]'),
 Text(0.02147526426872638, 0.4714285714285714, 'x[6] <= 0.795\ngini =
0.245\nsamples = 7\nvalue = [6, 1]'),
 Text(0.021246804010548438, 0.44285714285714284, 'gini = 0.0\nsamples
= 1\nvalue = [0, 1]'),
 Text(0.02170372452690432, 0.44285714285714284, 'gini = 0.0\nsamples =
6\nvalue = [6, 0]'),
 Text(0.02193218478508226, 0.5285714285714286, 'x[1] <= 0.791\ngini =
0.444\nsamples = 3\nvalue = [2, 1]'),
 Text(0.02170372452690432, 0.5, 'gini = 0.0\nsamples = 1\nvalue = [0,
1]'),
 Text(0.0221606450432602, 0.5, 'gini = 0.0\nsamples = 2\nvalue = [2,
0]'),
 Text(0.0235028490600556, 0.6714285714285714, 'x[3] <= 0.27\ngini =
0.327\nsamples = 107\nvalue = [85, 22]'),
 Text(0.02284602581779402, 0.6428571428571429, 'x[0] <= 0.272\ngini =
0.13\nsamples = 43\nvalue = [40, 3]'),
 Text(0.02261756555961608, 0.6142857142857143, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.02307448607597196, 0.6142857142857143, 'x[2] <= 0.144\ngini =
0.091\nsamples = 42\nvalue = [40, 2]'),
 Text(0.02284602581779402, 0.5857142857142857, 'x[7] <= 0.285\ngini =
0.048\nsamples = 41\nvalue = [40, 1]'),
 Text(0.02261756555961608, 0.5571428571428572, 'x[6] <= 0.65\ngini =

0.5\nsamples = 2\nvalue = [1, 1]'),
 Text(0.022389105301438138, 0.5285714285714286, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.02284602581779402, 0.5285714285714286, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.02307448607597196, 0.5571428571428572, 'gini = 0.0\nsamples =
39\nvalue = [39, 0]'),
 Text(0.0233029463341499, 0.5857142857142857, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.024159672302317175, 0.6428571428571429, 'x[1] <= 0.443\ngini =
0.417\nsamples = 64\nvalue = [45, 19]'),
 Text(0.023931212044139234, 0.6142857142857143, 'gini = 0.0\nsamples =
9\nvalue = [9, 0]'),
 Text(0.024388132560495115, 0.6142857142857143, 'x[0] <= 0.445\ngini =
0.452\nsamples = 55\nvalue = [36, 19]'),
 Text(0.02375986685050578, 0.5857142857142857, 'x[4] <= 0.338\ngini =
0.278\nsamples = 6\nvalue = [1, 5]'),
 Text(0.02353140659232784, 0.5571428571428572, 'gini = 0.0\nsamples =
5\nvalue = [0, 5]'),
 Text(0.023988327108683722, 0.5571428571428572, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.025016398270484453, 0.5857142857142857, 'x[6] <= 0.485\ngini =
0.408\nsamples = 49\nvalue = [35, 14]'),
 Text(0.0244452476250396, 0.5571428571428572, 'x[2] <= 0.024\ngini =
0.124\nsamples = 15\nvalue = [14, 1]'),
 Text(0.024216787366861663, 0.5285714285714286, 'gini = 0.0\nsamples =
14\nvalue = [14, 0]'),
 Text(0.02467370788321754, 0.5285714285714286, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.025587548915929303, 0.5571428571428572, 'x[6] <= 0.675\ngini =
0.472\nsamples = 34\nvalue = [21, 13]'),
 Text(0.02513062839957342, 0.5285714285714286, 'x[8] <= 0.515\ngini =
0.499\nsamples = 21\nvalue = [10, 11]'),
 Text(0.02490216814139548, 0.5, 'x[3] <= 0.348\ngini = 0.469\nsamples
= 16\nvalue = [10, 6]'),
 Text(0.0244452476250396, 0.4714285714285714, 'x[6] <= 0.505\ngini =
0.198\nsamples = 9\nvalue = [8, 1]'),
 Text(0.024216787366861663, 0.44285714285714284, 'x[11] <= 0.671\ngini
= 0.5\nsamples = 2\nvalue = [1, 1]'),
 Text(0.023988327108683722, 0.4142857142857143, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.0244452476250396, 0.4142857142857143, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.02467370788321754, 0.44285714285714284, 'gini = 0.0\nsamples =
7\nvalue = [7, 0]'),
 Text(0.025359088657751362, 0.4714285714285714, 'x[10] <= 0.681\ngini
= 0.408\nsamples = 7\nvalue = [2, 5]'),
 Text(0.02513062839957342, 0.44285714285714284, 'x[7] <= 0.325\ngini =
0.278\nsamples = 6\nvalue = [1, 5]'),
 Text(0.02490216814139548, 0.4142857142857143, 'gini = 0.0\nsamples =

1\nvalue = [1, 0]'),
 Text(0.025359088657751362, 0.4142857142857143, 'gini = 0.0\nsamples =
5\nvalue = [0, 5]'),
 Text(0.025587548915929303, 0.44285714285714284, 'gini = 0.0\nsamples
= 1\nvalue = [1, 0]'),
 Text(0.025359088657751362, 0.5, 'gini = 0.0\nsamples = 5\nvalue = [0,
5]'),
 Text(0.026044469432285184, 0.5285714285714286, 'x[4] <= 0.046\ngini =
0.26\nsamples = 13\nvalue = [11, 2]'),
 Text(0.025816009174107243, 0.5, 'gini = 0.0\nsamples = 1\nvalue = [0,
1]'),
 Text(0.02627292969046312, 0.5, 'x[6] <= 0.825\ngini = 0.153\nsamples
= 12\nvalue = [11, 1]'),
 Text(0.026044469432285184, 0.4714285714285714, 'gini = 0.0\nsamples =
11\nvalue = [11, 0]'),
 Text(0.02650138994864106, 0.4714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.02373130931823354, 0.7571428571428571, 'x[5] <= 0.236\ngini =
0.49\nsamples = 14\nvalue = [6, 8]'),
 Text(0.0235028490600556, 0.7285714285714285, 'gini = 0.0\nsamples =
5\nvalue = [0, 5]'),
 Text(0.02395976957641148, 0.7285714285714285, 'x[9] <= 0.472\ngini =
0.444\nsamples = 9\nvalue = [6, 3]'),
 Text(0.02373130931823354, 0.7, 'gini = 0.0\nsamples = 2\nvalue = [0,
2]'),
 Text(0.024188229834589417, 0.7, 'x[3] <= 0.287\ngini = 0.245\nsamples
= 7\nvalue = [6, 1]'),
 Text(0.02395976957641148, 0.6714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.024416690092767358, 0.6714285714285714, 'gini = 0.0\nsamples =
6\nvalue = [6, 0]'),
 Text(0.02510207086730118, 0.7857142857142857, 'x[9] <= 0.46\ngini =
0.5\nsamples = 24\nvalue = [12, 12]'),
 Text(0.024645150350945298, 0.7571428571428571, 'x[1] <= 0.697\ngini =
0.355\nsamples = 13\nvalue = [3, 10]'),
 Text(0.024416690092767358, 0.7285714285714285, 'gini = 0.0\nsamples =
9\nvalue = [0, 9]'),
 Text(0.02487361060912324, 0.7285714285714285, 'x[4] <= 0.254\ngini =
0.375\nsamples = 4\nvalue = [3, 1]'),
 Text(0.024645150350945298, 0.7, 'gini = 0.0\nsamples = 3\nvalue = [3,
0]'),
 Text(0.02510207086730118, 0.7, 'gini = 0.0\nsamples = 1\nvalue = [0,
1]'),
 Text(0.02555899138365706, 0.7571428571428571, 'x[6] <= 0.665\ngini =
0.298\nsamples = 11\nvalue = [9, 2]'),
 Text(0.02533053112547912, 0.7285714285714285, 'gini = 0.0\nsamples =
8\nvalue = [8, 0]'),
 Text(0.025787451641835, 0.7285714285714285, 'x[11] <= 0.354\ngini =
0.444\nsamples = 3\nvalue = [1, 2]'),
 Text(0.02555899138365706, 0.7, 'gini = 0.0\nsamples = 1\nvalue = [1,

0]'),
 Text(0.026015911900012942, 0.7, 'gini = 0.0\nsamples = 2\nvalue = [0,
2]'),
 Text(0.07562636440913657, 0.8428571428571429, 'x[7] <= 0.295\ngini =
0.068\nsamples = 10904\nvalue = [10518, 386]'),
 Text(0.04477754128571365, 0.8142857142857143, 'x[3] <= 0.27\ngini =
0.038\nsamples = 5329\nvalue = [5227, 102]'),
 Text(0.03716985930953241, 0.7857142857142857, 'x[1] <= 0.556\ngini =
0.022\nsamples = 2861\nvalue = [2829, 32]'),
 Text(0.03544435966427051, 0.7571428571428571, 'x[5] <= 0.338\ngini =
0.035\nsamples = 1328\nvalue = [1304, 24]'),
 Text(0.03450642321370405, 0.7285714285714285, 'x[11] <= 0.577\ngini =
0.033\nsamples = 1320\nvalue = [1298, 22]'),
 Text(0.033315931087104934, 0.7, 'x[8] <= 0.674\ngini = 0.031\nsamples
= 1317\nvalue = [1296, 21]'),
 Text(0.03162032760844054, 0.6714285714285714, 'x[9] <= 0.679\ngini =
0.066\nsamples = 499\nvalue = [482, 17]'),
 Text(0.030685068426524593, 0.6428571428571429, 'x[8] <= 0.665\ngini =
0.059\nsamples = 496\nvalue = [481, 15]'),
 Text(0.02949993083722653, 0.6142857142857143, 'x[11] <= 0.558\ngini =
0.051\nsamples = 462\nvalue = [450, 12]'),
 Text(0.0282719569495201, 0.5857142857142857, 'x[4] <= 0.154\ngini =
0.041\nsamples = 428\nvalue = [419, 9]'),
 Text(0.028043496691342158, 0.5571428571428572, 'gini = 0.0\nsamples =
195\nvalue = [195, 0]'),
 Text(0.02850041720769804, 0.5571428571428572, 'x[5] <= 0.135\ngini =
0.074\nsamples = 233\nvalue = [224, 9]'),
 Text(0.027186770723174884, 0.5285714285714286, 'x[1] <= 0.357\ngini =
0.19\nsamples = 47\nvalue = [42, 5]'),
 Text(0.026958310464996943, 0.5, 'gini = 0.0\nsamples = 1\nvalue = [0,
1]'),
 Text(0.027415230981352824, 0.5, 'x[9] <= 0.633\ngini = 0.159\nsamples
= 46\nvalue = [42, 4]'),
 Text(0.026958310464996943, 0.4714285714285714, 'x[7] <= 0.275\ngini =
0.093\nsamples = 41\nvalue = [39, 2]'),
 Text(0.026729850206819002, 0.44285714285714284, 'gini = 0.0\nsamples
= 30\nvalue = [30, 0]'),
 Text(0.027186770723174884, 0.44285714285714284, 'x[10] <= 0.469\ngini
= 0.298\nsamples = 11\nvalue = [9, 2]'),
 Text(0.026958310464996943, 0.4142857142857143, 'x[0] <= 0.311\ngini =
0.18\nsamples = 10\nvalue = [9, 1]'),
 Text(0.026729850206819002, 0.38571428571428573, 'gini = 0.0\nsamples
= 1\nvalue = [0, 1]'),
 Text(0.027186770723174884, 0.38571428571428573, 'gini = 0.0\nsamples
= 9\nvalue = [9, 0]'),
 Text(0.027415230981352824, 0.4142857142857143, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.027872151497708705, 0.4714285714285714, 'x[1] <= 0.49\ngini =
0.48\nsamples = 5\nvalue = [3, 2]'),
 Text(0.027643691239530765, 0.44285714285714284, 'gini = 0.0\nsamples

= 2\nvalue = [0, 2]'),
 Text(0.028100611755886646, 0.44285714285714284, 'gini = 0.0\nsamples
= 3\nvalue = [3, 0]'),
 Text(0.029814063692221195, 0.5285714285714286, 'x[6] <= 0.455\ngini =
0.042\nsamples = 186\nvalue = [182, 4]'),
 Text(0.029585603434043255, 0.5, 'x[6] <= 0.445\ngini = 0.092\nsamples
= 83\nvalue = [79, 4]'),
 Text(0.029014452788598405, 0.4714285714285714, 'x[3] <= 0.174\ngini =
0.051\nsamples = 76\nvalue = [74, 2]'),
 Text(0.028557532272242524, 0.44285714285714284, 'x[8] <= 0.619\ngini
= 0.444\nsamples = 3\nvalue = [2, 1]'),
 Text(0.028329072014064583, 0.4142857142857143, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.028785992530420464, 0.4142857142857143, 'gini = 0.0\nsamples =
2\nvalue = [2, 0]'),
 Text(0.029471373304954286, 0.44285714285714284, 'x[10] <= 0.408\ngini
= 0.027\nsamples = 73\nvalue = [72, 1]'),
 Text(0.029242913046776346, 0.4142857142857143, 'x[10] <= 0.405\ngini
= 0.111\nsamples = 17\nvalue = [16, 1]'),
 Text(0.029014452788598405, 0.38571428571428573, 'gini = 0.0\nsamples
= 16\nvalue = [16, 0]'),
 Text(0.029471373304954286, 0.38571428571428573, 'gini = 0.0\nsamples
= 1\nvalue = [0, 1]'),
 Text(0.029699833563132227, 0.4142857142857143, 'gini = 0.0\nsamples =
56\nvalue = [56, 0]'),
 Text(0.030156754079488108, 0.4714285714285714, 'x[11] <= 0.472\ngini
= 0.408\nsamples = 7\nvalue = [5, 2]'),
 Text(0.029928293821310167, 0.44285714285714284, 'gini = 0.0\nsamples
= 4\nvalue = [4, 0]'),
 Text(0.030385214337666045, 0.44285714285714284, 'x[1] <= 0.493\ngini
= 0.444\nsamples = 3\nvalue = [1, 2]'),
 Text(0.030156754079488108, 0.4142857142857143, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.030613674595843986, 0.4142857142857143, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.030042523950399136, 0.5, 'gini = 0.0\nsamples = 103\nvalue =
[103, 0]'),
 Text(0.030727904724932958, 0.5857142857142857, 'x[1] <= 0.54\ngini =
0.161\nsamples = 34\nvalue = [31, 3]'),
 Text(0.030499444466755017, 0.5571428571428572, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.0309563649831109, 0.5571428571428572, 'x[8] <= 0.573\ngini =
0.114\nsamples = 33\nvalue = [31, 2]'),
 Text(0.030727904724932958, 0.5285714285714286, 'x[1] <= 0.55\ngini =
0.48\nsamples = 5\nvalue = [3, 2]'),
 Text(0.030499444466755017, 0.5, 'gini = 0.0\nsamples = 3\nvalue = [3,
0]'),
 Text(0.0309563649831109, 0.5, 'gini = 0.0\nsamples = 2\nvalue = [0,
2]'),
 Text(0.031184825241288835, 0.5285714285714286, 'gini = 0.0\nsamples =

