```
import warnings
warnings.filterwarnings('ignore')


import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns


df = pd.read_csv("telecom_users.csv")


df.head()
```

	Unnamed: 0	customerID	gender	SeniorCitizen	Partner	Dependents	tenure	PhoneServi
0	1869	7010-BRBUU	Male	0	Yes	Yes	72	Ye
1	4528	9688-YGXVR	Female	0	No	No	44	Ye
2	6344	9286-DOJGF	Female	1	Yes	No	38	Ye
3	6739	6994-KERXL	Male	0	No	No	4	Ye
4	432	2181-UAESM	Male	0	No	No	2	Ye

```
#We will remove the columns from the dataset which does not affect the Churn

df.drop(['Unnamed: 0','customerID'], axis = 1, inplace = True)


df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 5986 entries, 0 to 5985
Data columns (total 20 columns):
 #   Column            Non-Null Count  Dtype 
---  ------            --------------  ----- 
 0   gender            5986 non-null   object
 1   SeniorCitizen     5986 non-null   int64 
 2   Partner           5986 non-null   object
 3   Dependents        5986 non-null   object
 4   tenure            5986 non-null   int64 
 5   PhoneService      5986 non-null   object
 6   MultipleLines     5986 non-null   object
```

```
 7   InternetService   5986 non-null   object
 8   OnlineSecurity    5986 non-null   object
 9   OnlineBackup      5986 non-null   object
 10  DeviceProtection  5986 non-null   object
 11  TechSupport       5986 non-null   object
 12  StreamingTV       5986 non-null   object
 13  StreamingMovies   5986 non-null   object
 14  Contract          5986 non-null   object
 15  PaperlessBilling  5986 non-null   object
 16  PaymentMethod     5986 non-null   object
 17  MonthlyCharges    5986 non-null   float64
 18  TotalCharges      5986 non-null   object
 19  Churn             5986 non-null   object
dtypes: float64(1), int64(2), object(17)
memory usage: 935.4+ KB
```

```
#We will drop the rows where there is no value in Total Charges Column

for i in range(len(df)):
        if df['TotalCharges'][i] == " ":
            df.drop(i, inplace = True)
```

```
# Converting the data type of Total Charges column from object to float

df['TotalCharges'] = df['TotalCharges'].apply(lambda x: float(x))
```

```
df[['tenure','MonthlyCharges','TotalCharges']].describe().T
```

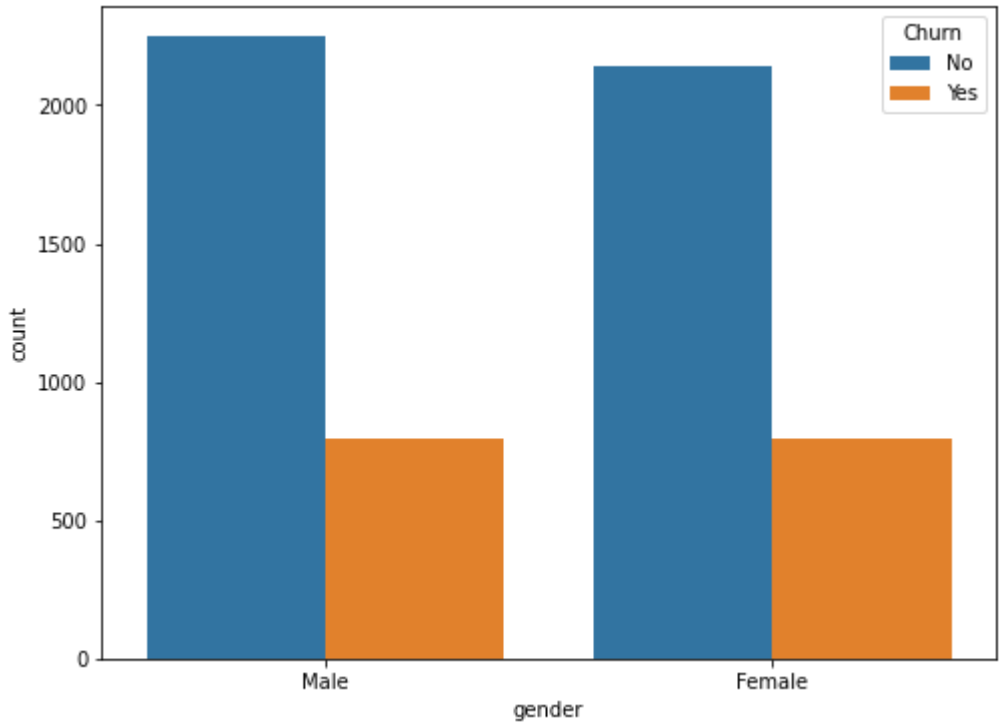
	count	mean	std	min	25%	50%	75%	
tenure	5976.0	32.523092	24.500858	1.00	9.0000	29.000	56.0000	
MonthlyCharges	5976.0	64.846687	30.107576	18.25	35.7500	70.425	89.9000	1
TotalCharges	5976.0	2298.060617	2274.127165	18.80	404.3125	1412.150	3846.9625	86

```
df.columns
```

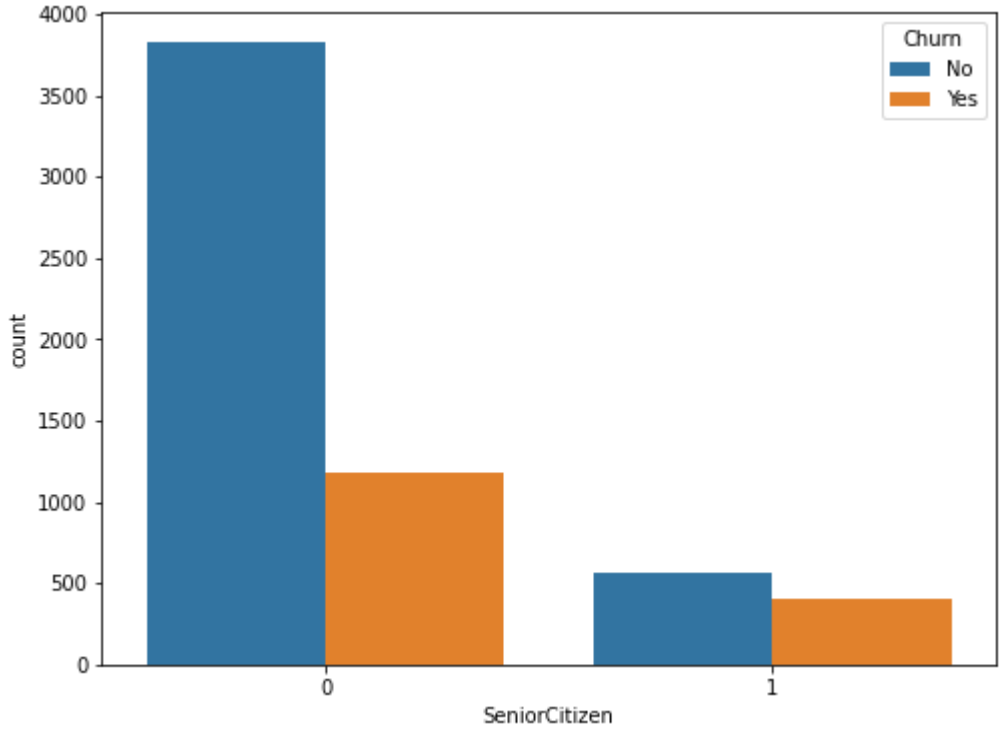
```
Index(['gender', 'SeniorCitizen', 'Partner', 'Dependents', 'tenure',
       'PhoneService', 'MultipleLines', 'InternetService', 'OnlineSecurity',
       'OnlineBackup', 'DeviceProtection', 'TechSupport', 'StreamingTV',
       'StreamingMovies', 'Contract', 'PaperlessBilling', 'PaymentMethod',
       'MonthlyCharges', 'TotalCharges', 'Churn'],
      dtype='object')
```

```
#EDA

plt.figure(figsize = (8,6))
sns.countplot(data = df, x = 'gender', hue = 'Churn')
plt.show()
```

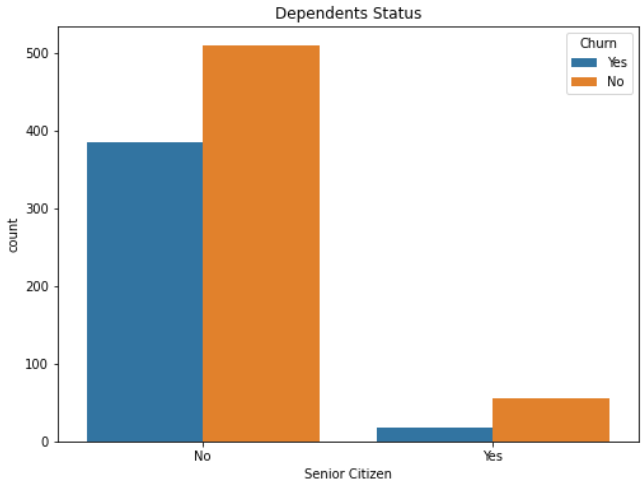


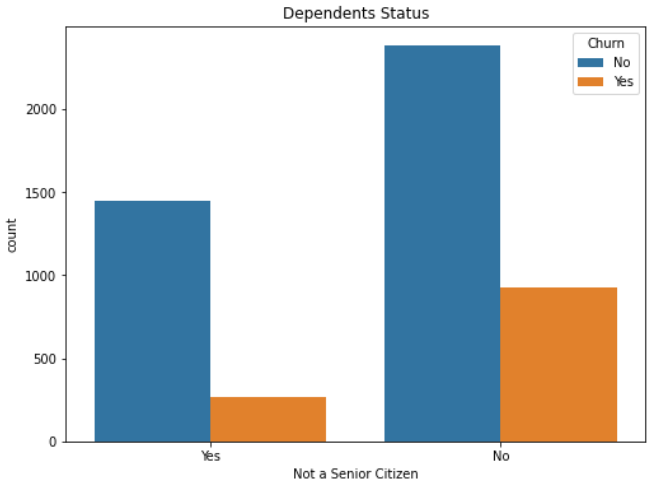

```
plt.figure(figsize = (8,6))
sns.countplot(data = df, x = 'SeniorCitizen', hue = 'Churn')
plt.show()
```



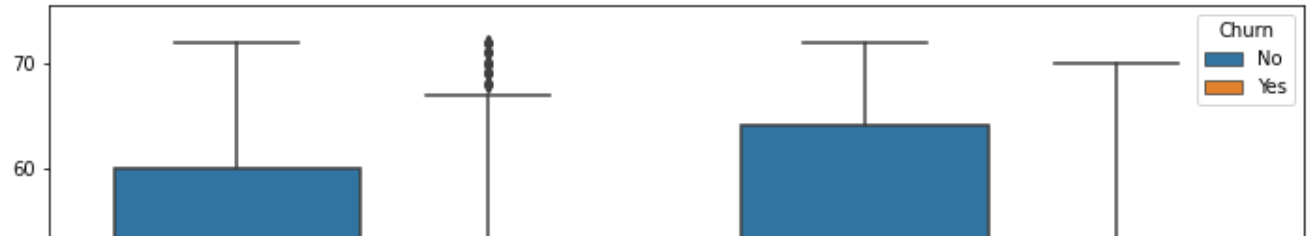

```
plt.figure(figsize=(18,6))
plt.subplot(1,2,1)
sns.countplot(data = df[df['SeniorCitizen'] == 1], x = 'Dependents', hue = 'Churn')
plt.xlabel('Senior Citizen')
plt.title('Dependents Status')
```

```
plt.subplot(1,2,2)
sns.countplot(data = df[df['SeniorCitizen'] == 0], x = 'Dependents', hue = 'Churn')
plt.xlabel('Not a Senior Citizen')
plt.title('Dependents Status')
plt.show()
```






```
plt.figure(figsize = (12,8))
sns.boxplot(y = 'tenure', x = 'SeniorCitizen', data = df, hue = 'Churn')
plt.show()
```




```
#Converting Categorical Variables into Numeric numbers

X = pd.get_dummies(data = df, columns=['gender','Partner','Dependents','PhoneService','Multip
                                       'OnlineSecurity','OnlineBackup','DeviceProtection',
                                       'Contract','PaperlessBilling','PaymentMethod','Chur
```

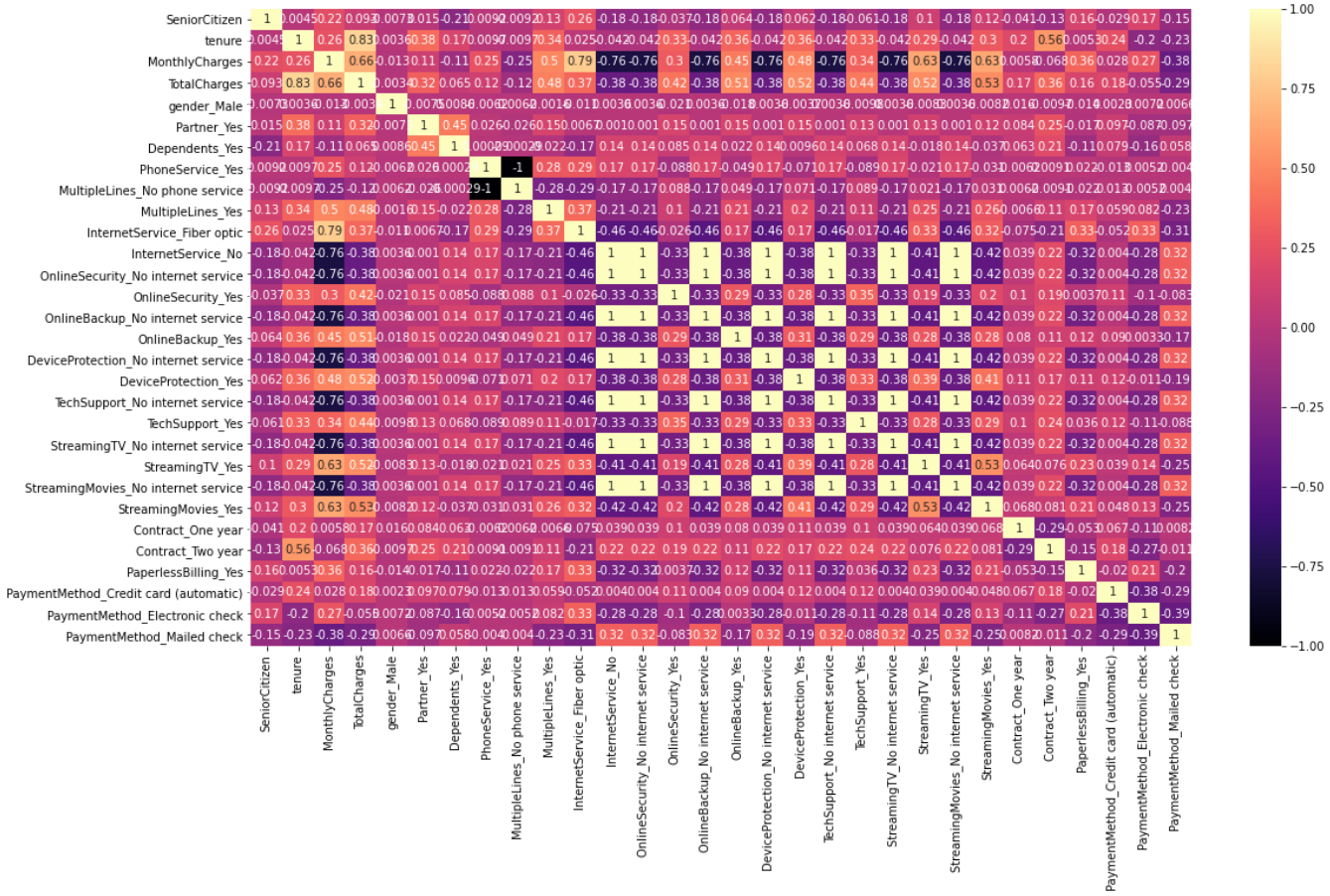

```
X.head()
```

	SeniorCitizen	tenure	MonthlyCharges	TotalCharges	gender_Male	Partner_Yes	Depen
0	0	72	24.10	1734.65	1	1	
1	0	44	88.15	3973.20	0	0	
2	1	38	74.95	2869.85	0	1	
3	0	4	55.90	238.50	1	0	
4	0	2	53.45	119.50	1	0	

```
y = X['Churn_Yes']

X.drop(['Churn_Yes'], axis = 1, inplace = True)

plt.figure(figsize = (18,10))
sns.heatmap(X.corr(), cmap = 'magma', annot = True)
plt.show()
```




```
#Intiating Scaler
from sklearn.preprocessing import StandardScaler
scaler = StandardScaler()
```

```
from sklearn.model_selection import train_test_split
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state = 101)
```

```
X_train = scaler.fit_transform(X_train)
```

```
X_test = scaler.transform(X_test)
```

Linear Regression

```
from sklearn.linear_model import LinearRegression
from sklearn.metrics import mean_squared_error, r2_score
```

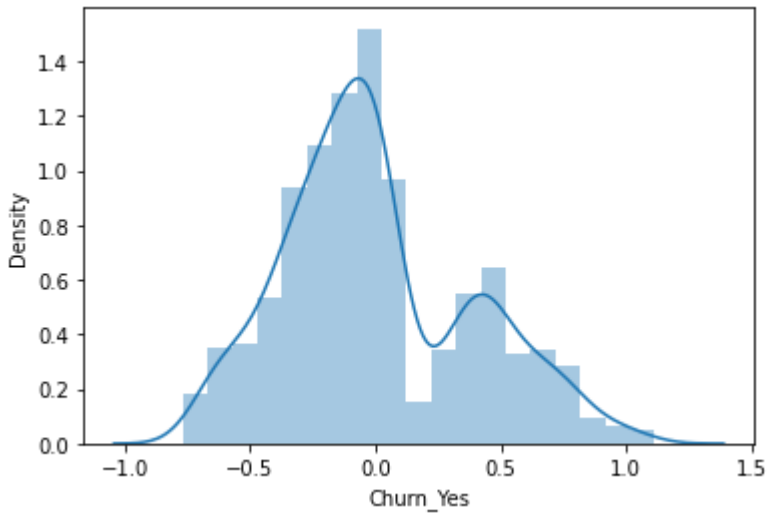
```
lr = LinearRegression()
```

```
lr.fit(X_train,y_train)
y_hat = lr.predict(X_test)
print("MSE = ", mean_squared_error(y_test, y_hat))
print("RMSE = ",np.sqrt(mean_squared_error(y_test, y_hat)))
print("r2 = ", r2_score(y_test, y_hat))
```

```
MSE =  0.1427968123589576
RMSE =  0.3778846548339289
r2 =  0.2756239111875327
```

```
residuals = y_test-y_hat
```

```
from scipy.stats import skew
sns.distplot(residuals)
plt.show()
print("Skew = ", skew(residuals))
```




```
Skew =  0.5139285249922637
```

Lostic Regression

```
from sklearn.linear_model import LogisticRegression
logmodel = LogisticRegression()
logmodel.fit(X_train,y_train)
log_predictions = logmodel.predict(X_test)
```

```
from sklearn.metrics import classification_report, confusion_matrix
```

```
# Printing Confusion Matrix
pd.DataFrame(confusion_matrix(y_test,log_predictions))
```

	0	1
0	778	95

```
from sklearn.metrics import accuracy_score, precision_score,recall_score,f1_score


#Printing Classification Report
print(classification_report(y_test,log_predictions))
```

```
                  precision    recall  f1-score   support

               0       0.85      0.89      0.87       873
               1       0.67      0.59      0.62       323

        accuracy                           0.81      1196
       macro avg       0.76      0.74      0.75      1196
    weighted avg       0.80      0.81      0.80      1196
```

Decision Tree

```
from sklearn.tree import DecisionTreeClassifier
from sklearn import tree
dtree = DecisionTreeClassifier()
dtree.fit(X_train,y_train)
y_pred_train = dtree.predict(X_train)
y_pred_test = dtree.predict(X_test)


print("Bias - Accuracy", accuracy_score(y_train,y_pred_train))
print("Variance - Accuracy", accuracy_score(y_test,y_pred_test))
```

```
    Bias - Accuracy 0.9989539748953975
    Variance - Accuracy 0.7215719063545151
```

```
print("Bias - Accuracy", f1_score(y_train,y_pred_train))
print("Variance - Accuracy", f1_score(y_test,y_pred_test))
```

```
    Bias - Accuracy 0.998021369212505
    Variance - Accuracy 0.48049921996879874
```

```
#decision Trees are prone to overfitting
#Decision tree gives you prefact answers but the drawback is it is prone to overfitting


tree.plot_tree(dtree.fit(X,y))
```

```
[Text(171.54495629522015, 213.69103448275862, 'X[1] <= 16.5\ngini = 0.39\nsamples = 5976
 Text(90.00721569042487, 206.19310344827585, 'X[10] <= 0.5\ngini = 0.496\nsamples = 2140
 Text(56.18584763700739, 198.6951724137931, 'X[1] <= 3.5\ngini = 0.417\nsamples = 1231\n
 Text(33.699364608990145, 191.19724137931036, 'X[14] <= 0.5\ngini = 0.493\nsamples = 518
 Text(22.80167872536946, 183.69931034482758, 'X[2] <= 60.2\ngini = 0.498\nsamples = 318\
 Text(13.772618534482758, 176.20137931034483, 'X[26] <= 0.5\ngini = 0.492\nsamples = 289
 Text(9.400788177339901, 168.70344827586206, 'X[0] <= 0.5\ngini = 0.497\nsamples = 134\n
 Text(7.42167487684729, 161.2055172413793, 'X[2] <= 56.3\ngini = 0.489\nsamples = 115\nv
 Text(7.091822660098522, 153.70758620689656, 'X[3] <= 92.1\ngini = 0.484\nsamples = 112\
 Text(5.112709359605911, 146.2096551724138, 'X[2] <= 24.55\ngini = 0.497\nsamples = 87\n
 Text(4.782857142857143, 138.71172413793101, 'gini = 0.0\nsamples = 5\nvalue = [5, 0]'),