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28\nvalue = [28, 0]'),
 Text(0.03187020601582266, 0.6142857142857143, 'x[9] <= 0.613\ngini =
0.161\nsamples = 34\nvalue = [31, 3]'),
 Text(0.03164174575764472, 0.5857142857142857, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.0320986662740006, 0.5857142857142857, 'x[8] <= 0.667\ngini =
0.061\nsamples = 32\nvalue = [31, 1]'),
 Text(0.03187020601582266, 0.5571428571428572, 'x[11] <= 0.456\ngini =
0.444\nsamples = 3\nvalue = [2, 1]'),
 Text(0.03164174575764472, 0.5285714285714286, 'gini = 0.0\nsamples =
2\nvalue = [2, 0]'),
 Text(0.0320986662740006, 0.5285714285714286, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.032327126532178535, 0.5571428571428572, 'gini = 0.0\nsamples =
29\nvalue = [29, 0]'),
 Text(0.03255558679035648, 0.6428571428571429, 'x[6] <= 0.51\ngini =
0.444\nsamples = 3\nvalue = [1, 2]'),
 Text(0.032327126532178535, 0.6142857142857143, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.032784047048534416, 0.6142857142857143, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.03501153456576934, 0.6714285714285714, 'x[2] <= 0.001\ngini =
0.01\nsamples = 818\nvalue = [814, 4]'),
 Text(0.03426903872669103, 0.6428571428571429, 'x[4] <= 0.323\ngini =
0.007\nsamples = 806\nvalue = [803, 3]'),
 Text(0.03346942782306824, 0.6142857142857143, 'x[5] <= 0.257\ngini =
0.005\nsamples = 763\nvalue = [761, 2]'),
 Text(0.03301250730671236, 0.5857142857142857, 'x[11] <= 0.529\ngini =
0.003\nsamples = 721\nvalue = [720, 1]'),
 Text(0.032784047048534416, 0.5571428571428572, 'gini = 0.0\nsamples =
628\nvalue = [628, 0]'),
 Text(0.0332409675648903, 0.5571428571428572, 'x[1] <= 0.512\ngini =
0.021\nsamples = 93\nvalue = [92, 1]'),
 Text(0.03301250730671236, 0.5285714285714286, 'x[9] <= 0.701\ngini =
0.444\nsamples = 3\nvalue = [2, 1]'),
 Text(0.032784047048534416, 0.5, 'gini = 0.0\nsamples = 2\nvalue = [2,
0]'),
 Text(0.0332409675648903, 0.5, 'gini = 0.0\nsamples = 1\nvalue = [0,
1]'),
 Text(0.03346942782306824, 0.5285714285714286, 'gini = 0.0\nsamples =
90\nvalue = [90, 0]'),
 Text(0.03392634833942412, 0.5857142857142857, 'x[0] <= 0.417\ngini =
0.046\nsamples = 42\nvalue = [41, 1]'),
 Text(0.03369788808124618, 0.5571428571428572, 'gini = 0.0\nsamples =
36\nvalue = [36, 0]'),
 Text(0.03415480859760206, 0.5571428571428572, 'x[11] <= 0.467\ngini =
0.278\nsamples = 6\nvalue = [5, 1]'),
 Text(0.03392634833942412, 0.5285714285714286, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.03438326885578, 0.5285714285714286, 'gini = 0.0\nsamples = 5\
```

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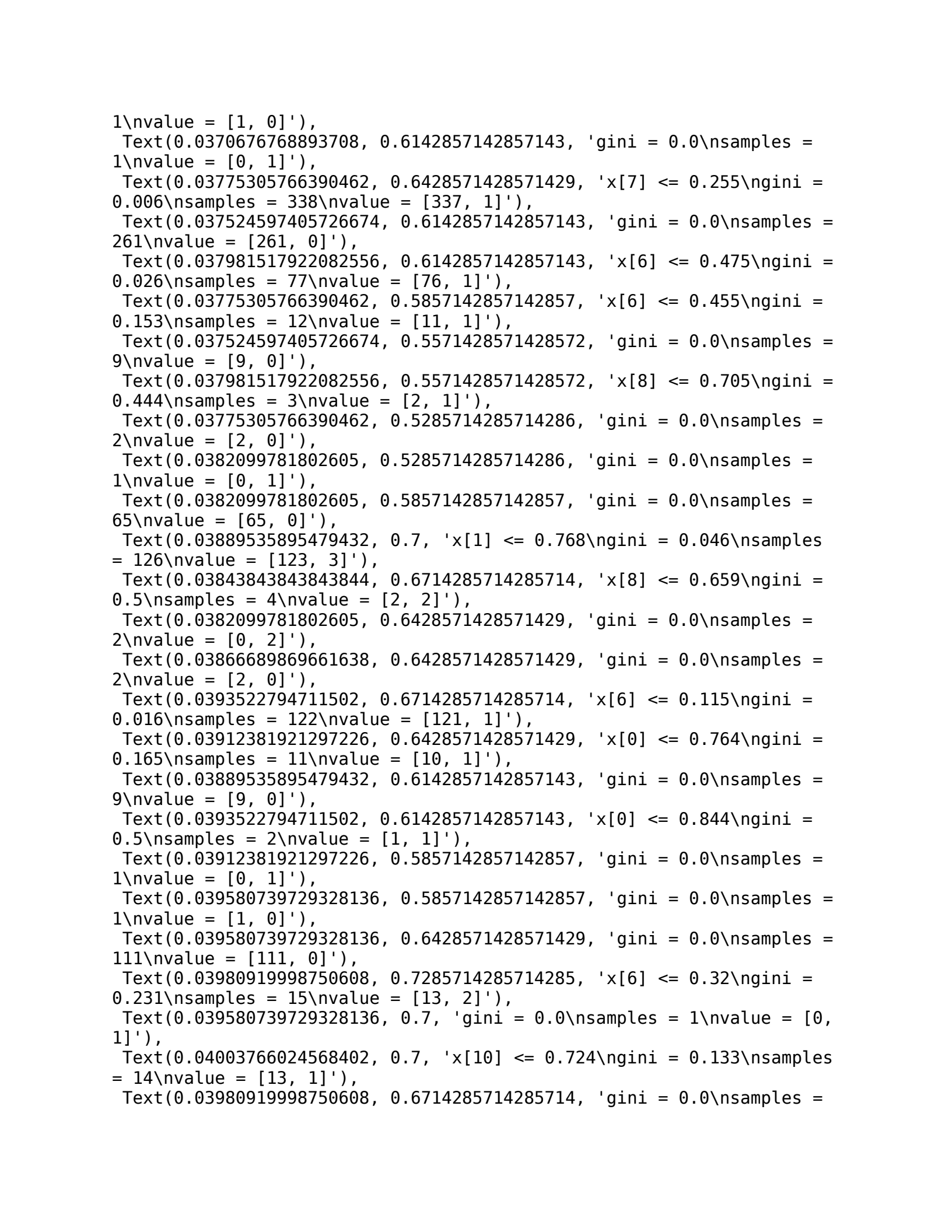
nvalue = [5, 0]'),
 Text(0.03506864963031382, 0.6142857142857143, 'x[9] <= 0.668\ngini =
0.045\nsamples = 43\nvalue = [42, 1]'),
 Text(0.03484018937213588, 0.5857142857142857, 'x[1] <= 0.409\ngini =
0.245\nsamples = 7\nvalue = [6, 1]'),
 Text(0.03461172911395794, 0.5571428571428572, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.03506864963031382, 0.5571428571428572, 'gini = 0.0\nsamples =
6\nvalue = [6, 0]'),
 Text(0.03529710988849176, 0.5857142857142857, 'gini = 0.0\nsamples =
36\nvalue = [36, 0]'),
 Text(0.03575403040484764, 0.6428571428571429, 'x[0] <= 0.491\ngini =
0.153\nsamples = 12\nvalue = [11, 1]'),
 Text(0.035525570146669704, 0.6142857142857143, 'gini = 0.0\nsamples =
11\nvalue = [11, 0]'),
 Text(0.035982490663025585, 0.6142857142857143, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.035696915340303156, 0.7, 'x[11] <= 0.579\ngini = 0.444\
nsamples = 3\nvalue = [2, 1]'),
 Text(0.03546845508212522, 0.6714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.035925375598481094, 0.6714285714285714, 'gini = 0.0\nsamples =
2\nvalue = [2, 0]'),
 Text(0.036382296114836975, 0.7285714285714285, 'x[4] <= 0.231\ngini =
0.375\nsamples = 8\nvalue = [6, 2]'),
 Text(0.03615383585665904, 0.7, 'gini = 0.0\nsamples = 6\nvalue = [6,
0]'),
 Text(0.03661075637301492, 0.7, 'gini = 0.0\nsamples = 2\nvalue = [0,
2]'),
 Text(0.03889535895479432, 0.7571428571428571, 'x[2] <= 0.009\ngini =
0.01\nsamples = 1533\nvalue = [1525, 8]'),
 Text(0.037981517922082556, 0.7285714285714285, 'x[11] <= 0.787\ngini
= 0.008\nsamples = 1518\nvalue = [1512, 6]'),
 Text(0.0370676768893708, 0.7, 'x[8] <= 0.655\ngini = 0.004\nsamples =
1392\nvalue = [1389, 3]'),
 Text(0.036839216631192856, 0.6714285714285714, 'gini = 0.0\nsamples =
1032\nvalue = [1032, 0]'),
 Text(0.03729613714754874, 0.6714285714285714, 'x[9] <= 0.621\ngini =
0.017\nsamples = 360\nvalue = [357, 3]'),
 Text(0.036839216631192856, 0.6428571428571429, 'x[8] <= 0.674\ngini =
0.165\nsamples = 22\nvalue = [20, 2]'),
 Text(0.03661075637301492, 0.6142857142857143, 'x[9] <= 0.619\ngini =
0.091\nsamples = 21\nvalue = [20, 1]'),
 Text(0.036382296114836975, 0.5857142857142857, 'gini = 0.0\nsamples =
19\nvalue = [19, 0]'),
 Text(0.036839216631192856, 0.5857142857142857, 'x[8] <= 0.659\ngini =
0.5\nsamples = 2\nvalue = [1, 1]'),
 Text(0.03661075637301492, 0.5571428571428572, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.0370676768893708, 0.5571428571428572, 'gini = 0.0\nsamples =
```


1\nvalue = [1, 0]'),
Text(0.0370676768893708, 0.6142857142857143, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
Text(0.03775305766390462, 0.6428571428571429, 'x[7] <= 0.255\ngini =
0.006\nsamples = 338\nvalue = [337, 1]'),
Text(0.037524597405726674, 0.6142857142857143, 'gini = 0.0\nsamples =
261\nvalue = [261, 0]'),
Text(0.037981517922082556, 0.6142857142857143, 'x[6] <= 0.475\ngini =
0.026\nsamples = 77\nvalue = [76, 1]'),
Text(0.03775305766390462, 0.5857142857142857, 'x[6] <= 0.455\ngini =
0.153\nsamples = 12\nvalue = [11, 1]'),
Text(0.037524597405726674, 0.5571428571428572, 'gini = 0.0\nsamples =
9\nvalue = [9, 0]'),
Text(0.037981517922082556, 0.5571428571428572, 'x[8] <= 0.705\ngini =
0.444\nsamples = 3\nvalue = [2, 1]'),
Text(0.03775305766390462, 0.5285714285714286, 'gini = 0.0\nsamples =
2\nvalue = [2, 0]'),
Text(0.0382099781802605, 0.5285714285714286, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
Text(0.0382099781802605, 0.5857142857142857, 'gini = 0.0\nsamples =
65\nvalue = [65, 0]'),
Text(0.03889535895479432, 0.7, 'x[1] <= 0.768\ngini = 0.046\nsamples
= 126\nvalue = [123, 3]'),
Text(0.03843843843843844, 0.6714285714285714, 'x[8] <= 0.659\ngini =
0.5\nsamples = 4\nvalue = [2, 2]'),
Text(0.0382099781802605, 0.6428571428571429, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
Text(0.03866689869661638, 0.6428571428571429, 'gini = 0.0\nsamples =
2\nvalue = [2, 0]'),
Text(0.0393522794711502, 0.6714285714285714, 'x[6] <= 0.115\ngini =
0.016\nsamples = 122\nvalue = [121, 1]'),
Text(0.03912381921297226, 0.6428571428571429, 'x[0] <= 0.764\ngini =
0.165\nsamples = 11\nvalue = [10, 1]'),
Text(0.03889535895479432, 0.6142857142857143, 'gini = 0.0\nsamples =
9\nvalue = [9, 0]'),
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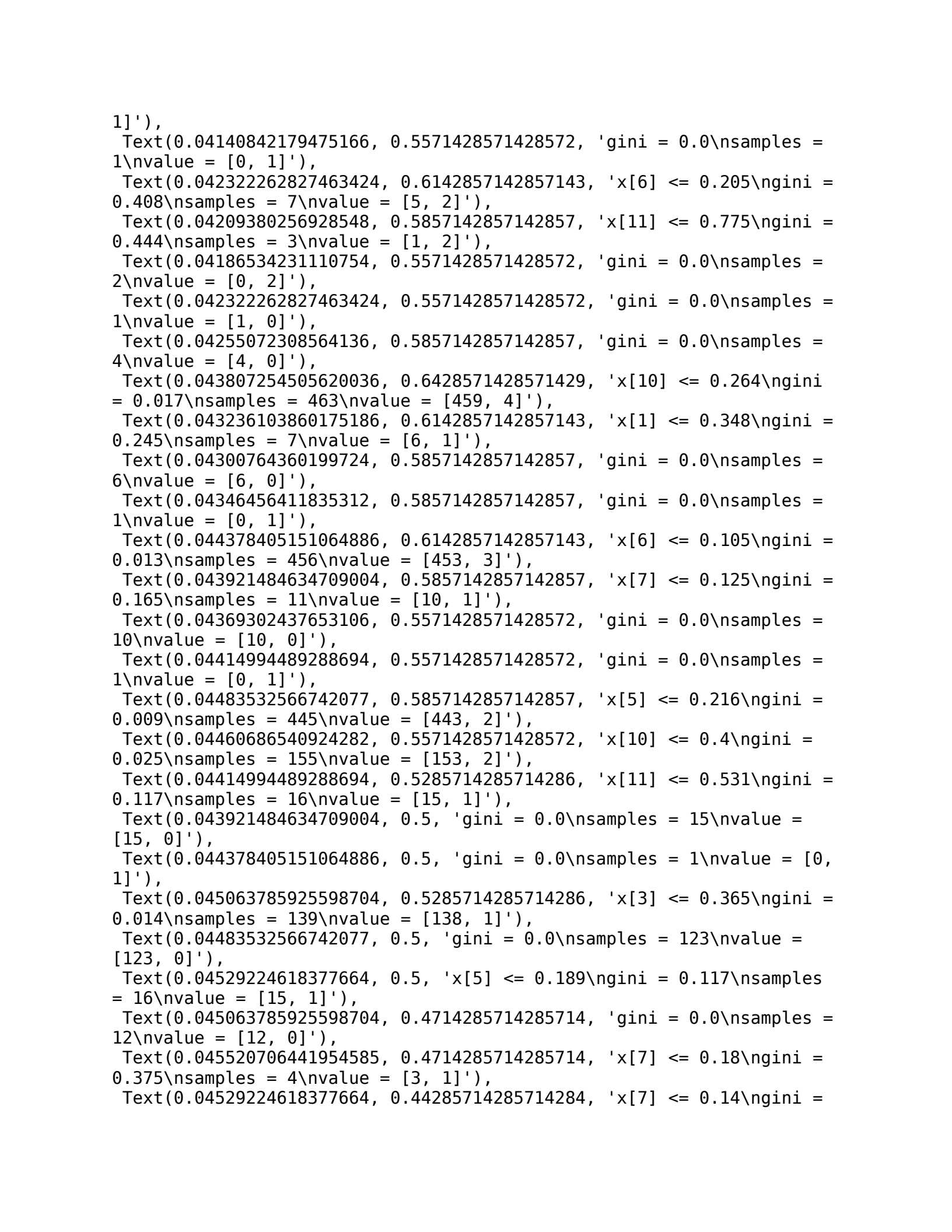
0.5\nsamples = 2\nvalue = [1, 1]'),
Text(0.03912381921297226, 0.5857142857142857, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
Text(0.039580739729328136, 0.5857142857142857, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
Text(0.039580739729328136, 0.6428571428571429, 'gini = 0.0\nsamples =
111\nvalue = [111, 0]'),
Text(0.03980919998750608, 0.7285714285714285, 'x[6] <= 0.32\ngini =
0.231\nsamples = 15\nvalue = [13, 2]'),
Text(0.039580739729328136, 0.7, 'gini = 0.0\nsamples = 1\nvalue = [0,
1]'),
Text(0.04003766024568402, 0.7, 'x[10] <= 0.724\ngini = 0.133\nsamples
= 14\nvalue = [13, 1]'),
Text(0.03980919998750608, 0.6714285714285714, 'gini = 0.0\nsamples =

```
13\nvalue = [13, 0]'),
 Text(0.04026612050386196, 0.6714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.05238522326189488, 0.7857142857142857, 'x[4] <= 0.246\ngini =
0.055\nsamples = 2468\nvalue = [2398, 70]'),
 Text(0.04635601426091768, 0.7571428571428571, 'x[7] <= 0.225\ngini =
0.084\nsamples = 1023\nvalue = [978, 45]'),
 Text(0.04471395615526373, 0.7285714285714285, 'x[3] <= 0.4\ngini =
0.045\nsamples = 652\nvalue = [637, 15]'),
 Text(0.04356451548130597, 0.7, 'x[6] <= 0.925\ngini = 0.037\nsamples
= 631\nvalue = [619, 12]'),
 Text(0.04263639568245809, 0.6714285714285714, 'x[9] <= 0.535\ngini =
0.035\nsamples = 626\nvalue = [615, 11]'),
 Text(0.041465536859296145, 0.6428571428571429, 'x[9] <= 0.533\ngini =
0.082\nsamples = 163\nvalue = [156, 7]'),
 Text(0.04060881089112887, 0.6142857142857143, 'x[8] <= 0.545\ngini =
0.062\nsamples = 156\nvalue = [151, 5]'),
 Text(0.04003766024568402, 0.5857142857142857, 'x[6] <= 0.225\ngini =
0.018\nsamples = 109\nvalue = [108, 1]'),
 Text(0.03980919998750608, 0.5571428571428572, 'x[4] <= 0.092\ngini =
0.087\nsamples = 22\nvalue = [21, 1]'),
 Text(0.039580739729328136, 0.5285714285714286, 'x[7] <= 0.135\ngini =
0.5\nsamples = 2\nvalue = [1, 1]'),
 Text(0.0393522794711502, 0.5, 'gini = 0.0\nsamples = 1\nvalue = [1,
0]'),
 Text(0.03980919998750608, 0.5, 'gini = 0.0\nsamples = 1\nvalue = [0,
1]'),
 Text(0.04003766024568402, 0.5285714285714286, 'gini = 0.0\nsamples =
20\nvalue = [20, 0]'),
 Text(0.04026612050386196, 0.5571428571428572, 'gini = 0.0\nsamples =
87\nvalue = [87, 0]'),
 Text(0.041179961536573724, 0.5857142857142857, 'x[7] <= 0.215\ngini =
0.156\nsamples = 47\nvalue = [43, 4]'),
 Text(0.04095150127839578, 0.5571428571428572, 'x[11] <= 0.802\ngini =
0.122\nsamples = 46\nvalue = [43, 3]'),
 Text(0.0404945807620399, 0.5285714285714286, 'x[1] <= 0.593\ngini =
0.087\nsamples = 44\nvalue = [42, 2]'),
 Text(0.04026612050386196, 0.5, 'x[11] <= 0.561\ngini = 0.375\nsamples
= 8\nvalue = [6, 2]'),
 Text(0.04003766024568402, 0.4714285714285714, 'gini = 0.0\nsamples =
6\nvalue = [6, 0]'),
 Text(0.0404945807620399, 0.4714285714285714, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.04072304102021784, 0.5, 'gini = 0.0\nsamples = 36\nvalue =
[36, 0]'),
 Text(0.04140842179475166, 0.5285714285714286, 'x[6] <= 0.205\ngini =
0.5\nsamples = 2\nvalue = [1, 1]'),
 Text(0.041179961536573724, 0.5, 'gini = 0.0\nsamples = 1\nvalue = [1,
0]'),
 Text(0.0416368820529296, 0.5, 'gini = 0.0\nsamples = 1\nvalue = [0,
```