 Text(5.44256157635468, 138.71172413793101, 'X[19] <= 0.5\ngini = 0.5\nsamples = 82\nval
 Text(4.782857142857143, 131.21379310344827, 'X[2] <= 55.375\ngini = 0.498\nsamples = 71
 Text(4.453004926108374, 123.71586206896552, 'X[17] <= 0.5\ngini = 0.495\nsamples = 69\n
 Text(4.123152709359606, 116.21793103448276, 'X[2] <= 47.075\ngini = 0.499\nsamples = 65
 Text(3.463448275862069, 108.72, 'X[2] <= 45.675\ngini = 0.484\nsamples = 51\nvalue = [2
 Text(3.1335960591133003, 101.22206896551724, 'X[23] <= 0.5\ngini = 0.499\nsamples = 44\
 Text(2.803743842364532, 93.72413793103449, 'X[5] <= 0.5\ngini = 0.5\nsamples = 42\nvalu
 Text(2.144039408866995, 86.22620689655173, 'X[6] <= 0.5\ngini = 0.497\nsamples = 37\nva
 Text(1.8141871921182267, 78.72827586206895, 'X[3] <= 25.225\ngini = 0.5\nsamples = 34\n
 Text(1.4843349753694581, 71.23034482758621, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]'),
 Text(2.144039408866995, 71.23034482758621, 'X[3] <= 27.775\ngini = 0.495\nsamples = 31\
 Text(1.8141871921182267, 63.73241379310346, 'gini = 0.0\nsamples = 4\nvalue = [4, 0]'),
 Text(2.4738916256157637, 63.73241379310346, 'X[4] <= 0.5\ngini = 0.499\nsamples = 27\nv
 Text(1.3194088669950739, 56.234482758620686, 'X[2] <= 27.575\ngini = 0.473\nsamples = 1
 Text(0.9895566502463053, 48.73655172413794, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
 Text(1.6492610837438424, 48.73655172413794, 'X[15] <= 0.5\ngini = 0.444\nsamples = 12\n
 Text(1.3194088669950739, 41.238620689655164, 'X[3] <= 45.225\ngini = 0.397\nsamples = 1
 Text(0.9895566502463053, 33.74068965517242, 'X[3] <= 44.95\ngini = 0.469\nsamples = 8\n
 Text(0.6597044334975369, 26.24275862068967, 'X[29] <= 0.5\ngini = 0.408\nsamples = 7\nv
 Text(0.32985221674876847, 18.744827586206895, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]
 Text(0.9895566502463053, 18.744827586206895, 'X[13] <= 0.5\ngini = 0.5\nsamples = 4\nva
 Text(0.6597044334975369, 11.246896551724149, 'X[3] <= 44.575\ngini = 0.444\nsamples = 3
 Text(0.32985221674876847, 3.7489655172413734, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]
 Text(0.9895566502463053, 3.7489655172413734, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
 Text(1.3194088669950739, 11.246896551724149, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
 Text(1.3194088669950739, 26.24275862068967, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
 Text(1.6492610837438424, 33.74068965517242, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]'),
 Text(1.9791133004926107, 41.238620689655164, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
 Text(3.6283743842364533, 56.234482758620686, 'X[3] <= 44.825\ngini = 0.459\nsamples = 1
 Text(2.9686699507389163, 48.73655172413794, 'X[2] <= 44.425\ngini = 0.48\nsamples = 5\n
 Text(2.6388177339901477, 41.238620689655164, 'X[29] <= 0.5\ngini = 0.444\nsamples = 3\n
 Text(2.308965517241379, 33.74068965517242, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
 Text(2.9686699507389163, 33.74068965517242, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
 Text(3.298522167487685, 41.238620689655164, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
 Text(4.28807881773399, 48.73655172413794, 'X[2] <= 45.475\ngini = 0.346\nsamples = 9\nv
 Text(3.9582266009852214, 41.238620689655164, 'X[2] <= 34.725\ngini = 0.219\nsamples = 8
 Text(3.6283743842364533, 33.74068965517242, 'X[2] <= 24.925\ngini = 0.5\nsamples = 2\nv
 Text(3.298522167487685, 26.24275862068967, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
 Text(3.9582266009852214, 26.24275862068967, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
 Text(4.28807881773399, 33.74068965517242, 'gini = 0.0\nsamples = 6\nvalue = [0, 6]'),
 Text(4.617931034482758, 41.238620689655164, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
 Text(2.4738916256157637, 78.72827586206895, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]'),
 Text(3.463448275862069, 86.22620689655173, 'X[2] <= 37.525\ngini = 0.32\nsamples = 5\nv
 Text(3.1335960591133003, 78.72827586206895, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]'),
 Text(3.7933004926108373, 78.72827586206895, 'X[3] <= 44.625\ngini = 0.5\nsamples = 2\nv
 Text(3.463448275862069, 71.23034482758621, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
```

```
Text(4.123152709359606, 71.23034482758621, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(3.463448275862069, 93.72413793103449, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(3.7933004926108373, 101.22206896551724, 'gini = 0.0\nsamples = 7\nvalue = [0, 7]')
Text(4.782857142857143, 108.72, 'X[2] <= 50.35\ngini = 0.408\nsamples = 14\nvalue = [10
Text(4.453004926108374, 101.22206896551724, 'gini = 0.0\nsamples = 7\nvalue = [7, 0]'),
Text(5.112709359605911, 101.22206896551724, 'X[9] <= 0.5\ngini = 0.49\nsamples = 7\nval
Text(4.782857142857143, 93.72413793103449, 'X[2] <= 51.0\ngini = 0.32\nsamples = 5\nval
Text(4.453004926108374, 86.22620689655173, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]'),
Text(5.112709359605911, 86.22620689655173, 'X[3] <= 53.2\ngini = 0.5\nsamples = 2\nvalu
Text(4.782857142857143, 78.72827586206895, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(5.44256157635468, 78.72827586206895, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(5.44256157635468, 93.72413793103449, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(4.782857142857143, 116.21793103448276, 'gini = 0.0\nsamples = 4\nvalue = [0, 4]'),
Text(5.112709359605911, 123.71586206896552, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(6.102266009852217, 131.21379310344827, 'X[3] <= 50.15\ngini = 0.298\nsamples = 11\
Text(5.772413793103448, 123.71586206896552, 'gini = 0.0\nsamples = 6\nvalue = [6, 0]'),
Text(6.432118226600985, 123.71586206896552, 'X[28] <= 0.5\ngini = 0.48\nsamples = 5\nva
Text(6.102266009852217, 116.21793103448276, 'X[17] <= 0.5\ngini = 0.444\nsamples = 3\nv
Text(5.772413793103448, 108.72, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(6.432118226600985, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(6.761970443349753, 116.21793103448276, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(9.070935960591132, 146.2096551724138, 'X[3] <= 158.35\ngini = 0.365\nsamples = 25\
Text(8.411231527093596, 138.71172413793101, 'X[2] <= 44.675\ngini = 0.245\nsamples = 21
Text(8.081379310344827, 131.21379310344827, 'X[3] <= 128.6\ngini = 0.444\nsamples = 9\n
Text(7.751527093596059, 123.71586206896552, 'X[1] <= 2.5\ngini = 0.245\nsamples = 7\nva
Text(7.42167487684729, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(8.081379310344827, 116.21793103448276, 'gini = 0.0\nsamples = 6\nvalue = [6, 0]'),
Text(8.411231527093596, 123.71586206896552, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(8.741083743842365, 131.21379310344827, 'gini = 0.0\nsamples = 12\nvalue = [12, 0]
Text(9.73064039408867, 138.71172413793101, 'X[3] <= 188.9\ngini = 0.375\nsamples = 4\nv
Text(9.400788177339901, 131.21379310344827, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]'),
Text(10.060492610837438, 131.21379310344827, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
Text(7.751527093596059, 153.70758620689656, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]'),
Text(11.379901477832512, 161.2055172413793, 'X[4] <= 0.5\ngini = 0.432\nsamples = 19\nv
Text(10.390344827586206, 153.70758620689656, 'X[3] <= 81.425\ngini = 0.18\nsamples = 10
Text(10.060492610837438, 146.2096551724138, 'gini = 0.0\nsamples = 6\nvalue = [0, 6]'),
Text(10.720197044334975, 146.2096551724138, 'X[3] <= 94.65\ngini = 0.375\nsamples = 4\n
Text(10.390344827586206, 138.71172413793101, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
Text(11.050049261083744, 138.71172413793101, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]')
Text(12.369458128078817, 153.70758620689656, 'X[2] <= 45.15\ngini = 0.494\nsamples = 9\
Text(12.03960591133005, 146.2096551724138, 'X[7] <= 0.5\ngini = 0.32\nsamples = 5\nvalu
Text(11.70975369458128, 138.71172413793101, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(12.369458128078817, 138.71172413793101, 'X[3] <= 44.55\ngini = 0.444\nsamples = 3\
Text(12.03960591133005, 131.21379310344827, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(12.699310344827586, 131.21379310344827, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]')
Text(12.699310344827586, 146.2096551724138, 'gini = 0.0\nsamples = 4\nvalue = [4, 0]'),