1]'),
Text(0.04140842179475166, 0.5571428571428572, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(0.042322262827463424, 0.6142857142857143, 'x[6] <= 0.205\ngini = 0.408\nsamples = 7\nvalue = [5, 2]'),
Text(0.04209380256928548, 0.5857142857142857, 'x[11] <= 0.775\ngini = 0.444\nsamples = 3\nvalue = [1, 2]'),
Text(0.04186534231110754, 0.5571428571428572, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(0.042322262827463424, 0.5571428571428572, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(0.04255072308564136, 0.5857142857142857, 'gini = 0.0\nsamples = 4\nvalue = [4, 0]'),
Text(0.043807254505620036, 0.6428571428571429, 'x[10] <= 0.264\ngini = 0.017\nsamples = 463\nvalue = [459, 4]'),
Text(0.043236103860175186, 0.6142857142857143, 'x[1] <= 0.348\ngini = 0.245\nsamples = 7\nvalue = [6, 1]'),
Text(0.04300764360199724, 0.5857142857142857, 'gini = 0.0\nsamples = 6\nvalue = [6, 0]'),
Text(0.04346456411835312, 0.5857142857142857, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(0.044378405151064886, 0.6142857142857143, 'x[6] <= 0.105\ngini = 0.013\nsamples = 456\nvalue = [453, 3]'),
Text(0.043921484634709004, 0.5857142857142857, 'x[7] <= 0.125\ngini = 0.165\nsamples = 11\nvalue = [10, 1]'),
Text(0.04369302437653106, 0.5571428571428572, 'gini = 0.0\nsamples = 10\nvalue = [10, 0]'),
Text(0.04414994489288694, 0.5571428571428572, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(0.04483532566742077, 0.5857142857142857, 'x[5] <= 0.216\ngini = 0.009\nsamples = 445\nvalue = [443, 2]'),
Text(0.04460686540924282, 0.5571428571428572, 'x[10] <= 0.4\ngini = 0.025\nsamples = 155\nvalue = [153, 2]'),
Text(0.04414994489288694, 0.5285714285714286, 'x[11] <= 0.531\ngini = 0.117\nsamples = 16\nvalue = [15, 1]'),
Text(0.043921484634709004, 0.5, 'gini = 0.0\nsamples = 15\nvalue = [15, 0]'),
Text(0.044378405151064886, 0.5, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(0.045063785925598704, 0.5285714285714286, 'x[3] <= 0.365\ngini = 0.014\nsamples = 139\nvalue = [138, 1]'),
Text(0.04483532566742077, 0.5, 'gini = 0.0\nsamples = 123\nvalue = [123, 0]'),
Text(0.04529224618377664, 0.5, 'x[5] <= 0.189\ngini = 0.117\nsamples = 16\nvalue = [15, 1]'),
Text(0.045063785925598704, 0.4714285714285714, 'gini = 0.0\nsamples = 12\nvalue = [12, 0]'),
Text(0.045520706441954585, 0.4714285714285714, 'x[7] <= 0.18\ngini = 0.375\nsamples = 4\nvalue = [3, 1]'),
Text(0.04529224618377664, 0.44285714285714284, 'x[7] <= 0.14\ngini =

0.5\nsamples = 2\nvalue = [1, 1]'),
 Text(0.045063785925598704, 0.4142857142857143, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.045520706441954585, 0.4142857142857143, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.04574916670013252, 0.44285714285714284, 'gini = 0.0\nsamples =
2\nvalue = [2, 0]'),
 Text(0.045063785925598704, 0.5571428571428572, 'gini = 0.0\nsamples =
290\nvalue = [290, 0]'),
 Text(0.044492635280153854, 0.6714285714285714, 'x[11] <= 0.664\ngini
= 0.32\nsamples = 5\nvalue = [4, 1]'),
 Text(0.04426417502197592, 0.6428571428571429, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.04472109553833179, 0.6428571428571429, 'gini = 0.0\nsamples =
4\nvalue = [4, 0]'),
 Text(0.0458633968292215, 0.7, 'x[4] <= 0.215\ngini = 0.245\nsamples =
21\nvalue = [18, 3]'),
 Text(0.045406476312865617, 0.6714285714285714, 'x[5] <= 0.189\ngini =
0.105\nsamples = 18\nvalue = [17, 1]'),
 Text(0.04517801605468767, 0.6428571428571429, 'x[1] <= 0.74\ngini =
0.5\nsamples = 2\nvalue = [1, 1]'),
 Text(0.044949555796509735, 0.6142857142857143, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.045406476312865617, 0.6142857142857143, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.045634936571043554, 0.6428571428571429, 'gini = 0.0\nsamples =
16\nvalue = [16, 0]'),
 Text(0.04632031734557737, 0.6714285714285714, 'x[8] <= 0.632\ngini =
0.444\nsamples = 3\nvalue = [1, 2]'),
 Text(0.046091857087399435, 0.6428571428571429, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.046548777603755316, 0.6428571428571429, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.04799807236657162, 0.7285714285714285, 'x[11] <= 0.4\ngini =
0.149\nsamples = 371\nvalue = [341, 30]'),
 Text(0.047769612108393686, 0.7, 'gini = 0.0\nsamples = 69\nvalue =
[69, 0]'),
 Text(0.04822653262474957, 0.7, 'x[1] <= 0.4\ngini = 0.179\nsamples =
302\nvalue = [272, 30]'),
 Text(0.047234158378289134, 0.6714285714285714, 'x[5] <= 0.257\ngini =
0.5\nsamples = 8\nvalue = [4, 4]'),
 Text(0.0470056981201112, 0.6428571428571429, 'gini = 0.0\nsamples =
3\nvalue = [0, 3]'),
 Text(0.04746261863646708, 0.6428571428571429, 'x[10] <= 0.279\ngini =
0.32\nsamples = 5\nvalue = [4, 1]'),
 Text(0.047234158378289134, 0.6142857142857143, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.047691078894645016, 0.6142857142857143, 'gini = 0.0\nsamples =
4\nvalue = [4, 0]'),
 Text(0.04921890687120999, 0.6714285714285714, 'x[0] <= 0.207\ngini =

0.161\nsamples = 294\nvalue = [268, 26]'),
 Text(0.04899044661303205, 0.6428571428571429, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.04944736712938793, 0.6428571428571429, 'x[5] <= 0.061\ngini =
0.156\nsamples = 293\nvalue = [268, 25]'),
 Text(0.0481479994110009, 0.6142857142857143, 'x[6] <= 0.485\ngini =
0.444\nsamples = 9\nvalue = [6, 3]'),
 Text(0.04791953915282296, 0.5857142857142857, 'gini = 0.0\nsamples =
5\nvalue = [5, 0]'),
 Text(0.048376459669178834, 0.5857142857142857, 'x[7] <= 0.285\ngini =
0.375\nsamples = 4\nvalue = [1, 3]'),
 Text(0.0481479994110009, 0.5571428571428572, 'gini = 0.0\nsamples =
3\nvalue = [0, 3]'),
 Text(0.04860491992735678, 0.5571428571428572, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.05074673484777497, 0.6142857142857143, 'x[0] <= 0.453\ngini =
0.143\nsamples = 284\nvalue = [262, 22]'),
 Text(0.049290300701890596, 0.5857142857142857, 'x[11] <= 0.632\ngini
= 0.248\nsamples = 69\nvalue = [59, 10]'),
 Text(0.04906184044371266, 0.5571428571428572, 'x[5] <= 0.338\ngini =
0.21\nsamples = 67\nvalue = [59, 8]'),
 Text(0.04849068979826781, 0.5285714285714286, 'x[6] <= 0.46\ngini =
0.153\nsamples = 60\nvalue = [55, 5]'),
 Text(0.04803376928191193, 0.5, 'x[6] <= 0.415\ngini = 0.355\nsamples
= 13\nvalue = [10, 3]'),
 Text(0.047805309023733984, 0.4714285714285714, 'gini = 0.0\nsamples =
7\nvalue = [7, 0]'),
 Text(0.048262229540089865, 0.4714285714285714, 'x[9] <= 0.574\ngini =
0.5\nsamples = 6\nvalue = [3, 3]'),
 Text(0.04803376928191193, 0.44285714285714284, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.04849068979826781, 0.44285714285714284, 'x[4] <= 0.215\ngini =
0.375\nsamples = 4\nvalue = [3, 1]'),
 Text(0.048262229540089865, 0.4142857142857143, 'gini = 0.0\nsamples =
3\nvalue = [3, 0]'),
 Text(0.04871915005644575, 0.4142857142857143, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.04894761031462369, 0.5, 'x[11] <= 0.403\ngini = 0.081\nsamples
= 47\nvalue = [45, 2]'),
 Text(0.04871915005644575, 0.4714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.04917607057280163, 0.4714285714285714, 'x[0] <= 0.42\ngini =
0.043\nsamples = 46\nvalue = [45, 1]'),
 Text(0.04894761031462369, 0.44285714285714284, 'gini = 0.0\nsamples =
32\nvalue = [32, 0]'),
 Text(0.049404530830979565, 0.44285714285714284, 'x[10] <= 0.387\ngini
= 0.133\nsamples = 14\nvalue = [13, 1]'),
 Text(0.04917607057280163, 0.4142857142857143, 'x[7] <= 0.27\ngini =
0.5\nsamples = 2\nvalue = [1, 1]'),
 Text(0.04894761031462369, 0.38571428571428573, 'gini = 0.0\nsamples =

1\nvalue = [1, 0]'),
 Text(0.049404530830979565, 0.38571428571428573, 'gini = 0.0\nsamples
= 1\nvalue = [0, 1]'),
 Text(0.04963299108915751, 0.4142857142857143, 'gini = 0.0\nsamples =
12\nvalue = [12, 0]'),
 Text(0.04963299108915751, 0.5285714285714286, 'x[1] <= 0.519\ngini =
0.49\nsamples = 7\nvalue = [4, 3]'),
 Text(0.049404530830979565, 0.5, 'gini = 0.0\nsamples = 3\nvalue = [3,
0]'),
 Text(0.049861451347335446, 0.5, 'x[7] <= 0.245\ngini = 0.375\nsamples
= 4\nvalue = [1, 3]'),
 Text(0.04963299108915751, 0.4714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.05008991160551339, 0.4714285714285714, 'gini = 0.0\nsamples =
3\nvalue = [0, 3]'),
 Text(0.04951876096006854, 0.5571428571428572, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.05220316899365934, 0.5857142857142857, 'x[8] <= 0.695\ngini =
0.105\nsamples = 215\nvalue = [203, 12]'),
 Text(0.05157490328367, 0.5571428571428572, 'x[4] <= 0.092\ngini =
0.093\nsamples = 204\nvalue = [194, 10]'),
 Text(0.05100375263822515, 0.5285714285714286, 'x[9] <= 0.548\ngini =
0.18\nsamples = 40\nvalue = [36, 4]'),
 Text(0.05077529238004721, 0.5, 'x[0] <= 0.543\ngini = 0.391\nsamples
= 15\nvalue = [11, 4]'),
 Text(0.05054683212186927, 0.4714285714285714, 'x[9] <= 0.526\ngini =
0.444\nsamples = 6\nvalue = [2, 4]'),
 Text(0.05031837186369133, 0.44285714285714284, 'x[6] <= 0.725\ngini =
0.444\nsamples = 3\nvalue = [2, 1]'),
 Text(0.05008991160551339, 0.4142857142857143, 'gini = 0.0\nsamples =
2\nvalue = [2, 0]'),
 Text(0.05054683212186927, 0.4142857142857143, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.05077529238004721, 0.44285714285714284, 'gini = 0.0\nsamples =
3\nvalue = [0, 3]'),
 Text(0.05100375263822515, 0.4714285714285714, 'gini = 0.0\nsamples =
9\nvalue = [9, 0]'),
 Text(0.05123221289640309, 0.5, 'gini = 0.0\nsamples = 25\nvalue =
[25, 0]'),
 Text(0.05214605392911485, 0.5285714285714286, 'x[3] <= 0.383\ngini =
0.07\nsamples = 164\nvalue = [158, 6]'),
 Text(0.05168913341275897, 0.5, 'x[4] <= 0.185\ngini = 0.052\nsamples
= 151\nvalue = [147, 4]'),
 Text(0.05146067315458103, 0.4714285714285714, 'gini = 0.0\nsamples =
81\nvalue = [81, 0]'),
 Text(0.05191759367093691, 0.4714285714285714, 'x[5] <= 0.216\ngini =
0.108\nsamples = 70\nvalue = [66, 4]'),
 Text(0.05168913341275897, 0.44285714285714284, 'gini = 0.0\nsamples =
31\nvalue = [31, 0]'),
 Text(0.05214605392911485, 0.44285714285714284, 'x[8] <= 0.563\ngini =