Text(18.144448891625615, 168.70344827586206, 'X[17] <= 0.5\ngini = 0.454\nsamples = 155
Text(17.814596674876846, 161.2055172413793, 'X[7] <= 0.5\ngini = 0.475\nsamples = 139\n
Text(14.678423645320196, 153.70758620689656, 'X[2] <= 34.95\ngini = 0.343\nsamples = 41
Text(14.348571428571429, 146.2096551724138, 'X[3] <= 63.0\ngini = 0.444\nsamples = 27\n
Text(13.68886699507389, 138.71172413793101, 'X[3] <= 30.6\ngini = 0.363\nsamples = 21\n
Text(13.359014778325124, 131.21379310344827, 'X[0] <= 0.5\ngini = 0.444\nsamples = 15\n
Text(13.029162561576355, 123.71586206896552, 'X[4] <= 0.5\ngini = 0.496\nsamples = 11\n
Text(12.369458128078817, 116.21793103448276, 'X[2] <= 25.125\ngini = 0.375\nsamples = 4
Text(12.03960591133005, 108.72, 'X[3] <= 25.0\ngini = 0.5\nsamples = 2\nvalue = [1, 1]
Text(11.70975369458128, 101.22206896551724, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(12.369458128078817, 101.22206896551724, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(12.699310344827586, 108.72, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
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Text(13.68886699507389, 116.21793103448276, 'X[2] <= 24.325\ngini = 0.408\nsamples = 7\
Text(13.359014778325124, 108.72, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(14.01871921182266, 108.72, 'X[2] <= 24.925\ngini = 0.48\nsamples = 5\nvalue = [2,
Text(13.68886699507389, 101.22206896551724, 'X[28] <= 0.5\ngini = 0.444\nsamples = 3\nv
Text(13.359014778325124, 93.72413793103449, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(14.01871921182266, 93.72413793103449, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(14.348571428571429, 101.22206896551724, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]')
Text(13.68886699507389, 123.71586206896552, 'gini = 0.0\nsamples = 4\nvalue = [0, 4]'),
Text(14.01871921182266, 131.21379310344827, 'gini = 0.0\nsamples = 6\nvalue = [0, 6]'),
Text(15.008275862068965, 138.71172413793101, 'X[2] <= 29.75\ngini = 0.444\nsamples = 6\
Text(14.678423645320196, 131.21379310344827, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(15.338128078817734, 131.21379310344827, 'X[3] <= 93.65\ngini = 0.32\nsamples = 5\n
Text(15.008275862068965, 123.71586206896552, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]')
Text(15.667980295566503, 123.71586206896552, 'X[3] <= 104.5\ngini = 0.5\nsamples = 2\nv
Text(15.338128078817734, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(15.99783251231527, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(15.008275862068965, 146.2096551724138, 'gini = 0.0\nsamples = 14\nvalue = [0, 14]
Text(20.950769704433498, 153.70758620689656, 'X[3] <= 45.75\ngini = 0.497\nsamples = 98
Text(17.64709359605911, 146.2096551724138, 'X[3] <= 45.0\ngini = 0.434\nsamples = 22\nv
Text(17.317241379310346, 138.71172413793101, 'X[4] <= 0.5\ngini = 0.497\nsamples = 13\n
Text(16.657536945812808, 131.21379310344827, 'X[2] <= 44.05\ngini = 0.32\nsamples = 5\n
Text(16.32768472906404, 123.71586206896552, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(16.987389162561577, 123.71586206896552, 'gini = 0.0\nsamples = 4\nvalue = [0, 4]')
Text(17.97694581280788, 131.21379310344827, 'X[3] <= 43.375\ngini = 0.375\nsamples = 8\
Text(17.64709359605911, 123.71586206896552, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(18.30679802955665, 123.71586206896552, 'X[2] <= 44.225\ngini = 0.245\nsamples = 7\
Text(17.97694581280788, 116.21793103448276, 'X[2] <= 44.1\ngini = 0.444\nsamples = 3\nv
Text(17.64709359605911, 108.72, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(18.30679802955665, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(18.636650246305418, 116.21793103448276, 'gini = 0.0\nsamples = 4\nvalue = [4, 0]')
Text(17.97694581280788, 138.71172413793101, 'gini = 0.0\nsamples = 9\nvalue = [0, 9]'),
Text(24.25444581280788, 146.2096551724138, 'X[3] <= 50.3\ngini = 0.5\nsamples = 76\nval
Text(21.110541871921182, 138.71172413793101, 'X[5] <= 0.5\ngini = 0.455\nsamples = 20\n
Text(20.28591133004926, 131.21379310344827, 'X[28] <= 0.5\ngini = 0.375\nsamples = 16\n
Text(19.95605911330049, 123.71586206896552, 'X[2] <= 49.85\ngini = 0.48\nsamples = 10\n
Text(19.296354679802956, 116.21793103448276, 'X[29] <= 0.5\ngini = 0.278\nsamples = 6\n
Text(18.966502463054187, 108.72, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]'),
Text(19.626206896551725, 108.72, 'X[0] <= 0.5\ngini = 0.444\nsamples = 3\nvalue = [2, 1
Text(19.296354679802956, 101.22206896551724, 'X[3] <= 45.825\ngini = 0.5\nsamples = 2\n
Text(18.966502463054187, 93.72413793103449, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(19.626206896551725, 93.72413793103449, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(19.95605911330049, 101.22206896551724, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(20.61576354679803, 116.21793103448276, 'X[2] <= 50.125\ngini = 0.375\nsamples = 4\
Text(20.28591133004926, 108.72, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]'),
Text(20.945615763546797, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(20.61576354679803, 123.71586206896552, 'gini = 0.0\nsamples = 6\nvalue = [6, 0]'),
Text(21.935172413793104, 131.21379310344827, 'X[3] <= 49.0\ngini = 0.375\nsamples = 4\n
Text(21.605320197044335, 123.71586206896552, 'X[3] <= 47.3\ngini = 0.5\nsamples = 2\nva
Text(21.275467980295566, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(21.935172413793104, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
Text(22.265024630541873, 123.71586206896552, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]')
Text(27.398349753694582, 138.71172413793101, 'X[5] <= 0.5\ngini = 0.494\nsamples = 56\n
Text(25.11, 131.21379310344827, 'X[3] <= 55.125\ngini = 0.475\nsamples = 49\nvalue = [1
Text(23.254581280788177, 123.71586206896552, 'X[13] <= 0.5\ngini = 0.355\nsamples = 13\
Text(22.59487684729064, 116.21793103448276, 'X[3] <= 54.1\ngini = 0.18\nsamples = 10\nv
Text(22.265024630541873, 108.72, 'gini = 0.0\nsamples = 6\nvalue = [0, 6]'),
Text(22.924729064039408, 108.72, 'X[2] <= 54.7\ngini = 0.375\nsamples = 4\nvalue = [1,
Text(22.59487684729064, 101.22206896551724, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
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Text(22.594876847290064, 101.22206896551724, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(23.254581280788177, 101.22206896551724, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]'),
Text(23.914285714285715, 116.21793103448276, 'X[3] <= 52.35\ngini = 0.444\nsamples = 3\
Text(23.584433497536946, 108.72, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(24.244137931034484, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(26.965418719211822, 123.71586206896552, 'X[3] <= 90.2\ngini = 0.494\nsamples = 36\
Text(25.563546798029556, 116.21793103448276, 'X[2] <= 55.575\ngini = 0.444\nsamples = 1
Text(24.903842364532018, 108.72, 'X[27] <= 0.5\ngini = 0.219\nsamples = 8\nvalue = [7,
Text(24.573990147783253, 101.22206896551724, 'gini = 0.0\nsamples = 7\nvalue = [7, 0]'),
Text(25.233694581280787, 101.22206896551724, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(26.223251231527094, 108.72, 'X[19] <= 0.5\ngini = 0.375\nsamples = 4\nvalue = [1,
Text(25.893399014778325, 101.22206896551724, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]'),
Text(26.553103448275863, 101.22206896551724, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(28.36729064039409, 116.21793103448276, 'X[2] <= 50.025\ngini = 0.444\nsamples = 24
Text(27.542660098522166, 108.72, 'X[29] <= 0.5\ngini = 0.165\nsamples = 11\nvalue = [1,
Text(27.212807881773397, 101.22206896551724, 'gini = 0.0\nsamples = 8\nvalue = [0, 8]'),
Text(27.872512315270935, 101.22206896551724, 'X[15] <= 0.5\ngini = 0.444\nsamples = 3\n
Text(27.542660098522166, 93.72413793103449, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(28.202364532019704, 93.72413793103449, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(29.19192118226601, 108.72, 'X[2] <= 52.175\ngini = 0.497\nsamples = 13\nvalue = [7
Text(28.862068965517242, 101.22206896551724, 'gini = 0.0\nsamples = 4\nvalue = [4, 0]'),
Text(29.521773399014776, 101.22206896551724, 'X[28] <= 0.5\ngini = 0.444\nsamples = 9\n
Text(28.862068965517242, 93.72413793103449, 'X[2] <= 55.825\ngini = 0.278\nsamples = 6\
Text(28.532216748768473, 86.22620689655173, 'gini = 0.0\nsamples = 5\nvalue = [0, 5]'),
Text(29.19192118226601, 86.22620689655173, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(30.181477832512314, 93.72413793103449, 'X[3] <= 168.275\ngini = 0.444\nsamples = 3
Text(29.851625615763545, 86.22620689655173, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(30.511330049261083, 86.22620689655173, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(29.68669950738916, 131.21379310344827, 'X[2] <= 44.8\ngini = 0.245\nsamples = 7\nv
Text(29.356847290640392, 123.71586206896552, 'X[4] <= 0.5\ngini = 0.5\nsamples = 2\nval
Text(29.026995073891626, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(29.68669950738916, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(30.01655172413793, 123.71586206896552, 'gini = 0.0\nsamples = 5\nvalue = [5, 0]'),
Text(18.474301108374384, 161.2055172413793, 'gini = 0.0\nsamples = 16\nvalue = [0, 16]
Text(31.830738916256156, 176.20137931034483, 'X[0] <= 0.5\ngini = 0.366\nsamples = 29\n
Text(31.50088669950739, 168.70344827586206, 'X[13] <= 0.5\ngini = 0.337\nsamples = 28\n
Text(31.17103448275862, 161.2055172413793, 'X[3] <= 194.125\ngini = 0.432\nsamples = 19
Text(30.841182266009852, 153.70758620689656, 'X[3] <= 62.425\ngini = 0.48\nsamples = 15
Text(30.511330049261083, 146.2096551724138, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(31.17103448275862, 146.2096551724138, 'X[3] <= 114.85\ngini = 0.459\nsamples = 14\
Text(30.841182266009852, 138.71172413793101, 'gini = 0.0\nsamples = 4\nvalue = [4, 0]'),
Text(31.50088669950739, 138.71172413793101, 'X[27] <= 0.5\ngini = 0.5\nsamples = 10\nva
Text(31.17103448275862, 131.21379310344827, 'X[2] <= 61.15\ngini = 0.494\nsamples = 9\n
Text(30.841182266009852, 123.71586206896552, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(31.50088669950739, 123.71586206896552, 'X[15] <= 0.5\ngini = 0.469\nsamples = 8\nv
Text(31.17103448275862, 116.21793103448276, 'X[28] <= 0.5\ngini = 0.408\nsamples = 7\nv
Text(30.841182266009852, 108.72, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(31.50088669950739, 108.72, 'X[26] <= 0.5\ngini = 0.48\nsamples = 5\nvalue = [2, 3]
Text(31.17103448275862, 101.22206896551724, 'X[2] <= 73.35\ngini = 0.444\nsamples = 3\n
Text(30.841182266009852, 93.72413793103449, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(31.50088669950739, 93.72413793103449, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(31.830738916256156, 101.22206896551724, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(31.830738916256156, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(31.830738916256156, 131.21379310344827, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(31.50088669950739, 153.70758620689656, 'gini = 0.0\nsamples = 4\nvalue = [4, 0]'),
Text(31.830738916256156, 161.2055172413793, 'gini = 0.0\nsamples = 9\nvalue = [9, 0]'),
Text(32.160591133004926, 168.70344827586206, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(44.59705049261083, 183.69931034482758, 'X[3] <= 24.525\ngini = 0.416\nsamples = 20
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Text(39.38641625615764, 176.20137931034483, 'X[27] <= 0.5\ngini = 0.469\nsamples = 128\
Text(39.05656403940887, 168.70344827586206, 'X[3] <= 19.225\ngini = 0.48\nsamples = 120
Text(36.572364532019705, 161.2055172413793, 'X[26] <= 0.5\ngini = 0.245\nsamples = 14\r
Text(36.242512315270936, 153.70758620689656, 'gini = 0.0\nsamples = 10\nvalue = [10, 0]
Text(36.902216748768474, 153.70758620689656, 'X[6] <= 0.5\ngini = 0.5\nsamples = 4\nval
Text(36.572364532019705, 146.2096551724138, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(37.23206896551724, 146.2096551724138, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(41.540763546798026, 161.2055172413793, 'X[0] <= 0.5\ngini = 0.491\nsamples = 106\r
Text(41.210911330049264, 153.70758620689656, 'X[2] <= 20.225\ngini = 0.488\nsamples = 1
Text(37.89177339901478, 146.2096551724138, 'X[2] <= 20.075\ngini = 0.498\nsamples = 66\
Text(35.211724137931036, 138.71172413793101, 'X[4] <= 0.5\ngini = 0.487\nsamples = 50\r
Text(32.820295566502466, 131.21379310344827, 'X[3] <= 19.275\ngini = 0.434\nsamples = 2
Text(32.4904433497537, 123.71586206896552, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(33.15014778325123, 123.71586206896552, 'X[3] <= 19.35\ngini = 0.455\nsamples = 20\
Text(32.820295566502466, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(33.48, 116.21793103448276, 'X[5] <= 0.5\ngini = 0.432\nsamples = 19\nvalue = [13,
Text(32.820295566502466, 108.72, 'X[29] <= 0.5\ngini = 0.375\nsamples = 16\nvalue = [12
Text(32.4904433497537, 101.22206896551724, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(33.15014778325123, 101.22206896551724, 'X[3] <= 19.575\ngini = 0.408\nsamples = 14
Text(32.4904433497537, 93.72413793103449, 'X[2] <= 19.525\ngini = 0.278\nsamples = 6\nv
Text(32.16059113300493, 86.22620689655173, 'X[26] <= 0.5\ngini = 0.444\nsamples = 3\nva
Text(31.830738916256156, 78.72827586206895, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(32.4904433497537, 78.72827586206895, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(32.820295566502466, 86.22620689655173, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]'),
Text(33.809852216748766, 93.72413793103449, 'X[3] <= 19.625\ngini = 0.469\nsamples = 8\
Text(33.48, 86.22620689655173, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(34.139704433497535, 86.22620689655173, 'X[3] <= 19.875\ngini = 0.408\nsamples = 7\
Text(33.809852216748766, 78.72827586206895, 'X[3] <= 19.7\ngini = 0.32\nsamples = 5\nva
Text(33.48, 71.23034482758621, 'gini = 0.444\nsamples = 3\nvalue = [2, 1]'),
Text(34.139704433497535, 71.23034482758621, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(34.469556650246304, 78.72827586206895, 'gini = 0.5\nsamples = 2\nvalue = [1, 1]'),
Text(34.139704433497535, 108.72, 'X[3] <= 19.425\ngini = 0.444\nsamples = 3\nvalue = [1
Text(33.809852216748766, 101.22206896551724, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
Text(34.469556650246304, 101.22206896551724, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]')
Text(37.603152709359605, 131.21379310344827, 'X[3] <= 20.0\ngini = 0.5\nsamples = 28\nv
Text(36.94344827586207, 123.71586206896552, 'X[3] <= 19.925\ngini = 0.491\nsamples = 23
Text(36.6135960591133, 116.21793103448276, 'X[29] <= 0.5\ngini = 0.499\nsamples = 21\nv
Text(35.95389162561576, 108.72, 'X[2] <= 19.8\ngini = 0.375\nsamples = 4\nvalue = [3, 1
Text(35.62403940886699, 101.22206896551724, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]'),
Text(36.28374384236453, 101.22206896551724, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(37.273300492610836, 108.72, 'X[3] <= 19.275\ngini = 0.484\nsamples = 17\nvalue =
Text(36.94344827586207, 101.22206896551724, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(37.603152709359605, 101.22206896551724, 'X[3] <= 19.675\ngini = 0.492\nsamples = 1
Text(36.11881773399015, 93.72413793103449, 'X[6] <= 0.5\ngini = 0.469\nsamples = 8\nval
Text(35.45911330049261, 86.22620689655173, 'X[2] <= 19.575\ngini = 0.32\nsamples = 5\nv
Text(35.12926108374384, 78.72827586206895, 'X[3] <= 19.425\ngini = 0.444\nsamples = 3\r
Text(34.79940886699507, 71.23034482758621, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(35.45911330049261, 71.23034482758621, 'gini = 0.5\nsamples = 2\nvalue = [1, 1]'),
Text(35.78896551724138, 78.72827586206895, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(36.77852216748769, 86.22620689655173, 'X[3] <= 19.375\ngini = 0.444\nsamples = 3\r
Text(36.44866995073892, 78.72827586206895, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(37.108374384236456, 78.72827586206895, 'X[26] <= 0.5\ngini = 0.5\nsamples = 2\nval
Text(36.77852216748769, 71.23034482758621, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(37.438226600985224, 71.23034482758621, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(39.08748768472906, 93.72413793103449, 'X[26] <= 0.5\ngini = 0.5\nsamples = 8\nvalu
Text(38.75763546798029, 86.22620689655173, 'X[2] <= 19.825\ngini = 0.444\nsamples = 6\r
Text(38.427783251231524, 78.72827586206895, 'X[5] <= 0.5\ngini = 0.48\nsamples = 5\nval
Text(38.097931034482755, 71.23034482758621, 'X[3] <= 19.725\ngini = 0.375\nsamples = 4\