0.184\nsamples = 39\nvalue = [35, 4]'),
 Text(0.05191759367093691, 0.4142857142857143, 'gini = 0.0\nsamples =
16\nvalue = [16, 0]'),
 Text(0.05237451418729279, 0.4142857142857143, 'x[8] <= 0.582\ngini =
0.287\nsamples = 23\nvalue = [19, 4]'),
 Text(0.05214605392911485, 0.38571428571428573, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.052602974445470733, 0.38571428571428573, 'x[5] <= 0.311\ngini
= 0.172\nsamples = 21\nvalue = [19, 2]'),
 Text(0.05237451418729279, 0.35714285714285715, 'gini = 0.0\nsamples =
14\nvalue = [14, 0]'),
 Text(0.05283143470364867, 0.35714285714285715, 'x[5] <= 0.338\ngini =
0.408\nsamples = 7\nvalue = [5, 2]'),
 Text(0.052602974445470733, 0.32857142857142857, 'x[0] <= 0.518\ngini
= 0.444\nsamples = 3\nvalue = [1, 2]'),
 Text(0.05237451418729279, 0.3, 'gini = 0.0\nsamples = 1\nvalue = [1,
0]'),
 Text(0.05283143470364867, 0.3, 'gini = 0.0\nsamples = 2\nvalue = [0,
2]'),
 Text(0.05305989496182661, 0.32857142857142857, 'gini = 0.0\nsamples =
4\nvalue = [4, 0]'),
 Text(0.052602974445470733, 0.5, 'x[9] <= 0.593\ngini = 0.26\nsamples
= 13\nvalue = [11, 2]'),
 Text(0.05237451418729279, 0.4714285714285714, 'gini = 0.0\nsamples =
11\nvalue = [11, 0]'),
 Text(0.05283143470364867, 0.4714285714285714, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.05283143470364867, 0.5571428571428572, 'x[3] <= 0.33\ngini =
0.298\nsamples = 11\nvalue = [9, 2]'),
 Text(0.052602974445470733, 0.5285714285714286, 'gini = 0.0\nsamples =
9\nvalue = [9, 0]'),
 Text(0.05305989496182661, 0.5285714285714286, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.05841443226287209, 0.7571428571428571, 'x[7] <= 0.285\ngini =
0.034\nsamples = 1445\nvalue = [1420, 25]'),
 Text(0.05662958649585693, 0.7285714285714285, 'x[9] <= 0.53\ngini =
0.028\nsamples = 1356\nvalue = [1337, 19]'),
 Text(0.05511603728542807, 0.7, 'x[8] <= 0.569\ngini = 0.067\nsamples
= 203\nvalue = [196, 7]'),
 Text(0.054202196252716314, 0.6714285714285714, 'x[3] <= 0.348\ngini =
0.041\nsamples = 191\nvalue = [187, 4]'),
 Text(0.05397373599453837, 0.6428571428571429, 'gini = 0.0\nsamples =
112\nvalue = [112, 0]'),
 Text(0.05443065651089425, 0.6428571428571429, 'x[11] <= 0.81\ngini =
0.096\nsamples = 79\nvalue = [75, 4]'),
 Text(0.05374527573636043, 0.6142857142857143, 'x[8] <= 0.556\ngini =
0.056\nsamples = 69\nvalue = [67, 2]'),
 Text(0.05351681547818249, 0.5857142857142857, 'gini = 0.0\nsamples =
57\nvalue = [57, 0]'),
 Text(0.05397373599453837, 0.5857142857142857, 'x[0] <= 0.787\ngini =

0.278\nsamples = 12\nvalue = [10, 2]'),
 Text(0.05374527573636043, 0.5571428571428572, 'x[10] <= 0.439\ngini =
0.165\nsamples = 11\nvalue = [10, 1]'),
 Text(0.05351681547818249, 0.5285714285714286, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.05397373599453837, 0.5285714285714286, 'gini = 0.0\nsamples =
10\nvalue = [10, 0]'),
 Text(0.054202196252716314, 0.5571428571428572, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.05511603728542807, 0.6142857142857143, 'x[4] <= 0.308\ngini =
0.32\nsamples = 10\nvalue = [8, 2]'),
 Text(0.05488757702725013, 0.5857142857142857, 'x[3] <= 0.383\ngini =
0.444\nsamples = 3\nvalue = [1, 2]'),
 Text(0.054659116769072195, 0.5571428571428572, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.05511603728542807, 0.5571428571428572, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.055344497543606014, 0.5857142857142857, 'gini = 0.0\nsamples =
7\nvalue = [7, 0]'),
 Text(0.05602987831813983, 0.6714285714285714, 'x[7] <= 0.205\ngini =
0.375\nsamples = 12\nvalue = [9, 3]'),
 Text(0.055801418059961895, 0.6428571428571429, 'x[0] <= 0.807\ngini =
0.18\nsamples = 10\nvalue = [9, 1]'),
 Text(0.05557295780178395, 0.6142857142857143, 'gini = 0.0\nsamples =
9\nvalue = [9, 0]'),
 Text(0.05602987831813983, 0.6142857142857143, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.056258338576317776, 0.6428571428571429, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.05814313570628578, 0.7, 'x[0] <= 0.602\ngini = 0.021\nsamples
= 1153\nvalue = [1141, 12]'),
 Text(0.05791467544810784, 0.6714285714285714, 'x[6] <= 0.355\ngini =
0.032\nsamples = 729\nvalue = [717, 12]'),
 Text(0.056943719350851595, 0.6428571428571429, 'x[7] <= 0.215\ngini =
0.068\nsamples = 227\nvalue = [219, 8]'),
 Text(0.05648679883449571, 0.6142857142857143, 'x[1] <= 0.553\ngini =
0.039\nsamples = 203\nvalue = [199, 4]'),
 Text(0.056258338576317776, 0.5857142857142857, 'x[11] <= 0.567\ngini
= 0.091\nsamples = 84\nvalue = [80, 4]'),
 Text(0.05602987831813983, 0.5571428571428572, 'x[10] <= 0.498\ngini =
0.07\nsamples = 83\nvalue = [80, 3]'),
 Text(0.055801418059961895, 0.5285714285714286, 'gini = 0.0\nsamples =
66\nvalue = [66, 0]'),
 Text(0.056258338576317776, 0.5285714285714286, 'x[1] <= 0.502\ngini =
0.291\nsamples = 17\nvalue = [14, 3]'),
 Text(0.05602987831813983, 0.5, 'x[1] <= 0.492\ngini = 0.5\nsamples =
6\nvalue = [3, 3]'),
 Text(0.055801418059961895, 0.4714285714285714, 'gini = 0.0\nsamples =
3\nvalue = [3, 0]'),
 Text(0.056258338576317776, 0.4714285714285714, 'gini = 0.0\nsamples =

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3\nvalue = [0, 3]'),
 Text(0.05648679883449571, 0.5, 'gini = 0.0\nsamples = 11\nvalue =
[11, 0]'),
 Text(0.05648679883449571, 0.5571428571428572, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.05671525909267366, 0.5857142857142857, 'gini = 0.0\nsamples =
119\nvalue = [119, 0]'),
 Text(0.057400639867207476, 0.6142857142857143, 'x[6] <= 0.215\ngini =
0.278\nsamples = 24\nvalue = [20, 4]'),
 Text(0.05717217960902953, 0.5857142857142857, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.05762910012538541, 0.5857142857142857, 'x[5] <= 0.311\ngini =
0.227\nsamples = 23\nvalue = [20, 3]'),
 Text(0.057400639867207476, 0.5571428571428572, 'gini = 0.0\nsamples =
15\nvalue = [15, 0]'),
 Text(0.05785756038356336, 0.5571428571428572, 'x[10] <= 0.561\ngini =
0.469\nsamples = 8\nvalue = [5, 3]'),
 Text(0.05762910012538541, 0.5285714285714286, 'x[1] <= 0.412\ngini =
0.48\nsamples = 5\nvalue = [2, 3]'),
 Text(0.057400639867207476, 0.5, 'gini = 0.0\nsamples = 2\nvalue = [2,
0]'),
 Text(0.05785756038356336, 0.5, 'gini = 0.0\nsamples = 3\nvalue = [0,
3]'),
 Text(0.058086020641741294, 0.5285714285714286, 'gini = 0.0\nsamples =
3\nvalue = [3, 0]'),
 Text(0.05888563154536409, 0.6428571428571429, 'x[7] <= 0.105\ngini =
0.016\nsamples = 502\nvalue = [498, 4]'),
 Text(0.05831448089991924, 0.6142857142857143, 'x[0] <= 0.408\ngini =
0.18\nsamples = 10\nvalue = [9, 1]'),
 Text(0.058086020641741294, 0.5857142857142857, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.058542941158097175, 0.5857142857142857, 'gini = 0.0\nsamples =
9\nvalue = [9, 0]'),
 Text(0.05945678219080894, 0.6142857142857143, 'x[4] <= 0.269\ngini =
0.012\nsamples = 492\nvalue = [489, 3]'),
 Text(0.05899986167445306, 0.5857142857142857, 'x[5] <= 0.189\ngini =
0.051\nsamples = 76\nvalue = [74, 2]'),
 Text(0.05877140141627512, 0.5571428571428572, 'x[3] <= 0.4\ngini =
0.231\nsamples = 15\nvalue = [13, 2]'),
 Text(0.058542941158097175, 0.5285714285714286, 'x[0] <= 0.563\ngini =
0.133\nsamples = 14\nvalue = [13, 1]'),
 Text(0.05831448089991924, 0.5, 'gini = 0.0\nsamples = 12\nvalue =
[12, 0]'),
 Text(0.05877140141627512, 0.5, 'x[7] <= 0.195\ngini = 0.5\nsamples =
2\nvalue = [1, 1]'),
 Text(0.058542941158097175, 0.4714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.05899986167445306, 0.4714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.05899986167445306, 0.5285714285714286, 'gini = 0.0\nsamples =
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1\nvalue = [0, 1]'),
 Text(0.059228321932630994, 0.5571428571428572, 'gini = 0.0\nsamples =
61\nvalue = [61, 0]'),
 Text(0.05991370270716482, 0.5857142857142857, 'x[4] <= 0.462\ngini =
0.005\nsamples = 416\nvalue = [415, 1]'),
 Text(0.059685242448986875, 0.5571428571428572, 'gini = 0.0\nsamples =
382\nvalue = [382, 0]'),
 Text(0.060142162965342756, 0.5571428571428572, 'x[7] <= 0.15\ngini =
0.057\nsamples = 34\nvalue = [33, 1]'),
 Text(0.05991370270716482, 0.5285714285714286, 'x[8] <= 0.598\ngini =
0.375\nsamples = 4\nvalue = [3, 1]'),
 Text(0.059685242448986875, 0.5, 'gini = 0.0\nsamples = 3\nvalue = [3,
0]'),
 Text(0.060142162965342756, 0.5, 'gini = 0.0\nsamples = 1\nvalue = [0,
1]'),
 Text(0.0603706232235207, 0.5285714285714286, 'gini = 0.0\nsamples =
30\nvalue = [30, 0]'),
 Text(0.05837159596446372, 0.6714285714285714, 'gini = 0.0\nsamples =
424\nvalue = [424, 0]'),
 Text(0.06019927802988724, 0.7285714285714285, 'x[5] <= 0.108\ngini =
0.126\nsamples = 89\nvalue = [83, 6]'),
 Text(0.05934255206171997, 0.7, 'x[11] <= 0.658\ngini = 0.48\nsamples
= 5\nvalue = [3, 2]'),
 Text(0.059114091803542025, 0.6714285714285714, 'gini = 0.0\nsamples =
2\nvalue = [2, 0]'),
 Text(0.059571012319897906, 0.6714285714285714, 'x[11] <= 0.718\ngini
= 0.444\nsamples = 3\nvalue = [1, 2]'),
 Text(0.05934255206171997, 0.6428571428571429, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.05979947257807585, 0.6428571428571429, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.06105600399805452, 0.7, 'x[6] <= 0.285\ngini = 0.091\nsamples
= 84\nvalue = [80, 4]'),
 Text(0.06048485335260967, 0.6714285714285714, 'x[4] <= 0.362\ngini =
0.5\nsamples = 2\nvalue = [1, 1]'),
 Text(0.060256393094431725, 0.6428571428571429, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.060713313610787606, 0.6428571428571429, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.06162715464349937, 0.6714285714285714, 'x[9] <= 0.509\ngini =
0.07\nsamples = 82\nvalue = [79, 3]'),
 Text(0.06117023412714349, 0.6428571428571429, 'x[3] <= 0.357\ngini =
0.444\nsamples = 3\nvalue = [2, 1]'),
 Text(0.06094177386896555, 0.6142857142857143, 'gini = 0.0\nsamples =
2\nvalue = [2, 0]'),
 Text(0.06139869438532143, 0.6142857142857143, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.06208407515985525, 0.6428571428571429, 'x[6] <= 0.495\ngini =
0.049\nsamples = 79\nvalue = [77, 2]'),
 Text(0.061855614901677305, 0.6142857142857143, 'x[0] <= 0.375\ngini =

0.124\nsamples = 30\nvalue = [28, 2]'),
 Text(0.06139869438532143, 0.5857142857142857, 'x[3] <= 0.309\ngini =
0.444\nsamples = 3\nvalue = [2, 1]'),
 Text(0.06117023412714349, 0.5571428571428572, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.06162715464349937, 0.5571428571428572, 'gini = 0.0\nsamples =
2\nvalue = [2, 0]'),
 Text(0.06231253541803319, 0.5857142857142857, 'x[9] <= 0.546\ngini =
0.071\nsamples = 27\nvalue = [26, 1]'),
 Text(0.06208407515985525, 0.5571428571428572, 'x[0] <= 0.556\ngini =
0.375\nsamples = 4\nvalue = [3, 1]'),
 Text(0.061855614901677305, 0.5285714285714286, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.06231253541803319, 0.5285714285714286, 'gini = 0.0\nsamples =
3\nvalue = [3, 0]'),
 Text(0.06254099567621113, 0.5571428571428572, 'gini = 0.0\nsamples =
23\nvalue = [23, 0]'),
 Text(0.06231253541803319, 0.6142857142857143, 'gini = 0.0\nsamples =
49\nvalue = [49, 0]'),
 Text(0.1064751875325595, 0.8142857142857143, 'x[9] <= 0.655\ngini =
0.097\nsamples = 5575\nvalue = [5291, 284]'),
 Text(0.08544623645399671, 0.7857142857142857, 'x[10] <= 0.36\ngini =
0.137\nsamples = 3113\nvalue = [2883, 230]'),
 Text(0.06990750036812445, 0.7571428571428571, 'x[8] <= 0.697\ngini =
0.248\nsamples = 546\nvalue = [467, 79]'),
 Text(0.06799459191732594, 0.7285714285714285, 'x[9] <= 0.546\ngini =
0.238\nsamples = 537\nvalue = [463, 74]'),
 Text(0.06485415579026277, 0.7, 'x[8] <= 0.563\ngini = 0.385\nsamples
= 73\nvalue = [54, 19]'),
 Text(0.06396887228982326, 0.6714285714285714, 'x[9] <= 0.506\ngini =
0.266\nsamples = 57\nvalue = [48, 9]'),
 Text(0.06322637645074496, 0.6428571428571429, 'x[6] <= 0.72\ngini =
0.5\nsamples = 8\nvalue = [4, 4]'),
 Text(0.062997916192567, 0.6142857142857143, 'x[0] <= 0.247\ngini =
0.32\nsamples = 5\nvalue = [4, 1]'),
 Text(0.06276945593438907, 0.5857142857142857, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.06322637645074496, 0.5857142857142857, 'gini = 0.0\nsamples =
4\nvalue = [4, 0]'),
 Text(0.0634548367089229, 0.6142857142857143, 'gini = 0.0\nsamples =
3\nvalue = [0, 3]'),
 Text(0.06471136812890156, 0.6428571428571429, 'x[9] <= 0.541\ngini =
0.183\nsamples = 49\nvalue = [44, 5]'),
 Text(0.0641402174834567, 0.6142857142857143, 'x[5] <= 0.135\ngini =
0.124\nsamples = 45\nvalue = [42, 3]'),
 Text(0.06368329696710083, 0.5857142857142857, 'x[9] <= 0.528\ngini =
0.444\nsamples = 6\nvalue = [4, 2]'),
 Text(0.0634548367089229, 0.5571428571428572, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.06391175722527877, 0.5571428571428572, 'gini = 0.0\nsamples =