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Text(37.768078817733986, 63.73241379310346, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(38.427783251231524, 63.73241379310346, 'X[6] <= 0.5\ngini = 0.444\nsamples = 3\nva
Text(38.097931034482755, 56.234482758620686, 'gini = 0.5\nsamples = 2\nvalue = [1, 1]')
Text(38.75763546798029, 56.234482758620686, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(38.75763546798029, 71.23034482758621, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(39.08748768472906, 78.72827586206895, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(39.41733990147783, 86.22620689655173, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(37.273300492610836, 116.21793103448276, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]')
Text(38.26285714285714, 123.71586206896552, 'X[29] <= 0.5\ngini = 0.32\nsamples = 5\nva
Text(37.933004926108374, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(38.59270935960591, 116.21793103448276, 'gini = 0.0\nsamples = 4\nvalue = [4, 0]'),
Text(40.57182266009852, 138.71172413793101, 'X[6] <= 0.5\ngini = 0.469\nsamples = 16\nv
Text(40.24197044334975, 131.21379310344827, 'X[26] <= 0.5\ngini = 0.408\nsamples = 14\n
Text(39.91211822660098, 123.71586206896552, 'X[2] <= 20.175\ngini = 0.5\nsamples = 8\nv
Text(39.25241379310345, 116.21793103448276, 'X[4] <= 0.5\ngini = 0.375\nsamples = 4\nva
Text(38.92256157635468, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(39.58226600985222, 108.72, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]'),
Text(40.57182266009852, 116.21793103448276, 'X[29] <= 0.5\ngini = 0.375\nsamples = 4\nv
Text(40.24197044334975, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(40.90167487684729, 108.72, 'gini = 0.444\nsamples = 3\nvalue = [2, 1]'),
Text(40.57182266009852, 123.71586206896552, 'gini = 0.0\nsamples = 6\nvalue = [0, 6]'),
Text(40.90167487684729, 131.21379310344827, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(44.53004926108375, 146.2096551724138, 'X[3] <= 20.475\ngini = 0.45\nsamples = 38\n
Text(43.21064039408867, 138.71172413793101, 'X[2] <= 20.325\ngini = 0.278\nsamples = 18
Text(42.8807881773399, 131.21379310344827, 'X[4] <= 0.5\ngini = 0.444\nsamples = 9\nval
Text(42.221083743842364, 123.71586206896552, 'X[5] <= 0.5\ngini = 0.5\nsamples = 4\nval
Text(41.891231527093595, 116.21793103448276, 'X[2] <= 20.275\ngini = 0.444\nsamples = 3
Text(41.561379310344826, 108.72, 'gini = 0.5\nsamples = 2\nvalue = [1, 1]'),
Text(42.221083743842364, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(42.55093596059113, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(43.54049261083744, 123.71586206896552, 'X[3] <= 20.275\ngini = 0.32\nsamples = 5\n
Text(43.21064039408867, 116.21793103448276, 'X[26] <= 0.5\ngini = 0.444\nsamples = 3\nv
Text(42.8807881773399, 108.72, 'gini = 0.5\nsamples = 2\nvalue = [1, 1]'),
Text(43.54049261083744, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(43.87034482758621, 116.21793103448276, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(43.54049261083744, 131.21379310344827, 'gini = 0.0\nsamples = 9\nvalue = [9, 0]'),
Text(45.849458128078815, 138.71172413793101, 'X[3] <= 20.575\ngini = 0.5\nsamples = 20\
Text(45.18975369458128, 131.21379310344827, 'X[5] <= 0.5\ngini = 0.278\nsamples = 6\nva
Text(44.85990147783251, 123.71586206896552, 'X[4] <= 0.5\ngini = 0.375\nsamples = 4\nva
Text(44.53004926108375, 116.21793103448276, 'gini = 0.5\nsamples = 2\nvalue = [1, 1]'),
Text(45.18975369458128, 116.21793103448276, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(45.519605911330046, 123.71586206896552, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]')
Text(46.50916256157635, 131.21379310344827, 'X[3] <= 20.85\ngini = 0.459\nsamples = 14\
Text(46.179310344827584, 123.71586206896552, 'gini = 0.0\nsamples = 5\nvalue = [5, 0]')
Text(46.83901477832512, 123.71586206896552, 'X[28] <= 0.5\ngini = 0.494\nsamples = 9\nv
Text(46.50916256157635, 116.21793103448276, 'X[6] <= 0.5\ngini = 0.5\nsamples = 8\nvalu
Text(46.179310344827584, 108.72, 'X[29] <= 0.5\ngini = 0.444\nsamples = 6\nvalue = [2,
Text(45.849458128078815, 101.22206896551724, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
Text(46.50916256157635, 101.22206896551724, 'X[3] <= 20.925\ngini = 0.32\nsamples = 5\n
Text(46.179310344827584, 93.72413793103449, 'gini = 0.444\nsamples = 3\nvalue = [1, 2]
Text(46.83901477832512, 93.72413793103449, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(46.83901477832512, 108.72, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(47.16886699507389, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(41.870615763546795, 153.70758620689656, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]')
Text(39.71626847290641, 168.70344827586206, 'gini = 0.0\nsamples = 8\nvalue = [8, 0]'),
Text(49.807684729064036, 176.20137931034483, 'X[2] <= 19.9\ngini = 0.259\nsamples = 72\
Text(48.48827586206897, 168.70344827586206, 'X[2] <= 19.7\ngini = 0.391\nsamples = 30\n
Text(47.828571428571433, 161.2055172413793, 'X[27] <= 0.5\ngini = 0.245\nsamples = 21\n
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Text(47.82857142857143, 161.2055172413793, 'X[27] <= 0.5\ngini = 0.245\nsamples = 21\nv
Text(47.49871921182266, 153.70758620689656, 'X[26] <= 0.5\ngini = 0.18\nsamples = 20\nv
Text(47.16886699507389, 146.2096551724138, 'gini = 0.0\nsamples = 12\nvalue = [12, 0]')
Text(47.82857142857143, 146.2096551724138, 'X[4] <= 0.5\ngini = 0.375\nsamples = 8\nval
Text(47.49871921182266, 138.71172413793101, 'X[5] <= 0.5\ngini = 0.444\nsamples = 3\nva
Text(47.16886699507389, 131.21379310344827, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(47.82857142857143, 131.21379310344827, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(48.1584236453202, 138.71172413793101, 'gini = 0.0\nsamples = 5\nvalue = [5, 0]'),
Text(48.1584236453202, 153.70758620689656, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(49.147980295566505, 161.2055172413793, 'X[3] <= 57.675\ngini = 0.494\nsamples = 9\
Text(48.818128078817736, 153.70758620689656, 'X[24] <= 0.5\ngini = 0.32\nsamples = 5\nv
Text(48.48827586206897, 146.2096551724138, 'gini = 0.0\nsamples = 4\nvalue = [4, 0]'),
Text(49.147980295566505, 146.2096551724138, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(49.47783251231527, 153.70758620689656, 'gini = 0.0\nsamples = 4\nvalue = [0, 4]'),
Text(51.12709359605911, 168.70344827586206, 'X[27] <= 0.5\ngini = 0.133\nsamples = 42\n
Text(50.467389162561574, 161.2055172413793, 'X[3] <= 38.975\ngini = 0.097\nsamples = 39
Text(50.137536945812805, 153.70758620689656, 'X[3] <= 38.475\ngini = 0.219\nsamples = 1
Text(49.807684729064036, 146.2096551724138, 'X[3] <= 33.4\ngini = 0.124\nsamples = 15\n
Text(49.47783251231527, 138.71172413793101, 'X[3] <= 32.95\ngini = 0.245\nsamples = 7\n
Text(49.147980295566505, 131.21379310344827, 'gini = 0.0\nsamples = 6\nvalue = [6, 0]')
Text(49.807684729064036, 131.21379310344827, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(50.137536945812805, 138.71172413793101, 'gini = 0.0\nsamples = 8\nvalue = [8, 0]')
Text(50.467389162561574, 146.2096551724138, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(50.79724137931034, 153.70758620689656, 'gini = 0.0\nsamples = 23\nvalue = [23, 0]
Text(51.78679802955665, 161.2055172413793, 'X[3] <= 54.275\ngini = 0.444\nsamples = 3\n
Text(51.45694581280788, 153.70758620689656, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(52.11665024630542, 153.70758620689656, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(78.67233066502463, 191.19724137931036, 'X[16] <= 0.5\ngini = 0.309\nsamples = 713\
Text(67.62743534482759, 183.69931034482758, 'X[3] <= 310.9\ngini = 0.391\nsamples = 417
Text(59.05385467980295, 176.20137931034483, 'X[13] <= 0.5\ngini = 0.482\nsamples = 131\
Text(57.085049261083746, 168.70344827586206, 'X[3] <= 299.375\ngini = 0.498\nsamples =
Text(56.75519704433498, 161.2055172413793, 'X[2] <= 50.925\ngini = 0.493\nsamples = 95\
Text(54.796699507389164, 153.70758620689656, 'X[2] <= 45.575\ngini = 0.5\nsamples = 75\
Text(52.85881773399014, 146.2096551724138, 'X[2] <= 40.325\ngini = 0.482\nsamples = 47\
Text(51.2920197044335, 138.71172413793101, 'X[3] <= 199.4\ngini = 0.498\nsamples = 30\n
Text(50.467389162561574, 131.21379310344827, 'X[3] <= 140.05\ngini = 0.43\nsamples = 16
Text(50.137536945812805, 123.71586206896552, 'X[2] <= 29.775\ngini = 0.494\nsamples = 9