4\nvalue = [4, 0]'),
 Text(0.06459713799981259, 0.5857142857142857, 'x[1] <= 0.29\ngini =
0.05\nsamples = 39\nvalue = [38, 1]'),
 Text(0.06436867774163466, 0.5571428571428572, 'x[11] <= 0.294\ngini =
0.198\nsamples = 9\nvalue = [8, 1]'),
 Text(0.0641402174834567, 0.5285714285714286, 'gini = 0.0\nsamples =
8\nvalue = [8, 0]'),
 Text(0.06459713799981259, 0.5285714285714286, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.06482559825799053, 0.5571428571428572, 'gini = 0.0\nsamples =
30\nvalue = [30, 0]'),
 Text(0.06528251877434642, 0.6142857142857143, 'x[0] <= 0.409\ngini =
0.5\nsamples = 4\nvalue = [2, 2]'),
 Text(0.06505405851616847, 0.5857142857142857, 'gini = 0.0\nsamples =
2\nvalue = [2, 0]'),
 Text(0.06551097903252436, 0.5857142857142857, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.06573943929070229, 0.6714285714285714, 'x[4] <= 0.123\ngini =
0.469\nsamples = 16\nvalue = [6, 10]'),
 Text(0.06551097903252436, 0.6428571428571429, 'gini = 0.0\nsamples =
3\nvalue = [3, 0]'),
 Text(0.06596789954888023, 0.6428571428571429, 'x[5] <= 0.365\ngini =
0.355\nsamples = 13\nvalue = [3, 10]'),
 Text(0.06573943929070229, 0.6142857142857143, 'gini = 0.0\nsamples =
8\nvalue = [0, 8]'),
 Text(0.06619635980705817, 0.6142857142857143, 'x[0] <= 0.339\ngini =
0.48\nsamples = 5\nvalue = [3, 2]'),
 Text(0.06596789954888023, 0.5857142857142857, 'gini = 0.0\nsamples =
2\nvalue = [2, 0]'),
 Text(0.06642482006523612, 0.5857142857142857, 'x[4] <= 0.238\ngini =
0.444\nsamples = 3\nvalue = [1, 2]'),
 Text(0.06619635980705817, 0.5571428571428572, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.06665328032341405, 0.5571428571428572, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.07113502804438912, 0.7, 'x[11] <= 0.171\ngini = 0.209\nsamples
= 464\nvalue = [409, 55]'),
 Text(0.07090656778621117, 0.6714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.07136348830256706, 0.6714285714285714, 'x[0] <= 0.507\ngini =
0.206\nsamples = 463\nvalue = [409, 54]'),
 Text(0.07113502804438912, 0.6428571428571429, 'x[2] <= 0.181\ngini =
0.203\nsamples = 462\nvalue = [409, 53]'),
 Text(0.07090656778621117, 0.6142857142857143, 'x[1] <= 0.342\ngini =
0.2\nsamples = 461\nvalue = [409, 52]'),
 Text(0.06855949560258624, 0.5857142857142857, 'x[2] <= 0.0\ngini =
0.137\nsamples = 217\nvalue = [201, 16]'),
 Text(0.06711020083976993, 0.5571428571428572, 'x[8] <= 0.534\ngini =
0.189\nsamples = 142\nvalue = [127, 15]'),
 Text(0.06606785091183308, 0.5285714285714286, 'x[3] <= 0.339\ngini =

0.444\nsamples = 3\nvalue = [1, 2]'),
 Text(0.06583939065365514, 0.5, 'gini = 0.0\nsamples = 1\nvalue = [1,
0]'),
 Text(0.06629631117001102, 0.5, 'gini = 0.0\nsamples = 2\nvalue = [0,
2]'),
 Text(0.06815255076770678, 0.5285714285714286, 'x[8] <= 0.662\ngini =
0.17\nsamples = 139\nvalue = [126, 13]'),
 Text(0.0667532316863669, 0.5, 'x[9] <= 0.573\ngini = 0.126\nsamples =
118\nvalue = [110, 8]'),
 Text(0.06612496597637757, 0.4714285714285714, 'x[8] <= 0.602\ngini =
0.346\nsamples = 18\nvalue = [14, 4]'),
 Text(0.06589650571819963, 0.44285714285714284, 'x[5] <= 0.189\ngini =
0.219\nsamples = 16\nvalue = [14, 2]'),
 Text(0.06566804546002168, 0.4142857142857143, 'x[8] <= 0.583\ngini =
0.48\nsamples = 5\nvalue = [3, 2]'),
 Text(0.06543958520184374, 0.38571428571428573, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.06589650571819963, 0.38571428571428573, 'gini = 0.0\nsamples =
3\nvalue = [3, 0]'),
 Text(0.06612496597637757, 0.4142857142857143, 'gini = 0.0\nsamples =
11\nvalue = [11, 0]'),
 Text(0.06635342623455551, 0.44285714285714284, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.06738149739635624, 0.4714285714285714, 'x[0] <= 0.172\ngini =
0.077\nsamples = 100\nvalue = [96, 4]'),
 Text(0.06681034675091138, 0.44285714285714284, 'x[10] <= 0.188\ngini
= 0.408\nsamples = 7\nvalue = [5, 2]'),
 Text(0.06658188649273344, 0.4142857142857143, 'gini = 0.0\nsamples =
5\nvalue = [5, 0]'),
 Text(0.06703880700908933, 0.4142857142857143, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.0679526480418011, 0.44285714285714284, 'x[10] <= 0.197\ngini =
0.042\nsamples = 93\nvalue = [91, 2]'),
 Text(0.0674957275254452, 0.4142857142857143, 'x[11] <= 0.274\ngini =
0.32\nsamples = 5\nvalue = [4, 1]'),
 Text(0.06726726726726727, 0.38571428571428573, 'gini = 0.0\nsamples =
4\nvalue = [4, 0]'),
 Text(0.06772418778362314, 0.38571428571428573, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.06840956855815697, 0.4142857142857143, 'x[7] <= 0.415\ngini =
0.022\nsamples = 88\nvalue = [87, 1]'),
 Text(0.06818110829997903, 0.38571428571428573, 'gini = 0.0\nsamples =
83\nvalue = [83, 0]'),
 Text(0.0686380288163349, 0.38571428571428573, 'x[1] <= 0.3\ngini =
0.32\nsamples = 5\nvalue = [4, 1]'),
 Text(0.06840956855815697, 0.35714285714285715, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.06886648907451284, 0.35714285714285715, 'gini = 0.0\nsamples =
4\nvalue = [4, 0]'),
 Text(0.06955186984904667, 0.5, 'x[9] <= 0.615\ngini = 0.363\nsamples

= 21\nvalue = [16, 5]'),
 Text(0.06932340959086873, 0.4714285714285714, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.0697803301072246, 0.4714285714285714, 'x[6] <= 0.505\ngini =
0.266\nsamples = 19\nvalue = [16, 3]'),
 Text(0.06955186984904667, 0.44285714285714284, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.07000879036540254, 0.44285714285714284, 'x[7] <= 0.365\ngini =
0.198\nsamples = 18\nvalue = [16, 2]'),
 Text(0.0697803301072246, 0.4142857142857143, 'x[11] <= 0.315\ngini =
0.444\nsamples = 6\nvalue = [4, 2]'),
 Text(0.06955186984904667, 0.38571428571428573, 'x[8] <= 0.678\ngini =
0.444\nsamples = 3\nvalue = [1, 2]'),
 Text(0.06932340959086873, 0.35714285714285715, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
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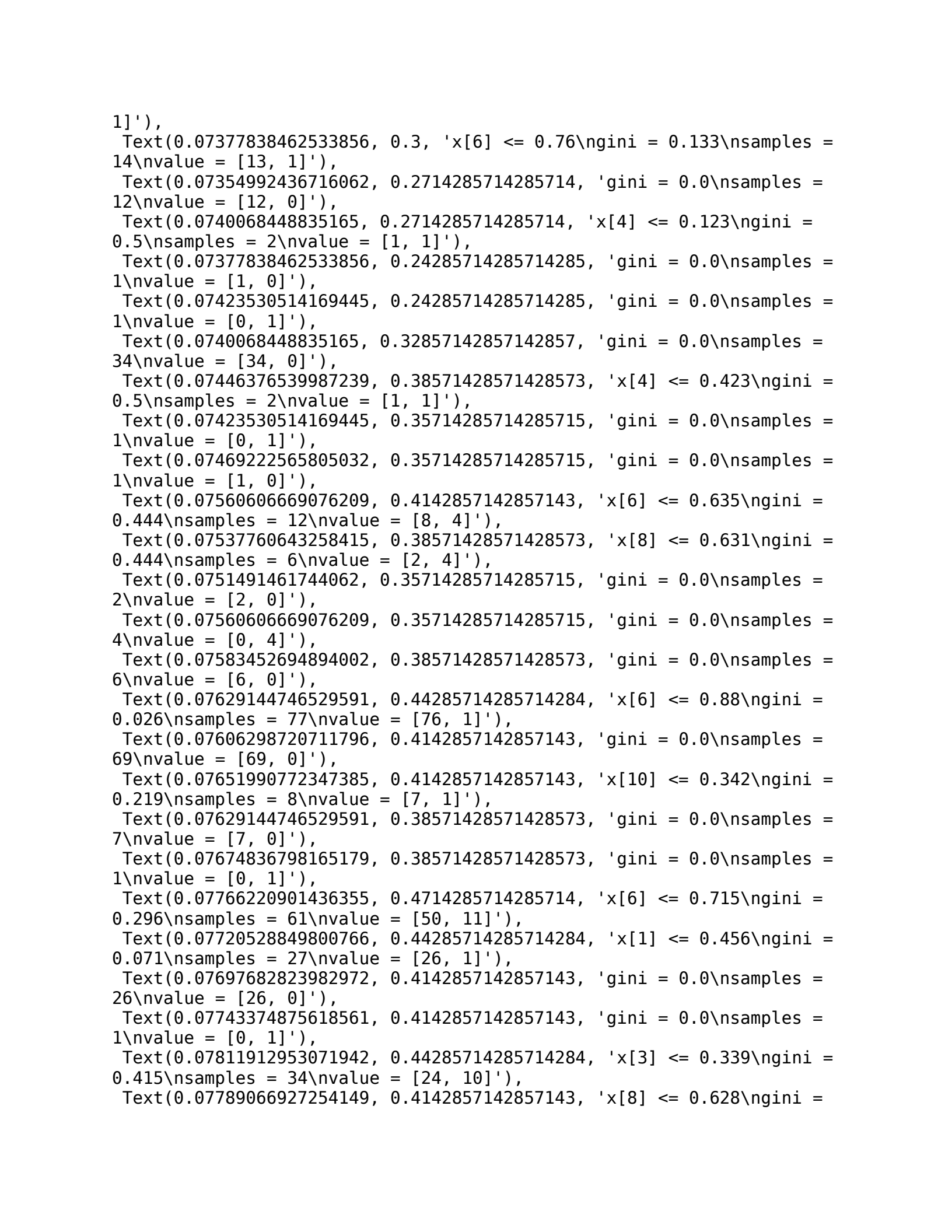
1\nvalue = [1, 0]'),
 Text(0.07000879036540254, 0.38571428571428573, 'gini = 0.0\nsamples =
3\nvalue = [3, 0]'),
 Text(0.0702372506235805, 0.4142857142857143, 'gini = 0.0\nsamples =
12\nvalue = [12, 0]'),
 Text(0.07000879036540254, 0.5571428571428572, 'x[3] <= 0.365\ngini =
0.026\nsamples = 75\nvalue = [74, 1]'),
 Text(0.0697803301072246, 0.5285714285714286, 'gini = 0.0\nsamples =
66\nvalue = [66, 0]'),
 Text(0.0702372506235805, 0.5285714285714286, 'x[6] <= 0.82\ngini =
0.198\nsamples = 9\nvalue = [8, 1]'),
 Text(0.07000879036540254, 0.5, 'gini = 0.0\nsamples = 8\nvalue = [8,
0]'),
 Text(0.07046571088175843, 0.5, 'gini = 0.0\nsamples = 1\nvalue = [0,
1]'),
 Text(0.07325363996983611, 0.5857142857142857, 'x[6] <= 0.515\ngini =
0.252\nsamples = 244\nvalue = [208, 36]'),
 Text(0.07160801217264813, 0.5571428571428572, 'x[0] <= 0.337\ngini =
0.483\nsamples = 22\nvalue = [13, 9]'),
 Text(0.07115109165629226, 0.5285714285714286, 'x[6] <= 0.455\ngini =
0.42\nsamples = 10\nvalue = [3, 7]'),
 Text(0.0709226313981143, 0.5, 'x[5] <= 0.25\ngini = 0.375\nsamples =
4\nvalue = [3, 1]'),
 Text(0.07069417113993637, 0.4714285714285714, 'gini = 0.0\nsamples =
3\nvalue = [3, 0]'),
 Text(0.07115109165629226, 0.4714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.0713795519144702, 0.5, 'gini = 0.0\nsamples = 6\nvalue = [0,
6]'),
 Text(0.072064932689004, 0.5285714285714286, 'x[8] <= 0.562\ngini =
0.278\nsamples = 12\nvalue = [10, 2]'),
 Text(0.07183647243082607, 0.5, 'gini = 0.0\nsamples = 1\nvalue = [0,
1]'),
 Text(0.07229339294718196, 0.5, 'x[4] <= 0.408\ngini = 0.165\nsamples

= 11\nvalue = [10, 1]'),
 Text(0.072064932689004, 0.4714285714285714, 'gini = 0.0\nsamples =
10\nvalue = [10, 0]'),
 Text(0.07252185320535989, 0.4714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.07489926776702409, 0.5571428571428572, 'x[11] <= 0.35\ngini =
0.214\nsamples = 222\nvalue = [195, 27]'),
 Text(0.07343569423807166, 0.5285714285714286, 'x[0] <= 0.329\ngini =
0.444\nsamples = 18\nvalue = [12, 6]'),
 Text(0.07320723397989372, 0.5, 'x[0] <= 0.265\ngini = 0.48\nsamples =
10\nvalue = [4, 6]'),
 Text(0.07297877372171577, 0.4714285714285714, 'x[7] <= 0.395\ngini =
0.444\nsamples = 6\nvalue = [4, 2]'),
 Text(0.07275031346353783, 0.44285714285714284, 'gini = 0.0\nsamples =
3\nvalue = [3, 0]'),
 Text(0.07320723397989372, 0.44285714285714284, 'x[7] <= 0.405\ngini =
0.444\nsamples = 3\nvalue = [1, 2]'),
 Text(0.07297877372171577, 0.4142857142857143, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.07343569423807166, 0.4142857142857143, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.07343569423807166, 0.4714285714285714, 'gini = 0.0\nsamples =
4\nvalue = [0, 4]'),
 Text(0.07366415449624959, 0.5, 'gini = 0.0\nsamples = 8\nvalue = [8,
0]'),
 Text(0.07636284129597651, 0.5285714285714286, 'x[0] <= 0.169\ngini =
0.185\nsamples = 204\nvalue = [183, 21]'),
 Text(0.07613438103779857, 0.5, 'gini = 0.0\nsamples = 1\nvalue = [0,
1]'),
 Text(0.07659130155415445, 0.5, 'x[7] <= 0.385\ngini = 0.178\nsamples
= 203\nvalue = [183, 20]'),
 Text(0.07552039409394536, 0.4714285714285714, 'x[1] <= 0.394\ngini =
0.119\nsamples = 142\nvalue = [133, 9]'),
 Text(0.07474934072259481, 0.44285714285714284, 'x[11] <= 0.39\ngini =
0.216\nsamples = 65\nvalue = [57, 8]'),
 Text(0.07389261475442753, 0.4142857142857143, 'x[4] <= 0.385\ngini =
0.14\nsamples = 53\nvalue = [49, 4]'),
 Text(0.07332146410898269, 0.38571428571428573, 'x[3] <= 0.139\ngini =
0.111\nsamples = 51\nvalue = [48, 3]'),
 Text(0.0728645435926268, 0.35714285714285715, 'x[6] <= 0.73\ngini =
0.5\nsamples = 2\nvalue = [1, 1]'),
 Text(0.07263608333444886, 0.32857142857142857, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.07309300385080474, 0.32857142857142857, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.07377838462533856, 0.35714285714285715, 'x[5] <= 0.135\ngini =
0.078\nsamples = 49\nvalue = [47, 2]'),
 Text(0.07354992436716062, 0.32857142857142857, 'x[8] <= 0.588\ngini =
0.231\nsamples = 15\nvalue = [13, 2]'),
 Text(0.07332146410898269, 0.3, 'gini = 0.0\nsamples = 1\nvalue = [0,


1]'),
Text(0.07377838462533856, 0.3, 'x[6] <= 0.76\ngini = 0.133\nsamples = 14\nvalue = [13, 1]'),
Text(0.07354992436716062, 0.2714285714285714, 'gini = 0.0\nsamples = 12\nvalue = [12, 0]'),
Text(0.0740068448835165, 0.2714285714285714, 'x[4] <= 0.123\ngini = 0.5\nsamples = 2\nvalue = [1, 1]'),
Text(0.07377838462533856, 0.24285714285714285, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(0.07423530514169445, 0.24285714285714285, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(0.0740068448835165, 0.32857142857142857, 'gini = 0.0\nsamples = 34\nvalue = [34, 0]'),
Text(0.07446376539987239, 0.38571428571428573, 'x[4] <= 0.423\ngini = 0.5\nsamples = 2\nvalue = [1, 1]'),
Text(0.07423530514169445, 0.35714285714285715, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(0.07469222565805032, 0.35714285714285715, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(0.07560606669076209, 0.4142857142857143, 'x[6] <= 0.635\ngini = 0.444\nsamples = 12\nvalue = [8, 4]'),
Text(0.07537760643258415, 0.38571428571428573, 'x[8] <= 0.631\ngini = 0.444\nsamples = 6\nvalue = [2, 4]'),
Text(0.0751491461744062, 0.35714285714285715, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(0.07560606669076209, 0.35714285714285715, 'gini = 0.0\nsamples = 4\nvalue = [0, 4]'),
Text(0.07583452694894002, 0.38571428571428573, 'gini = 0.0\nsamples = 6\nvalue = [6, 0]'),
Text(0.07629144746529591, 0.44285714285714284, 'x[6] <= 0.88\ngini = 0.026\nsamples = 77\nvalue = [76, 1]'),
Text(0.07606298720711796, 0.4142857142857143, 'gini = 0.0\nsamples = 69\nvalue = [69, 0]'),
Text(0.07651990772347385, 0.4142857142857143, 'x[10] <= 0.342\ngini = 0.219\nsamples = 8\nvalue = [7, 1]'),
Text(0.07629144746529591, 0.38571428571428573, 'gini = 0.0\nsamples = 7\nvalue = [7, 0]'),
Text(0.07674836798165179, 0.38571428571428573, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(0.07766220901436355, 0.4714285714285714, 'x[6] <= 0.715\ngini = 0.296\nsamples = 61\nvalue = [50, 11]'),
Text(0.07720528849800766, 0.44285714285714284, 'x[1] <= 0.456\ngini = 0.071\nsamples = 27\nvalue = [26, 1]'),
Text(0.07697682823982972, 0.4142857142857143, 'gini = 0.0\nsamples = 26\nvalue = [26, 0]'),
Text(0.07743374875618561, 0.4142857142857143, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(0.07811912953071942, 0.44285714285714284, 'x[3] <= 0.339\ngini = 0.415\nsamples = 34\nvalue = [24, 10]'),
Text(0.07789066927254149, 0.4142857142857143, 'x[8] <= 0.628\ngini =

0.375\nsamples = 32\nvalue = [24, 8]'),
 Text(0.07766220901436355, 0.38571428571428573, 'gini = 0.0\nsamples =
11\nvalue = [11, 0]'),
 Text(0.07811912953071942, 0.38571428571428573, 'x[10] <= 0.305\ngini
= 0.472\nsamples = 21\nvalue = [13, 8]'),
 Text(0.07789066927254149, 0.3571428571428571, 'gini = 0.0\nsamples =
5\nvalue = [5, 0]'),
 Text(0.07834758978889737, 0.3571428571428571, 'x[8] <= 0.679\ngini =
0.5\nsamples = 16\nvalue = [8, 8]'),
 Text(0.07811912953071942, 0.32857142857142857, 'x[6] <= 0.77\ngini =
0.473\nsamples = 13\nvalue = [5, 8]'),
 Text(0.07789066927254149, 0.3, 'x[11] <= 0.409\ngini = 0.408\nsamples
= 7\nvalue = [5, 2]'),
 Text(0.07766220901436355, 0.2714285714285714, 'x[8] <= 0.644\ngini =
0.444\nsamples = 3\nvalue = [1, 2]'),
 Text(0.07743374875618561, 0.24285714285714285, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.07789066927254149, 0.24285714285714285, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.07811912953071942, 0.2714285714285714, 'gini = 0.0\nsamples =
4\nvalue = [4, 0]'),
 Text(0.07834758978889737, 0.3, 'gini = 0.0\nsamples = 6\nvalue = [0,
6]'),
 Text(0.07857605004707531, 0.32857142857142857, 'gini = 0.0\nsamples =
3\nvalue = [3, 0]'),
 Text(0.07834758978889737, 0.4142857142857143, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.07136348830256706, 0.6142857142857143, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.071591948560745, 0.6428571428571429, 'gini = 0.0\nsamples = 1\
nvalue = [0, 1]'),
 Text(0.07182040881892293, 0.7285714285714285, 'x[3] <= 0.27\ngini =
0.494\nsamples = 9\nvalue = [4, 5]'),
 Text(0.071591948560745, 0.7, 'gini = 0.0\nsamples = 4\nvalue = [0,
4]'),
 Text(0.07204886907710087, 0.7, 'x[11] <= 0.318\ngini = 0.32\nsamples
= 5\nvalue = [4, 1]'),
 Text(0.07182040881892293, 0.6714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.07227732933527882, 0.6714285714285714, 'gini = 0.0\nsamples =
4\nvalue = [4, 0]'),
 Text(0.10098497253986899, 0.7571428571428571, 'x[3] <= 0.348\ngini =
0.111\nsamples = 2567\nvalue = [2416, 151]'),
 Text(0.09345868493400533, 0.7285714285714285, 'x[9] <= 0.59\ngini =
0.095\nsamples = 2229\nvalue = [2117, 112]'),
 Text(0.08484114802953027, 0.7, 'x[10] <= 0.463\ngini = 0.125\nsamples
= 1259\nvalue = [1175, 84]'),
 Text(0.07950416984592319, 0.6714285714285714, 'x[8] <= 0.55\ngini =
0.219\nsamples = 287\nvalue = [251, 36]'),
 Text(0.078304753490489, 0.6428571428571429, 'x[2] <= 0.101\ngini =

0.108\nsamples = 122\nvalue = [115, 7]'),
 Text(0.07807629323231106, 0.6142857142857143, 'x[2] <= 0.004\ngini =
0.094\nsamples = 121\nvalue = [115, 6]'),
 Text(0.07750514258686621, 0.5857142857142857, 'x[0] <= 0.332\ngini =
0.041\nsamples = 96\nvalue = [94, 2]'),
 Text(0.07704822207051033, 0.5571428571428572, 'x[10] <= 0.38\ngini =
0.375\nsamples = 4\nvalue = [3, 1]'),
 Text(0.0768197618123324, 0.5285714285714286, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.07727668232868827, 0.5285714285714286, 'gini = 0.0\nsamples =
3\nvalue = [3, 0]'),
 Text(0.0779620631032221, 0.5571428571428572, 'x[6] <= 0.505\ngini =
0.022\nsamples = 92\nvalue = [91, 1]'),
 Text(0.07773360284504416, 0.5285714285714286, 'x[11] <= 0.481\ngini =
0.142\nsamples = 13\nvalue = [12, 1]'),
 Text(0.07750514258686621, 0.5, 'gini = 0.0\nsamples = 12\nvalue =
[12, 0]'),
 Text(0.0779620631032221, 0.5, 'gini = 0.0\nsamples = 1\nvalue = [0,
1]'),
 Text(0.07819052336140003, 0.5285714285714286, 'gini = 0.0\nsamples =
79\nvalue = [79, 0]'),
 Text(0.07864744387775591, 0.5857142857142857, 'x[2] <= 0.006\ngini =
0.269\nsamples = 25\nvalue = [21, 4]'),
 Text(0.07841898361957797, 0.5571428571428572, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.07887590413593386, 0.5571428571428572, 'x[1] <= 0.35\ngini =
0.159\nsamples = 23\nvalue = [21, 2]'),
 Text(0.07864744387775591, 0.5285714285714286, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.0791043643941118, 0.5285714285714286, 'x[11] <= 0.518\ngini =
0.087\nsamples = 22\nvalue = [21, 1]'),
 Text(0.07887590413593386, 0.5, 'gini = 0.0\nsamples = 20\nvalue =
[20, 0]'),
 Text(0.07933282465228973, 0.5, 'x[8] <= 0.519\ngini = 0.5\nsamples =
2\nvalue = [1, 1]'),
 Text(0.0791043643941118, 0.4714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.07956128491046767, 0.4714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.07853321374866694, 0.6142857142857143, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.08070358620135737, 0.6428571428571429, 'x[4] <= 0.015\ngini =
0.29\nsamples = 165\nvalue = [136, 29]'),
 Text(0.08047512594317943, 0.6142857142857143, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.08093204645953532, 0.6142857142857143, 'x[9] <= 0.527\ngini =
0.276\nsamples = 163\nvalue = [136, 27]'),
 Text(0.08001820542682356, 0.5857142857142857, 'x[0] <= 0.465\ngini =
0.494\nsamples = 9\nvalue = [4, 5]'),
 Text(0.07978974516864562, 0.5571428571428572, 'gini = 0.0\nsamples =

2\nvalue = [2, 0]'),
 Text(0.0802466656850015, 0.5571428571428572, 'x[0] <= 0.533\ngini =
0.408\nsamples = 7\nvalue = [2, 5]'),
 Text(0.08001820542682356, 0.5285714285714286, 'x[7] <= 0.315\ngini =
0.278\nsamples = 6\nvalue = [1, 5]'),
 Text(0.07978974516864562, 0.5, 'gini = 0.0\nsamples = 1\nvalue = [1,
0]'),
 Text(0.0802466656850015, 0.5, 'gini = 0.0\nsamples = 5\nvalue = [0,
5]'),
 Text(0.08047512594317943, 0.5285714285714286, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.08184588749224708, 0.5857142857142857, 'x[11] <= 0.377\ngini =
0.245\nsamples = 154\nvalue = [132, 22]'),
 Text(0.08116050671771326, 0.5571428571428572, 'x[3] <= 0.252\ngini =
0.486\nsamples = 12\nvalue = [7, 5]'),
 Text(0.08093204645953532, 0.5285714285714286, 'gini = 0.0\nsamples =
5\nvalue = [5, 0]'),
 Text(0.0813889669758912, 0.5285714285714286, 'x[0] <= 0.445\ngini =
0.408\nsamples = 7\nvalue = [2, 5]'),
 Text(0.08116050671771326, 0.5, 'gini = 0.0\nsamples = 5\nvalue = [0,
5]'),
 Text(0.08161742723406913, 0.5, 'gini = 0.0\nsamples = 2\nvalue = [2,
0]'),
 Text(0.0825312682667809, 0.5571428571428572, 'x[8] <= 0.645\ngini =
0.211\nsamples = 142\nvalue = [125, 17]'),
 Text(0.08230280800860296, 0.5285714285714286, 'x[3] <= 0.187\ngini =
0.201\nsamples = 141\nvalue = [125, 16]'),
 Text(0.08207434775042502, 0.5, 'gini = 0.0\nsamples = 28\nvalue =
[28, 0]'),
 Text(0.0825312682667809, 0.5, 'x[1] <= 0.549\ngini = 0.243\nsamples =
113\nvalue = [97, 16]'),
 Text(0.08116050671771326, 0.4714285714285714, 'x[8] <= 0.59\ngini =
0.19\nsamples = 94\nvalue = [84, 10]'),
 Text(0.0802466656850015, 0.44285714285714284, 'x[0] <= 0.558\ngini =
0.069\nsamples = 56\nvalue = [54, 2]'),
 Text(0.07978974516864562, 0.4142857142857143, 'x[9] <= 0.535\ngini =
0.036\nsamples = 54\nvalue = [53, 1]'),
 Text(0.07956128491046767, 0.38571428571428573, 'x[5] <= 0.209\ngini =
0.32\nsamples = 5\nvalue = [4, 1]'),
 Text(0.07933282465228973, 0.35714285714285715, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
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4\nvalue = [4, 0]'),
 Text(0.08001820542682356, 0.38571428571428573, 'gini = 0.0\nsamples =
49\nvalue = [49, 0]'),
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 Text(0.08047512594317943, 0.38571428571428573, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.08093204645953532, 0.38571428571428573, 'gini = 0.0\nsamples =

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1\nvalue = [1, 0]'),
 Text(0.08207434775042502, 0.44285714285714284, 'x[11] <= 0.449\ngini
= 0.332\nsamples = 38\nvalue = [30, 8]'),
 Text(0.08161742723406913, 0.4142857142857143, 'x[1] <= 0.441\ngini =
0.457\nsamples = 17\nvalue = [11, 6]'),
 Text(0.0813889669758912, 0.38571428571428573, 'x[8] <= 0.592\ngini =
0.337\nsamples = 14\nvalue = [11, 3]'),
 Text(0.08116050671771326, 0.3571428571428571, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
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0.26\nsamples = 13\nvalue = [11, 2]'),
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8\nvalue = [8, 0]'),
 Text(0.08184588749224708, 0.32857142857142857, 'x[0] <= 0.387\ngini =
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= 3\nvalue = [1, 2]'),
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2\nvalue = [0, 2]'),
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1\nvalue = [1, 0]'),
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0.172\nsamples = 21\nvalue = [19, 2]'),
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3\nvalue = [3, 0]'),
 Text(0.08275972852495883, 0.38571428571428573, 'gini = 0.0\nsamples =
16\nvalue = [16, 0]'),
 Text(0.08390202981584854, 0.4714285714285714, 'x[9] <= 0.563\ngini =
0.432\nsamples = 19\nvalue = [13, 6]'),
 Text(0.0836735695576706, 0.44285714285714284, 'x[6] <= 0.755\ngini =
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 Text(0.08344510929949266, 0.4142857142857143, 'x[0] <= 0.394\ngini =
0.375\nsamples = 8\nvalue = [2, 6]'),
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 Text(0.0836735695576706, 0.38571428571428573, 'x[8] <= 0.57\ngini =
0.245\nsamples = 7\nvalue = [1, 6]'),
 Text(0.08344510929949266, 0.3571428571428571, 'x[4] <= 0.169\ngini =
0.5\nsamples = 2\nvalue = [1, 1]'),
 Text(0.08321664904131472, 0.32857142857142857, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.0836735695576706, 0.32857142857142857, 'gini = 0.0\nsamples =
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1\nvalue = [0, 1]'),
 Text(0.08390202981584854, 0.35714285714285715, 'gini = 0.0\nsamples =
5\nvalue = [0, 5]'),
 Text(0.08390202981584854, 0.4142857142857143, 'gini = 0.0\nsamples =
2\nvalue = [2, 0]'),
 Text(0.08413049007402648, 0.44285714285714284, 'gini = 0.0\nsamples =
9\nvalue = [9, 0]'),
 Text(0.08275972852495883, 0.5285714285714286, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.09017812621313735, 0.6714285714285714, 'x[8] <= 0.639\ngini =
0.094\nsamples = 972\nvalue = [924, 48]'),
 Text(0.08839070775827834, 0.6428571428571429, 'x[7] <= 0.315\ngini =
0.09\nsamples = 969\nvalue = [923, 46]'),
 Text(0.08550125162309412, 0.6142857142857143, 'x[11] <= 0.743\ngini =
0.187\nsamples = 134\nvalue = [120, 14]'),
 Text(0.08504433110673824, 0.5857142857142857, 'x[4] <= 0.046\ngini =
0.166\nsamples = 131\nvalue = [119, 12]'),
 Text(0.08481587084856029, 0.5571428571428572, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.08527279136491618, 0.5571428571428572, 'x[4] <= 0.454\ngini =
0.155\nsamples = 130\nvalue = [119, 11]'),
 Text(0.08504433110673824, 0.5285714285714286, 'x[11] <= 0.599\ngini =
0.143\nsamples = 129\nvalue = [119, 10]'),
 Text(0.08481587084856029, 0.5, 'gini = 0.0\nsamples = 41\nvalue =
[41, 0]'),
 Text(0.08527279136491618, 0.5, 'x[10] <= 0.511\ngini = 0.201\nsamples
= 88\nvalue = [78, 10]'),
 Text(0.08481587084856029, 0.4714285714285714, 'x[9] <= 0.565\ngini =
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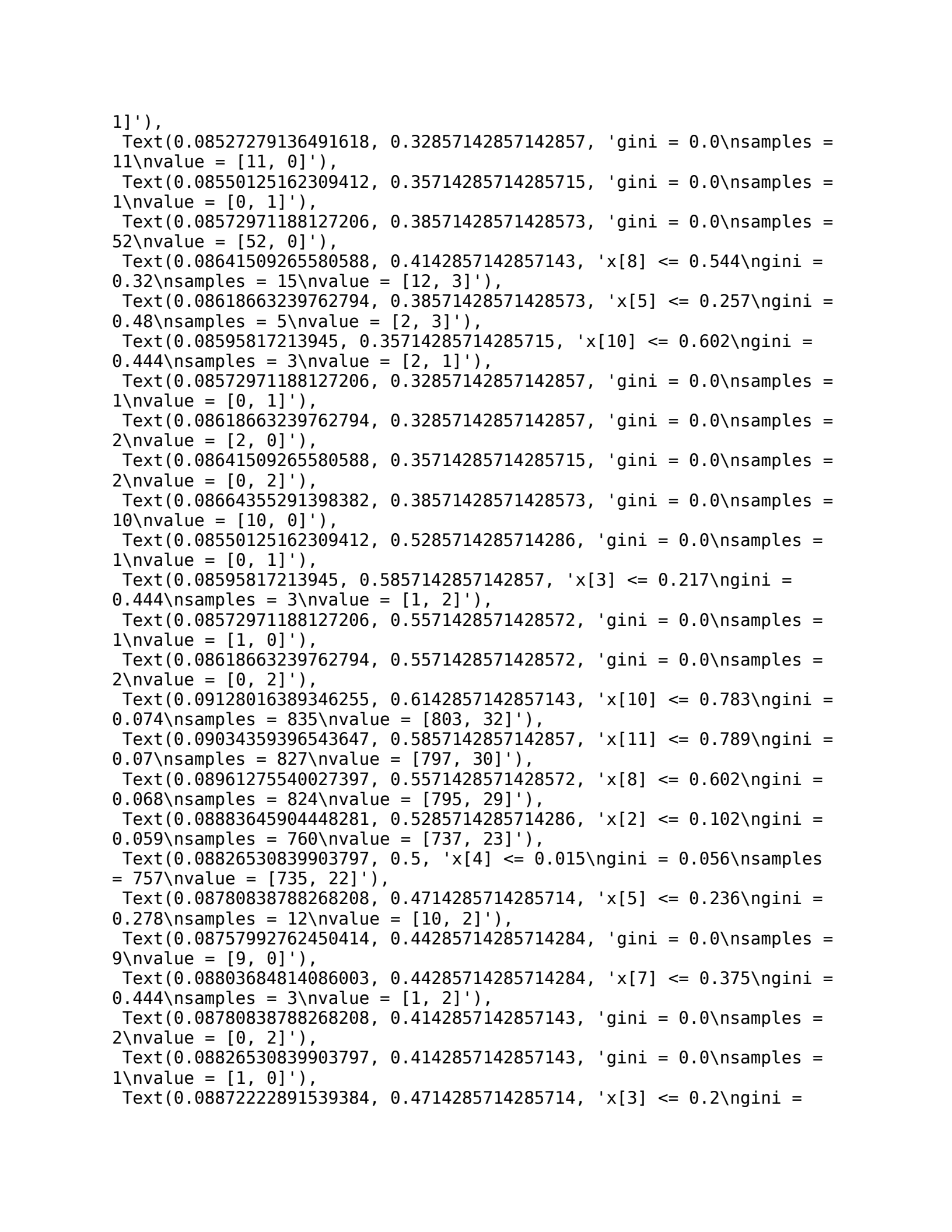
 Text(0.08458741059038236, 0.44285714285714284, 'gini = 0.0\nsamples =
4\nvalue = [0, 4]'),
 Text(0.08504433110673824, 0.44285714285714284, 'gini = 0.0\nsamples =
2\nvalue = [2, 0]'),
 Text(0.08572971188127206, 0.4714285714285714, 'x[1] <= 0.598\ngini =
0.136\nsamples = 82\nvalue = [76, 6]'),
 Text(0.08550125162309412, 0.44285714285714284, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.08595817213945, 0.44285714285714284, 'x[4] <= 0.292\ngini =
0.116\nsamples = 81\nvalue = [76, 5]'),
 Text(0.08550125162309412, 0.4142857142857143, 'x[5] <= 0.135\ngini =
0.059\nsamples = 66\nvalue = [64, 2]'),
 Text(0.08527279136491618, 0.38571428571428573, 'x[0] <= 0.741\ngini =
0.245\nsamples = 14\nvalue = [12, 2]'),
 Text(0.08504433110673824, 0.35714285714285715, 'x[11] <= 0.631\ngini
= 0.142\nsamples = 13\nvalue = [12, 1]'),
 Text(0.08481587084856029, 0.32857142857142857, 'x[6] <= 0.435\ngini =
0.5\nsamples = 2\nvalue = [1, 1]'),
 Text(0.08458741059038236, 0.3, 'gini = 0.0\nsamples = 1\nvalue = [1,
0]'),
 Text(0.08504433110673824, 0.3, 'gini = 0.0\nsamples = 1\nvalue = [0,