Text(49.807684729064036, 116.21793103448276, 'X[5] <= 0.5\ngini = 0.408\nsamples = 7\nv
Text(49.47783251231527, 108.72, 'X[2] <= 24.375\ngini = 0.278\nsamples = 6\nvalue = [1,
Text(49.147980295566505, 101.22206896551724, 'X[2] <= 24.275\ngini = 0.5\nsamples = 2\n
Text(48.818128078817736, 93.72413793103449, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(49.47783251231527, 93.72413793103449, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(49.807684729064036, 101.22206896551724, 'gini = 0.0\nsamples = 4\nvalue = [0, 4]')
Text(50.137536945812805, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(50.467389162561574, 116.21793103448276, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]')
Text(50.79724137931034, 123.71586206896552, 'gini = 0.0\nsamples = 7\nvalue = [7, 0]'),
Text(52.11665024630542, 131.21379310344827, 'X[19] <= 0.5\ngini = 0.337\nsamples = 14\n
Text(51.45694581280788, 123.71586206896552, 'X[2] <= 29.325\ngini = 0.165\nsamples = 11
Text(51.12709359605911, 116.21793103448276, 'X[2] <= 27.375\ngini = 0.444\nsamples = 3\
Text(50.79724137931034, 108.72, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(51.45694581280788, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(51.78679802955665, 116.21793103448276, 'gini = 0.0\nsamples = 8\nvalue = [0, 8]'),
Text(52.77635467980296, 123.71586206896552, 'X[28] <= 0.5\ngini = 0.444\nsamples = 3\nv
Text(52.44650246305419, 116.21793103448276, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(53.106206896551726, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(54.425615763546794, 138.71172413793101, 'X[2] <= 44.575\ngini = 0.291\nsamples = 1
Text(54.095763546798025, 131.21379310344827, 'gini = 0.0\nsamples = 6\nvalue = [6, 0]')
Text(54.75546798029556, 131.21379310344827, 'X[26] <= 0.5\ngini = 0.397\nsamples = 11\n
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Text(54.095763546798025, 123.71586206896552, 'X[2] <= 44.775\ngini = 0.219\nsamples = 8
Text(53.76591133004926, 116.21793103448276, 'X[0] <= 0.5\ngini = 0.5\nsamples = 2\nvalu
Text(53.436059113300495, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(54.095763546798025, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(54.425615763546794, 116.21793103448276, 'gini = 0.0\nsamples = 6\nvalue = [6, 0]')
Text(55.4151724137931, 123.71586206896552, 'X[3] <= 186.575\ngini = 0.444\nsamples = 3\
Text(55.08532019704433, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(55.74502463054187, 116.21793103448276, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(56.73458128078818, 146.2096551724138, 'X[2] <= 48.6\ngini = 0.459\nsamples = 28\nv
Text(56.07487684729064, 138.71172413793101, 'X[26] <= 0.5\ngini = 0.219\nsamples = 8\nv
Text(55.74502463054187, 131.21379310344827, 'gini = 0.0\nsamples = 5\nvalue = [0, 5]'),
Text(56.40472906403941, 131.21379310344827, 'X[2] <= 45.95\ngini = 0.444\nsamples = 3\n
Text(56.07487684729064, 123.71586206896552, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(56.73458128078818, 123.71586206896552, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(57.394285714285715, 138.71172413793101, 'X[2] <= 49.05\ngini = 0.495\nsamples = 20
Text(57.064433497536946, 131.21379310344827, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]')
Text(57.724137931034484, 131.21379310344827, 'X[5] <= 0.5\ngini = 0.457\nsamples = 17\n
Text(57.394285714285715, 123.71586206896552, 'X[29] <= 0.5\ngini = 0.497\nsamples = 13\
Text(56.73458128078818, 116.21793103448276, 'X[9] <= 0.5\ngini = 0.408\nsamples = 7\nva
Text(56.40472906403941, 108.72, 'X[15] <= 0.5\ngini = 0.278\nsamples = 6\nvalue = [1, 5
Text(56.07487684729064, 101.22206896551724, 'gini = 0.0\nsamples = 4\nvalue = [0, 4]'),
Text(56.73458128078818, 101.22206896551724, 'X[27] <= 0.5\ngini = 0.5\nsamples = 2\nval
Text(56.40472906403941, 93.72413793103449, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(57.064433497536946, 93.72413793103449, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(57.064433497536946, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(58.05399014778325, 116.21793103448276, 'X[9] <= 0.5\ngini = 0.444\nsamples = 6\nva
Text(57.724137931034484, 108.72, 'gini = 0.0\nsamples = 4\nvalue = [4, 0]'),
Text(58.38384236453202, 108.72, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(58.05399014778325, 123.71586206896552, 'gini = 0.0\nsamples = 4\nvalue = [0, 4]'),
Text(58.713694581280784, 153.70758620689656, 'X[3] <= 204.225\ngini = 0.375\nsamples =
Text(58.38384236453202, 146.2096551724138, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(59.04354679802955, 146.2096551724138, 'X[2] <= 67.125\ngini = 0.278\nsamples = 18\
Text(58.713694581280784, 138.71172413793101, 'X[5] <= 0.5\ngini = 0.208\nsamples = 17\n
Text(58.38384236453202, 131.21379310344827, 'gini = 0.0\nsamples = 12\nvalue = [12, 0]
Text(59.04354679802955, 131.21379310344827, 'X[9] <= 0.5\ngini = 0.48\nsamples = 5\nval
Text(58.713694581280784, 123.71586206896552, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]')
Text(59.37339901477832, 123.71586206896552, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]'),
Text(59.37339901477832, 138.71172413793101, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(57.41490147783251, 161.2055172413793, 'gini = 0.0\nsamples = 5\nvalue = [0, 5]'),
Text(61.02266009852217, 168.70344827586206, 'X[2] <= 60.15\ngini = 0.312\nsamples = 31\
Text(60.6928078817734, 161.2055172413793, 'X[4] <= 0.5\ngini = 0.278\nsamples = 30\nval
Text(60.36295566502463, 153.70758620689656, 'gini = 0.0\nsamples = 15\nvalue = [15, 0]
Text(61.02266009852217, 153.70758620689656, 'X[28] <= 0.5\ngini = 0.444\nsamples = 15\n
Text(60.36295566502463, 146.2096551724138, 'X[19] <= 0.5\ngini = 0.298\nsamples = 11\nv
Text(60.03310344827586, 138.71172413793101, 'gini = 0.0\nsamples = 6\nvalue = [6, 0]'),
Text(60.6928078817734, 138.71172413793101, 'X[3] <= 245.2\ngini = 0.48\nsamples = 5\nva
Text(60.36295566502463, 131.21379310344827, 'X[17] <= 0.5\ngini = 0.444\nsamples = 3\nv
Text(60.03310344827586, 123.71586206896552, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(60.6928078817734, 123.71586206896552, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(61.02266009852217, 131.21379310344827, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(61.682364532019704, 146.2096551724138, 'X[3] <= 287.45\ngini = 0.375\nsamples = 4\
Text(61.352512315270936, 138.71172413793101, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]')
Text(62.01221674876847, 138.71172413793101, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(61.352512315270936, 161.2055172413793, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(76.20101600985221, 176.20137931034483, 'X[15] <= 0.5\ngini = 0.323\nsamples = 286\
Text(71.91809113300492, 168.70344827586206, 'X[13] <= 0.5\ngini = 0.387\nsamples = 187\
Text(68.79480295566502, 161.2055172413793, 'X[2] <= 69.825\ngini = 0.437\nsamples = 124
Text(67.16615763546798, 153.70758620689656, 'X[28] <= 0.5\ngini = 0.406\nsamples = 113\
```

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Text(64.8984236453202, 146.2096551724138, 'X[2] <= 55.675\ngini = 0.287\nsamples = 69\r
Text(62.83684729064039, 138.71172413793101, 'X[3] <= 386.875\ngini = 0.346\nsamples = 4
Text(61.682364532019704, 131.21379310344827, 'X[21] <= 0.5\ngini = 0.133\nsamples = 14\
Text(61.352512315270936, 123.71586206896552, 'gini = 0.0\nsamples = 11\nvalue = [11, 0]
Text(62.01221674876847, 123.71586206896552, 'X[3] <= 346.05\ngini = 0.444\nsamples = 3\
Text(61.682364532019704, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(62.34206896551724, 116.21793103448276, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(63.99133004926108, 131.21379310344827, 'X[3] <= 435.8\ngini = 0.412\nsamples = 31\
Text(63.33162561576354, 123.71586206896552, 'X[2] <= 45.1\ngini = 0.375\nsamples = 4\nv
Text(63.00177339901478, 116.21793103448276, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]'),
Text(63.66147783251231, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(64.65103448275862, 123.71586206896552, 'X[1] <= 13.5\ngini = 0.346\nsamples = 27\r
Text(64.32118226600986, 116.21793103448276, 'X[2] <= 45.075\ngini = 0.42\nsamples = 20\
Text(63.99133004926108, 108.72, 'gini = 0.0\nsamples = 5\nvalue = [5, 0]'),
Text(64.65103448275862, 108.72, 'X[2] <= 45.6\ngini = 0.48\nsamples = 15\nvalue = [9, 6