1]'),
Text(0.08527279136491618, 0.32857142857142857, 'gini = 0.0\nsamples = 11\nvalue = [11, 0]'),
Text(0.08550125162309412, 0.35714285714285715, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(0.08572971188127206, 0.38571428571428573, 'gini = 0.0\nsamples = 52\nvalue = [52, 0]'),
Text(0.08641509265580588, 0.4142857142857143, 'x[8] <= 0.544\ngini = 0.32\nsamples = 15\nvalue = [12, 3]'),
Text(0.08618663239762794, 0.38571428571428573, 'x[5] <= 0.257\ngini = 0.48\nsamples = 5\nvalue = [2, 3]'),
Text(0.08595817213945, 0.35714285714285715, 'x[10] <= 0.602\ngini = 0.444\nsamples = 3\nvalue = [2, 1]'),
Text(0.08572971188127206, 0.32857142857142857, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(0.08618663239762794, 0.32857142857142857, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(0.08641509265580588, 0.35714285714285715, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(0.08664355291398382, 0.38571428571428573, 'gini = 0.0\nsamples = 10\nvalue = [10, 0]'),
Text(0.08550125162309412, 0.5285714285714286, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(0.08595817213945, 0.5857142857142857, 'x[3] <= 0.217\ngini = 0.444\nsamples = 3\nvalue = [1, 2]'),
Text(0.08572971188127206, 0.5571428571428572, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(0.08618663239762794, 0.5571428571428572, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(0.09128016389346255, 0.6142857142857143, 'x[10] <= 0.783\ngini = 0.074\nsamples = 835\nvalue = [803, 32]'),
Text(0.09034359396543647, 0.5857142857142857, 'x[11] <= 0.789\ngini = 0.07\nsamples = 827\nvalue = [797, 30]'),
Text(0.08961275540027397, 0.5571428571428572, 'x[8] <= 0.602\ngini = 0.068\nsamples = 824\nvalue = [795, 29]'),
Text(0.08883645904448281, 0.5285714285714286, 'x[2] <= 0.102\ngini = 0.059\nsamples = 760\nvalue = [737, 23]'),
Text(0.08826530839903797, 0.5, 'x[4] <= 0.015\ngini = 0.056\nsamples = 757\nvalue = [735, 22]'),
Text(0.08780838788268208, 0.4714285714285714, 'x[5] <= 0.236\ngini = 0.278\nsamples = 12\nvalue = [10, 2]'),
Text(0.08757992762450414, 0.44285714285714284, 'gini = 0.0\nsamples = 9\nvalue = [9, 0]'),
Text(0.08803684814086003, 0.44285714285714284, 'x[7] <= 0.375\ngini = 0.444\nsamples = 3\nvalue = [1, 2]'),
Text(0.08780838788268208, 0.4142857142857143, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
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Text(0.08872222891539384, 0.4714285714285714, 'x[3] <= 0.2\ngini =

0.052\nsamples = 745\nvalue = [725, 20]'),
 Text(0.08849376865721591, 0.44285714285714284, 'gini = 0.0\nsamples =
135\nvalue = [135, 0]'),
 Text(0.0889506891735718, 0.44285714285714284, 'x[5] <= 0.338\ngini =
0.063\nsamples = 610\nvalue = [590, 20]'),
 Text(0.08872222891539384, 0.4142857142857143, 'x[10] <= 0.57\ngini =
0.074\nsamples = 518\nvalue = [498, 20]'),
 Text(0.08755739394669558, 0.38571428571428573, 'x[5] <= 0.311\ngini =
0.027\nsamples = 146\nvalue = [144, 2]'),
 Text(0.08687201317216176, 0.35714285714285715, 'x[0] <= 0.618\ngini =
0.015\nsamples = 131\nvalue = [130, 1]'),
 Text(0.08664355291398382, 0.32857142857142857, 'gini = 0.0\nsamples =
105\nvalue = [105, 0]'),
 Text(0.0871004734303397, 0.32857142857142857, 'x[0] <= 0.621\ngini =
0.074\nsamples = 26\nvalue = [25, 1]'),
 Text(0.08687201317216176, 0.3, 'x[1] <= 0.575\ngini = 0.375\nsamples
= 4\nvalue = [3, 1]'),
 Text(0.08664355291398382, 0.2714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.0871004734303397, 0.2714285714285714, 'gini = 0.0\nsamples =
3\nvalue = [3, 0]'),
 Text(0.08732893368851764, 0.3, 'gini = 0.0\nsamples = 22\nvalue =
[22, 0]'),
 Text(0.0882427747212294, 0.35714285714285715, 'x[3] <= 0.27\ngini =
0.124\nsamples = 15\nvalue = [14, 1]'),
 Text(0.08801431446305147, 0.32857142857142857, 'x[8] <= 0.57\ngini =
0.5\nsamples = 2\nvalue = [1, 1]'),
 Text(0.08778585420487352, 0.3, 'gini = 0.0\nsamples = 1\nvalue = [0,
1]'),
 Text(0.0882427747212294, 0.3, 'gini = 0.0\nsamples = 1\nvalue = [1,
0]'),
 Text(0.08847123497940734, 0.32857142857142857, 'gini = 0.0\nsamples =
13\nvalue = [13, 0]'),
 Text(0.08988706388409212, 0.38571428571428573, 'x[1] <= 0.49\ngini =
0.092\nsamples = 372\nvalue = [354, 18]'),
 Text(0.08915661575394117, 0.35714285714285715, 'x[8] <= 0.544\ngini =
0.5\nsamples = 2\nvalue = [1, 1]'),
 Text(0.08892815549576322, 0.32857142857142857, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.0893850760121191, 0.32857142857142857, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.09061751201424306, 0.35714285714285715, 'x[5] <= 0.061\ngini =
0.088\nsamples = 370\nvalue = [353, 17]'),
 Text(0.08984199652847498, 0.32857142857142857, 'x[0] <= 0.633\ngini =
0.444\nsamples = 3\nvalue = [2, 1]'),
 Text(0.08961353627029704, 0.3, 'gini = 0.0\nsamples = 1\nvalue = [0,
1]'),
 Text(0.09007045678665292, 0.3, 'gini = 0.0\nsamples = 2\nvalue = [2,
0]'),
 Text(0.09139302750001116, 0.32857142857142857, 'x[4] <= 0.438\ngini =

0.083\nsamples = 367\nvalue = [351, 16]'),
 Text(0.0905273773030088, 0.3, 'x[11] <= 0.664\ngini = 0.079\nsamples
= 363\nvalue = [348, 15]'),
 Text(0.08948145768353792, 0.2714285714285714, 'x[6] <= 0.765\ngini =
0.106\nsamples = 214\nvalue = [202, 12]'),
 Text(0.0887603799936638, 0.24285714285714285, 'x[1] <= 0.688\ngini =
0.091\nsamples = 209\nvalue = [199, 10]'),
 Text(0.08800360538844937, 0.21428571428571427, 'x[0] <= 0.832\ngini =
0.075\nsamples = 204\nvalue = [196, 8]'),
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 Text(0.0862044808552981, 0.15714285714285714, 'x[9] <= 0.567\ngini =
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79\nvalue = [79, 0]'),
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0.091\nsamples = 21\nvalue = [20, 1]'),
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2\nvalue = [1, 1]'),
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1\nvalue = [1, 0]'),
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1\nvalue = [0, 1]'),
 Text(0.08666140137165397, 0.1, 'gini = 0.0\nsamples = 19\nvalue =
[19, 0]'),
 Text(0.08814639304981059, 0.15714285714285714, 'x[0] <= 0.702\ngini =
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 Text(0.0873467821461878, 0.12857142857142856, 'x[10] <= 0.596\ngini =
0.308\nsamples = 21\nvalue = [17, 4]'),
 Text(0.08711832188800986, 0.1, 'gini = 0.0\nsamples = 2\nvalue = [0,
2]'),
 Text(0.08757524240436573, 0.1, 'x[1] <= 0.66\ngini = 0.188\nsamples =
19\nvalue = [17, 2]'),
 Text(0.0873467821461878, 0.07142857142857142, 'x[4] <= 0.1\ngini =
0.105\nsamples = 18\nvalue = [17, 1]'),
 Text(0.08711832188800986, 0.04285714285714286, 'x[8] <= 0.518\ngini =
0.5\nsamples = 2\nvalue = [1, 1]'),
 Text(0.08688986162983191, 0.014285714285714285, 'gini = 0.0\nsamples
= 1\nvalue = [1, 0]'),
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16\nvalue = [16, 0]'),
 Text(0.08780370266254367, 0.07142857142857142, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.08894600395343337, 0.12857142857142856, 'x[9] <= 0.583\ngini =
0.048\nsamples = 81\nvalue = [79, 2]'),
 Text(0.0884890834370775, 0.1, 'x[10] <= 0.702\ngini = 0.025\nsamples
= 79\nvalue = [78, 1]'),
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74\nvalue = [74, 0]'),
 Text(0.08871754369525543, 0.07142857142857142, 'x[3] <= 0.291\ngini =
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4\nvalue = [4, 0]'),
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1\nvalue = [0, 1]'),
 Text(0.08940292446978926, 0.1, 'x[11] <= 0.627\ngini = 0.5\nsamples =
2\nvalue = [1, 1]'),
 Text(0.08917446421161132, 0.07142857142857142, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
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1\nvalue = [0, 1]'),
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0.5\nsamples = 2\nvalue = [1, 1]'),
 Text(0.08860331356616646, 0.15714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.08906023408252234, 0.15714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.08951715459887823, 0.21428571428571427, 'x[1] <= 0.694\ngini =
0.48\nsamples = 5\nvalue = [3, 2]'),
 Text(0.08928869434070029, 0.18571428571428572, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.08974561485705616, 0.18571428571428572, 'gini = 0.0\nsamples =
3\nvalue = [3, 0]'),
 Text(0.09020253537341205, 0.24285714285714285, 'x[9] <= 0.54\ngini =
0.48\nsamples = 5\nvalue = [3, 2]'),
 Text(0.0899740751152341, 0.21428571428571427, 'gini = 0.0\nsamples =
3\nvalue = [3, 0]'),
 Text(0.09043099563158999, 0.21428571428571427, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.09157329692247969, 0.2714285714285714, 'x[8] <= 0.525\ngini =
0.039\nsamples = 149\nvalue = [146, 3]'),
 Text(0.0911163764061238, 0.24285714285714285, 'x[8] <= 0.522\ngini =
0.18\nsamples = 20\nvalue = [18, 2]'),
 Text(0.09088791614794586, 0.21428571428571427, 'gini = 0.0\nsamples =
14\nvalue = [14, 0]'),
 Text(0.09134483666430175, 0.21428571428571427, 'x[1] <= 0.686\ngini =
0.444\nsamples = 6\nvalue = [4, 2]'),
 Text(0.0911163764061238, 0.18571428571428572, 'gini = 0.0\nsamples =
3\nvalue = [3, 0]'),
 Text(0.09157329692247969, 0.18571428571428572, 'x[10] <= 0.692\ngini
= 0.444\nsamples = 3\nvalue = [1, 2]'),
 Text(0.09134483666430175, 0.15714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [1, 0]'),
 Text(0.09180175718065763, 0.15714285714285714, 'gini = 0.0\nsamples =
2\nvalue = [0, 2]'),
 Text(0.09203021743883556, 0.24285714285714285, 'x[12] <= 0.5\ngini =
0.015\nsamples = 129\nvalue = [128, 1]'),
 Text(0.09180175718065763, 0.21428571428571427, 'gini = 0.0\nsamples =
```
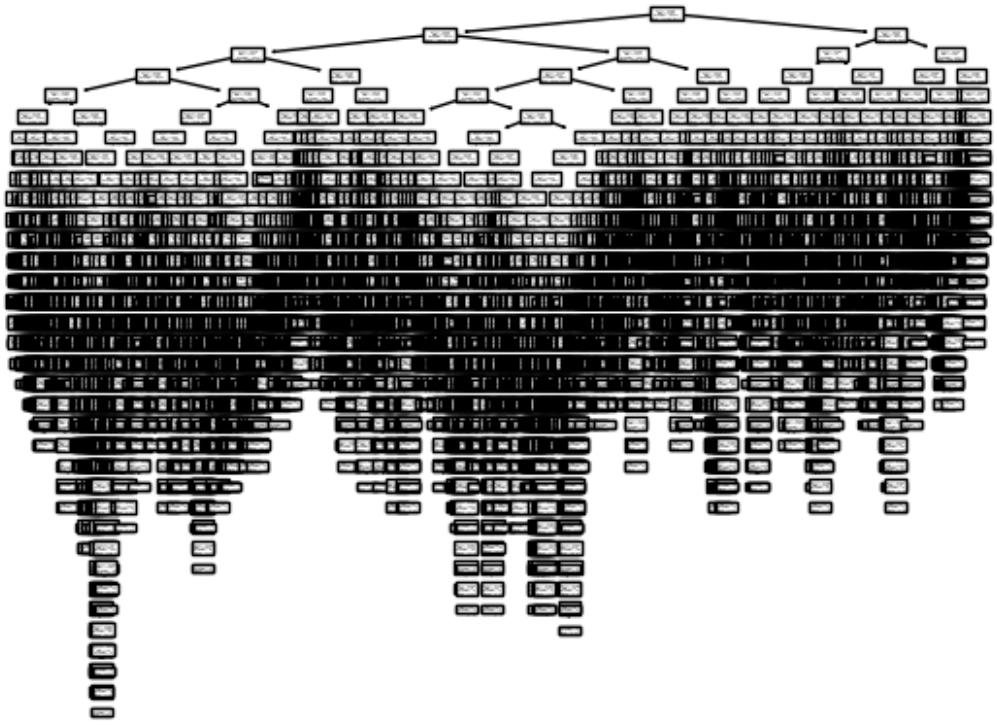