Text(64.32118226600986, 101.22206896551724, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(64.9808866995074, 101.22206896551724, 'X[3] <= 517.15\ngini = 0.426\nsamples = 13\
Text(64.65103448275862, 93.72413793103449, 'gini = 0.0\nsamples = 5\nvalue = [5, 0]'),
Text(65.31073891625616, 93.72413793103449, 'X[3] <= 600.95\ngini = 0.5\nsamples = 8\nva
Text(64.9808866995074, 86.22620689655173, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(65.64059113300493, 86.22620689655173, 'X[23] <= 0.5\ngini = 0.444\nsamples = 6\nva
Text(65.31073891625616, 78.72827586206895, 'gini = 0.0\nsamples = 4\nvalue = [4, 0]'),
Text(65.9704433497537, 78.72827586206895, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(64.9808866995074, 116.21793103448276, 'gini = 0.0\nsamples = 7\nvalue = [7, 0]'),
Text(66.96, 138.71172413793101, 'X[1] <= 15.5\ngini = 0.153\nsamples = 24\nvalue = [22,
Text(66.30029556650246, 131.21379310344827, 'X[3] <= 417.125\ngini = 0.087\nsamples = 2
Text(65.9704433497537, 123.71586206896552, 'X[3] <= 415.025\ngini = 0.444\nsamples = 3\
Text(65.64059113300493, 116.21793103448276, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(66.30029556650246, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(66.63014778325123, 123.71586206896552, 'gini = 0.0\nsamples = 19\nvalue = [19, 0]
Text(67.61970443349753, 131.21379310344827, 'X[27] <= 0.5\ngini = 0.5\nsamples = 2\nval
Text(67.28985221674877, 123.71586206896552, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(67.94955665024631, 123.71586206896552, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(69.43389162561576, 146.2096551724138, 'X[2] <= 43.7\ngini = 0.496\nsamples = 44\nv
Text(69.104039408867, 138.71172413793101, 'gini = 0.0\nsamples = 5\nvalue = [0, 5]'),
Text(69.76374384236453, 138.71172413793101, 'X[1] <= 8.5\ngini = 0.473\nsamples = 39\nv
Text(68.93911330049261, 131.21379310344827, 'X[17] <= 0.5\ngini = 0.278\nsamples = 12\r
Text(68.60926108374385, 123.71586206896552, 'gini = 0.0\nsamples = 10\nvalue = [10, 0]
Text(69.26896551724138, 123.71586206896552, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(70.58837438423645, 131.21379310344827, 'X[3] <= 503.4\ngini = 0.499\nsamples = 27\
Text(69.92866995073892, 123.71586206896552, 'X[2] <= 43.9\ngini = 0.278\nsamples = 6\nv
Text(69.59881773399015, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(70.25852216748768, 116.21793103448276, 'gini = 0.0\nsamples = 5\nvalue = [0, 5]'),
Text(71.24807881773398, 123.71586206896552, 'X[3] <= 658.55\ngini = 0.472\nsamples = 21
Text(70.91822660098522, 116.21793103448276, 'gini = 0.0\nsamples = 6\nvalue = [6, 0]'),
Text(71.57793103448276, 116.21793103448276, 'X[2] <= 67.85\ngini = 0.498\nsamples = 15\
Text(71.24807881773398, 108.72, 'X[4] <= 0.5\ngini = 0.473\nsamples = 13\nvalue = [5, 8
Text(70.58837438423645, 101.22206896551724, 'X[3] <= 725.975\ngini = 0.278\nsamples = 6
Text(70.25852216748768, 93.72413793103449, 'X[3] <= 695.35\ngini = 0.5\nsamples = 2\nva
Text(69.92866995073892, 86.22620689655173, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(70.58837438423645, 86.22620689655173, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(70.91822660098522, 93.72413793103449, 'gini = 0.0\nsamples = 4\nvalue = [0, 4]'),
Text(71.90778325123152, 101.22206896551724, 'X[17] <= 0.5\ngini = 0.49\nsamples = 7\nva
Text(71.57793103448276, 93.72413793103449, 'X[26] <= 0.5\ngini = 0.48\nsamples = 5\nval
Text(71.24807881773398, 86.22620689655173, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(71.90778325123152, 86.22620689655173, 'X[19] <= 0.5\ngini = 0.444\nsamples = 3\nva
Text(71.57793103448276, 78.72827586206895, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(72.23763546798893, 78.72827586206895, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
```

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Text(72.23763546798803, 78.72827586206895, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(72.2376354679803, 93.72413793103449, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(71.90778325123152, 108.72, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(70.42344827586207, 153.70758620689656, 'X[2] <= 74.7\ngini = 0.397\nsamples = 11\r
Text(70.0935960591133, 146.2096551724138, 'gini = 0.0\nsamples = 7\nvalue = [0, 7]'),
Text(70.75330049261083, 146.2096551724138, 'X[3] <= 921.95\ngini = 0.375\nsamples = 4\r
Text(70.42344827586207, 138.71172413793101, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]'),
Text(71.08315270935961, 138.71172413793101, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(75.04137931034482, 161.2055172413793, 'X[9] <= 0.5\ngini = 0.245\nsamples = 63\nva
Text(74.21674876847291, 153.70758620689656, 'X[2] <= 58.725\ngini = 0.174\nsamples = 52
Text(73.88689655172413, 146.2096551724138, 'X[2] <= 56.175\ngini = 0.251\nsamples = 34\
Text(73.55704433497537, 138.71172413793101, 'X[28] <= 0.5\ngini = 0.17\nsamples = 32\nv
Text(72.89733990147784, 131.21379310344827, 'X[27] <= 0.5\ngini = 0.083\nsamples = 23\r
Text(72.56748768472906, 123.71586206896552, 'gini = 0.0\nsamples = 18\nvalue = [18, 0]
Text(73.2271921182266, 123.71586206896552, 'X[5] <= 0.5\ngini = 0.32\nsamples = 5\nvalu
Text(72.89733990147784, 116.21793103448276, 'X[2] <= 50.325\ngini = 0.5\nsamples = 2\nv
Text(72.56748768472906, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(73.2271921182266, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(73.55704433497537, 116.21793103448276, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]'),
Text(74.21674876847291, 131.21379310344827, 'X[2] <= 49.65\ngini = 0.346\nsamples = 9\r
Text(73.88689655172413, 123.71586206896552, 'gini = 0.0\nsamples = 6\nvalue = [6, 0]'),
Text(74.54660098522167, 123.71586206896552, 'X[6] <= 0.5\ngini = 0.444\nsamples = 3\nva
Text(74.21674876847291, 116.21793103448276, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(74.87645320197045, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(74.21674876847291, 138.71172413793101, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(74.54660098522167, 146.2096551724138, 'gini = 0.0\nsamples = 18\nvalue = [18, 0]'
Text(75.86600985221675, 153.70758620689656, 'X[19] <= 0.5\ngini = 0.463\nsamples = 11\r
Text(75.53615763546797, 146.2096551724138, 'X[28] <= 0.5\ngini = 0.346\nsamples = 9\nva
Text(75.20630541871921, 138.71172413793101, 'X[1] <= 12.5\ngini = 0.444\nsamples = 3\nv
Text(74.87645320197045, 131.21379310344827, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(75.53615763546797, 131.21379310344827, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(75.86600985221675, 138.71172413793101, 'gini = 0.0\nsamples = 6\nvalue = [6, 0]'),
Text(76.19586206896551, 146.2096551724138, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(80.4839408866995, 168.70344827586206, 'X[17] <= 0.5\ngini = 0.165\nsamples = 99\nv
Text(80.15408866995074, 161.2055172413793, 'X[27] <= 0.5\ngini = 0.224\nsamples = 70\nv
Text(78.5048275862069, 153.70758620689656, 'X[21] <= 0.5\ngini = 0.192\nsamples = 65\nv
Text(77.18541871921182, 146.2096551724138, 'X[3] <= 389.45\ngini = 0.115\nsamples = 49\
Text(76.52571428571429, 138.71172413793101, 'X[3] <= 385.65\ngini = 0.32\nsamples = 10\
Text(76.19586206896551, 131.21379310344827, 'X[2] <= 33.65\ngini = 0.198\nsamples = 9\r
Text(75.86600985221675, 123.71586206896552, 'X[26] <= 0.5\ngini = 0.444\nsamples = 3\nv
Text(75.53615763546797, 116.21793103448276, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(76.19586206896551, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(76.52571428571429, 123.71586206896552, 'gini = 0.0\nsamples = 6\nvalue = [6, 0]'),
Text(76.85556650246305, 131.21379310344827, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(77.84512315270936, 138.71172413793101, 'X[1] <= 15.5\ngini = 0.05\nsamples = 39\nv
Text(77.51527093596059, 131.21379310344827, 'gini = 0.0\nsamples = 34\nvalue = [34, 0]
Text(78.17497536945812, 131.21379310344827, 'X[2] <= 54.225\ngini = 0.32\nsamples = 5\r
Text(77.84512315270936, 123.71586206896552, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(78.5048275862069, 123.71586206896552, 'gini = 0.0\nsamples = 4\nvalue = [4, 0]'),
Text(79.82423645320196, 146.2096551724138, 'X[1] <= 13.5\ngini = 0.375\nsamples = 16\nv
Text(79.16453201970444, 138.71172413793101, 'X[2] <= 65.925\ngini = 0.26\nsamples = 13\