```
118\nvalue = [118, 0]'),
 Text(0.09225867769701351, 0.21428571428571427, 'x[2] <= 0.007\ngini =
0.165\nsamples = 11\nvalue = [10, 1]'),
 Text(0.09203021743883556, 0.18571428571428572, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.09248713795519145, 0.18571428571428572, 'gini = 0.0\nsamples =
10\nvalue = [10, 0]'),
 Text(0.09225867769701351, 0.3, 'x[10] <= 0.611\ngini = 0.375\nsamples
= 4\nvalue = [3, 1]'),
 Text(0.09203021743883556, 0.2714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.09248713795519145, 0.2714285714285714, 'gini = 0.0\nsamples =
3\nvalue = [3, 0]'),
 Text(0.08917914943174973, 0.4142857142857143, 'gini = 0.0\nsamples =
92\nvalue = [92, 0]'),
 Text(0.08940760968992767, 0.5, 'x[1] <= 0.509\ngini = 0.444\nsamples
= 3\nvalue = [2, 1]'),
 Text(0.08917914943174973, 0.4714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.0896360699481056, 0.4714285714285714, 'gini = 0.0\nsamples =
2\nvalue = [2, 0]'),
 Text(0.09038905175606513, 0.5285714285714286, 'x[11] <= 0.445\ngini =
0.17\nsamples = 64\nvalue = [58, 6]'),
 Text(0.09016059149788719, 0.5, 'gini = 0.0\nsamples = 1\nvalue = [0,
1]'),
 Text(0.09061751201424306, 0.5, 'x[0] <= 0.413\ngini = 0.146\nsamples
= 63\nvalue = [58, 5]'),
 Text(0.09038905175606513, 0.4714285714285714, 'gini = 0.0\nsamples =
1\nvalue = [0, 1]'),
 Text(0.09084597227242101, 0.4714285714285714, 'x[6] <= 0.625\ngini =
0.121\nsamples = 62\nvalue = [58, 4]'),
 Text(0.09061751201424306, 0.44285714285714284, 'gini = 0.0\nsamples =
41\nvalue = [41, 0]'),
 ...]
```



accuracy of the tree classifier

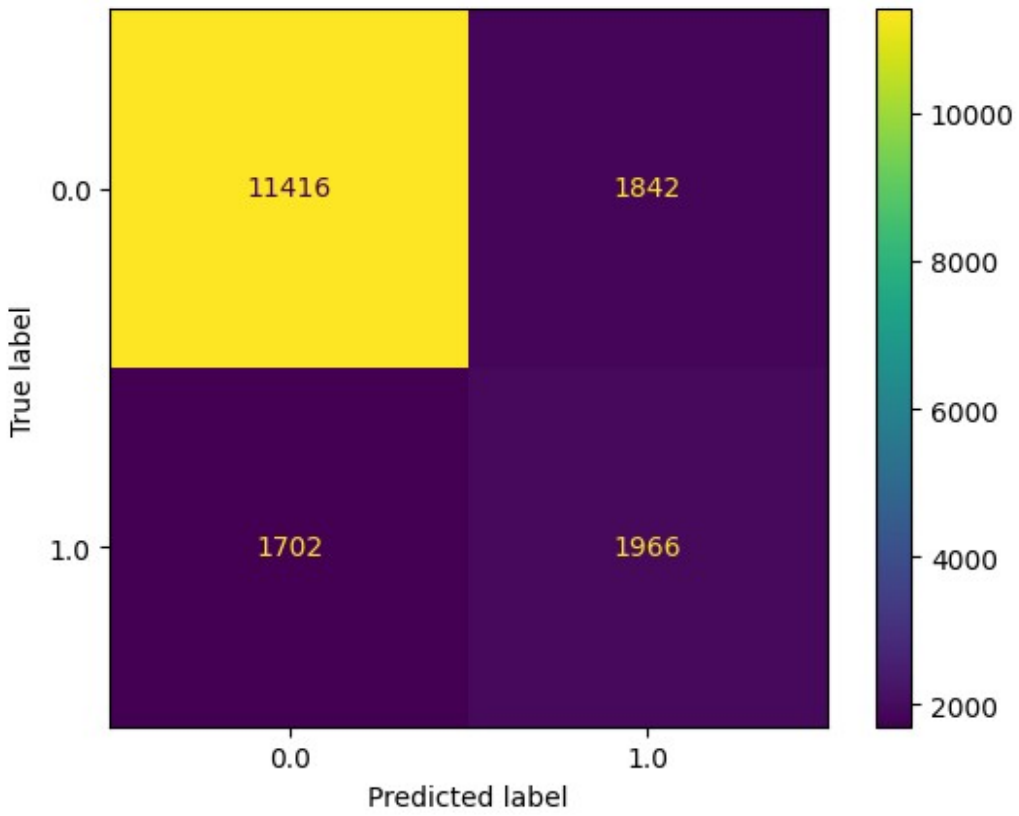
```
clf.score(X_test, y_test)
```

```
0.7906179841663713
```

confusion matrix

```
predictions = clf.predict(X_test)
cm = confusion_matrix(y_test, predictions)
disp = ConfusionMatrixDisplay(confusion_matrix=cm,
display_labels=clf.classes_)
disp.plot()
```

```
<sklearn.metrics._plot.confusion_matrix.ConfusionMatrixDisplay at
0x12b0c945ed0>
```



bayes classifier

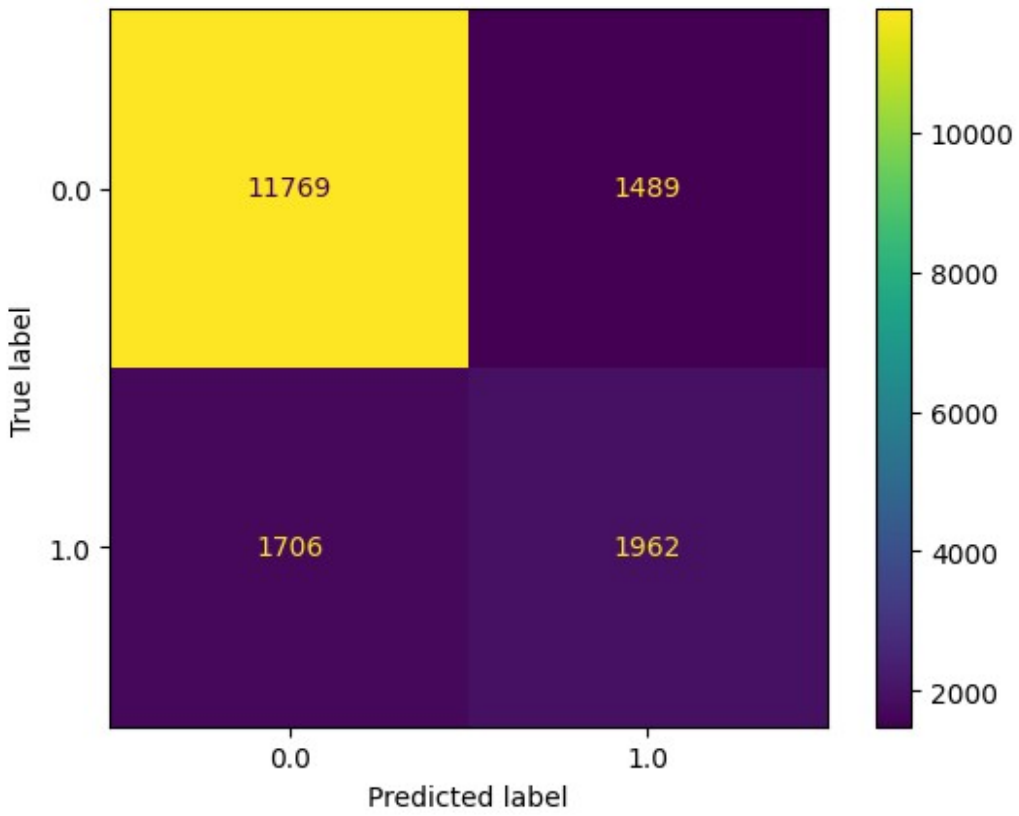
```
model = GaussianNB()
model.fit(X_train, y_train)
model.score(X_test, y_test)
```

```
0.8112371499468274
```

confusion matrix

```
predictions = model.predict(X_test)
cm = confusion_matrix(y_test, predictions)
disp = ConfusionMatrixDisplay(confusion_matrix=cm,
display_labels=clf.classes_)
disp.plot()
```

```
<sklearn.metrics._plot.confusion_matrix.ConfusionMatrixDisplay at
0x12b0e77e090>
```



k nearest neighbors classifier with 3 neighbors

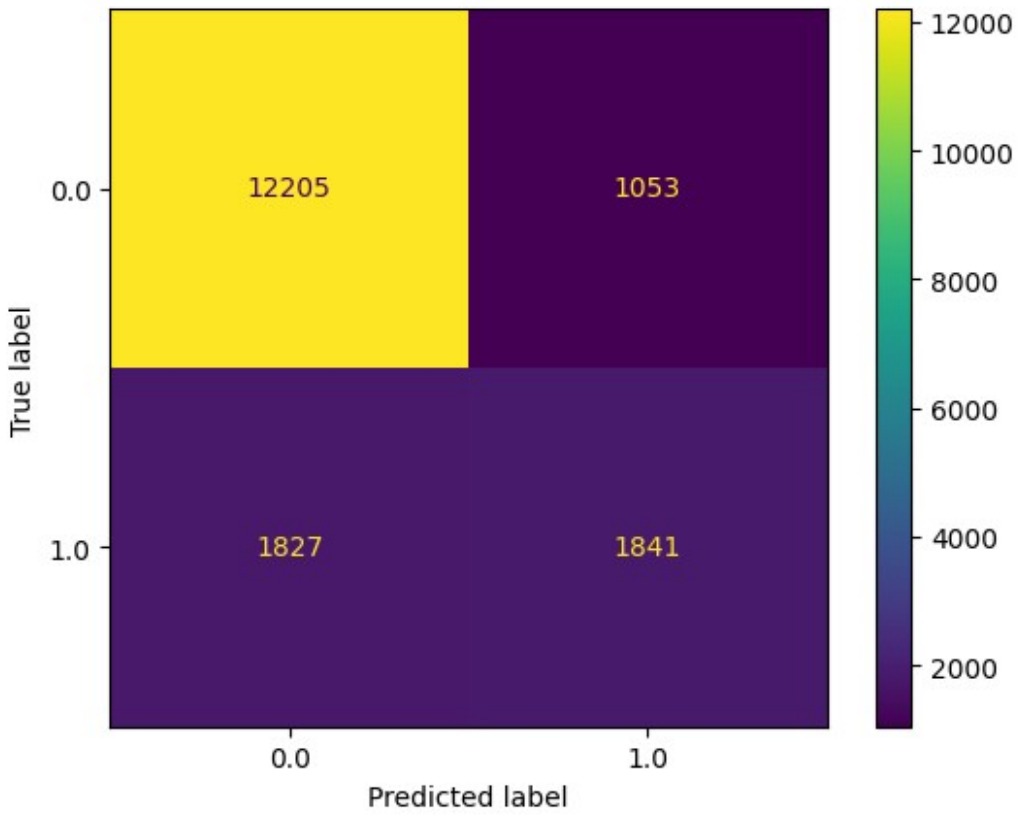
```
knn = KNeighborsClassifier(n_neighbors=3, metric='euclidean')
knn.fit(X_train, y_train)
knn.score(X_test, y_test)
```

```
0.8298475717830557
```

confusion matrix

```
predictions = knn.predict(X_test)
cm = confusion_matrix(y_test, predictions)
disp = ConfusionMatrixDisplay(confusion_matrix=cm,
display_labels=clf.classes_)
disp.plot()
```

```
<sklearn.metrics._plot.confusion_matrix.ConfusionMatrixDisplay at
0x12b738b8910>
```



k nearest neighbors classifier with 5 neighbors

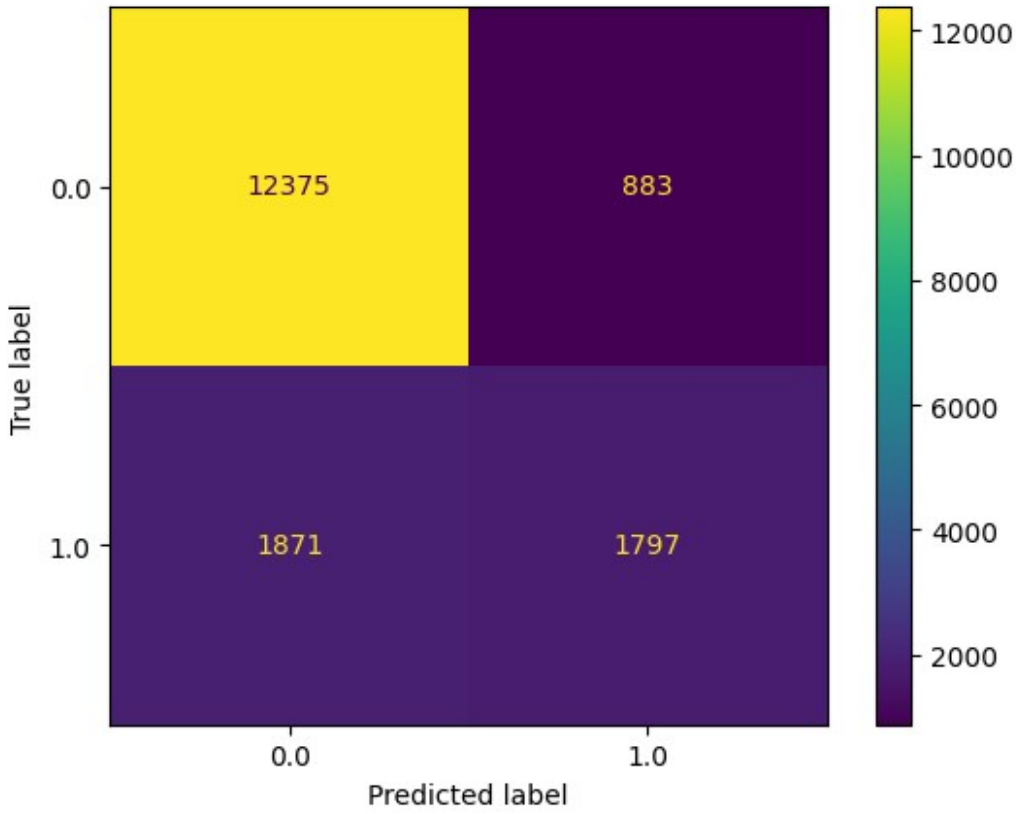
```
knn = KNeighborsClassifier(n_neighbors=5, metric='euclidean')
knn.fit(X_train, y_train)
knn.score(X_test, y_test)
```

```
0.837291740517547
```

confusion matrix:

```
predictions = knn.predict(X_test)
cm = confusion_matrix(y_test, predictions)
disp = ConfusionMatrixDisplay(confusion_matrix=cm,
display_labels=clf.classes_)
disp.plot()
```

```
<sklearn.metrics._plot.confusion_matrix.ConfusionMatrixDisplay at
0x12b78edda50>
```



Classifier	raw data	preprocessed data
Decision Tree	78.6%	79.0%
Bayes	81.1%	81.1%
3 nearest neighbours	83.0%	83.0%
5 nearest neighbours	83.8%	83.7%
Neural network	84.7%	85.3%

Preprocessed data in increased the accuracy but in a small amount. The best classifier turned out to be the neural network with preprocessed data (85.3%).