Text(78.83467980295566, 131.21379310344827, 'gini = 0.0\nsamples = 7\nvalue = [7, 0]'),
Text(79.4943842364532, 131.21379310344827, 'X[1] <= 9.5\ngini = 0.444\nsamples = 6\nval
Text(79.16453201970444, 123.71586206896552, 'X[1] <= 8.0\ngini = 0.444\nsamples = 3\nva
Text(78.83467980295566, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(79.4943842364532, 116.21793103448276, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(79.82423645320196, 123.71586206896552, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]'),
Text(80.4839408866995, 138.71172413793101, 'X[19] <= 0.5\ngini = 0.444\nsamples = 3\nva
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Text(80.15408866995074, 131.21379310344827, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(80.81379310344828, 131.21379310344827, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(81.80334975369458, 153.70758620689656, 'X[23] <= 0.5\ngini = 0.48\nsamples = 5\nva
Text(81.47349753694581, 146.2096551724138, 'X[0] <= 0.5\ngini = 0.444\nsamples = 3\nval
Text(81.14364532019704, 138.71172413793101, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(81.80334975369458, 138.71172413793101, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(82.13320197044335, 146.2096551724138, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(80.81379310344828, 161.2055172413793, 'gini = 0.0\nsamples = 29\nvalue = [29, 0]')
Text(89.71722598522167, 183.69931034482758, 'X[3] <= 397.225\ngini = 0.155\nsamples = 2
Text(89.3873737684729, 176.20137931034483, 'X[24] <= 0.5\ngini = 0.149\nsamples = 295\n
Text(86.41612684729064, 168.70344827586206, 'X[25] <= 0.5\ngini = 0.187\nsamples = 220\
Text(86.08627463054187, 161.2055172413793, 'X[2] <= 19.275\ngini = 0.234\nsamples = 176
Text(83.12275862068965, 153.70758620689656, 'X[2] <= 19.225\ngini = 0.426\nsamples = 13
Text(82.79290640394089, 146.2096551724138, 'X[3] <= 174.4\ngini = 0.298\nsamples = 11\n
Text(82.46305418719211, 138.71172413793101, 'gini = 0.0\nsamples = 8\nvalue = [8, 0]'),
Text(83.12275862068965, 138.71172413793101, 'X[2] <= 19.1\ngini = 0.444\nsamples = 3\nv
Text(82.79290640394089, 131.21379310344827, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(83.45261083743843, 131.21379310344827, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(83.45261083743843, 146.2096551724138, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(89.0497906403941, 153.70758620689656, 'X[26] <= 0.5\ngini = 0.213\nsamples = 157\n
Text(86.7305172413793, 146.2096551724138, 'X[29] <= 0.5\ngini = 0.265\nsamples = 102\nv
Text(84.93694581280788, 138.71172413793101, 'X[4] <= 0.5\ngini = 0.375\nsamples = 40\nv
Text(84.11231527093597, 131.21379310344827, 'X[2] <= 20.125\ngini = 0.488\nsamples = 19
Text(83.45261083743843, 123.71586206896552, 'X[2] <= 19.725\ngini = 0.496\nsamples = 11
Text(83.12275862068965, 116.21793103448276, 'X[28] <= 0.5\ngini = 0.408\nsamples = 7\nv
Text(82.79290640394089, 108.72, 'X[5] <= 0.5\ngini = 0.278\nsamples = 6\nvalue = [5, 1]
Text(82.46305418719211, 101.22206896551724, 'gini = 0.0\nsamples = 5\nvalue = [5, 0]'),
Text(83.12275862068965, 101.22206896551724, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(83.45261083743843, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(83.78246305418719, 116.21793103448276, 'gini = 0.0\nsamples = 4\nvalue = [0, 4]'),
Text(84.77201970443349, 123.71586206896552, 'X[27] <= 0.5\ngini = 0.375\nsamples = 8\nv
Text(84.44216748768473, 116.21793103448276, 'X[1] <= 8.5\ngini = 0.48\nsamples = 5\nval
Text(84.11231527093597, 108.72, 'X[28] <= 0.5\ngini = 0.444\nsamples = 3\nvalue = [1, 2
Text(83.78246305418719, 101.22206896551724, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(84.44216748768473, 101.22206896551724, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(84.77201970443349, 108.72, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(85.10187192118227, 116.21793103448276, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]'),
Text(85.7615763546798, 131.21379310344827, 'X[2] <= 20.2\ngini = 0.172\nsamples = 21\nv
Text(85.43172413793103, 123.71586206896552, 'gini = 0.0\nsamples = 14\nvalue = [14, 0]
Text(86.09142857142857, 123.71586206896552, 'X[3] <= 240.5\ngini = 0.408\nsamples = 7\n
Text(85.7615763546798, 116.21793103448276, 'gini = 0.0\nsamples = 4\nvalue = [4, 0]'),
Text(86.42128078817734, 116.21793103448276, 'X[28] <= 0.5\ngini = 0.444\nsamples = 3\nv
Text(86.09142857142857, 108.72, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(86.7511330049261, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(88.52408866995074, 138.71172413793101, 'X[3] <= 77.9\ngini = 0.175\nsamples = 62\n
Text(87.57576354679803, 131.21379310344827, 'X[3] <= 74.7\ngini = 0.5\nsamples = 4\nval
Text(87.24591133004925, 123.71586206896552, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(87.90561576354679, 123.71586206896552, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(89.47241379310344, 131.21379310344827, 'X[0] <= 0.5\ngini = 0.128\nsamples = 58\nv
Text(88.56532019704433, 123.71586206896552, 'X[2] <= 19.375\ngini = 0.101\nsamples = 56
Text(87.74068965517242, 116.21793103448276, 'X[3] <= 135.5\ngini = 0.444\nsamples = 3\n
Text(87.41083743842364, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(88.07054187192118, 108.72, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(89.38995073891626, 116.21793103448276, 'X[2] <= 20.9\ngini = 0.073\nsamples = 53\n
Text(88.73024630541872, 108.72, 'X[2] <= 20.225\ngini = 0.042\nsamples = 47\nvalue = [4
Text(88.40039408866996, 101.22206896551724, 'gini = 0.0\nsamples = 30\nvalue = [30, 0]
Text(89.0600985221675, 101.22206896551724, 'X[2] <= 20.275\ngini = 0.111\nsamples = 17\
Text(88.73024630541872, 93.72413793103449, 'X[3] <= 182.325\ngini = 0.375\nsamples = 4\
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Text(88.40039408866996, 86.22620689655173, 'X[5] <= 0.5\ngini = 0.5\nsamples = 2\nvalue
Text(88.07054187192118, 78.72827586206895, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(88.73024630541872, 78.72827586206895, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(89.0600985221675, 86.22620689655173, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(89.38995073891626, 93.72413793103449, 'gini = 0.0\nsamples = 13\nvalue = [13, 0]'
Text(90.0496551724138, 108.72, 'X[9] <= 0.5\ngini = 0.278\nsamples = 6\nvalue = [5, 1]
Text(89.71980295566502, 101.22206896551724, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(90.37950738916255, 101.22206896551724, 'gini = 0.0\nsamples = 5\nvalue = [5, 0]'),
Text(90.37950738916255, 123.71586206896552, 'X[2] <= 20.0\ngini = 0.5\nsamples = 2\nval
Text(90.0496551724138, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(90.70935960591133, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(91.36906403940887, 146.2096551724138, 'X[2] <= 25.675\ngini = 0.103\nsamples = 55\
Text(91.03921182266009, 138.71172413793101, 'X[1] <= 14.5\ngini = 0.071\nsamples = 54\n
Text(90.70935960591133, 131.21379310344827, 'gini = 0.0\nsamples = 47\nvalue = [47, 0]
Text(91.36906403940887, 131.21379310344827, 'X[3] <= 298.725\ngini = 0.408\nsamples = 7
Text(91.03921182266009, 123.71586206896552, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(91.69891625615763, 123.71586206896552, 'X[2] <= 19.75\ngini = 0.278\nsamples = 6\n
Text(91.36906403940887, 116.21793103448276, 'X[5] <= 0.5\ngini = 0.5\nsamples = 2\nvalu
Text(91.03921182266009, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(91.69891625615763, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(92.0287684729064, 116.21793103448276, 'gini = 0.0\nsamples = 4\nvalue = [4, 0]'),
Text(91.69891625615763, 138.71172413793101, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(86.7459790640394, 161.2055172413793, 'gini = 0.0\nsamples = 50\nvalue = [50, 0]'),
Text(92.35862068965517, 168.70344827586206, 'X[26] <= 0.5\ngini = 0.026\nsamples = 75\n
Text(92.0287684729064, 161.2055172413793, 'gini = 0.0\nsamples = 59\nvalue = [59, 0]'),
Text(92.68847290640394, 161.2055172413793, 'X[3] <= 153.475\ngini = 0.117\nsamples = 16
Text(92.35862068965517, 153.70758620689656, 'X[2] <= 19.975\ngini = 0.444\nsamples = 3\
Text(92.0287684729064, 146.2096551724138, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(92.68847290640394, 146.2096551724138, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(93.0183251231527, 153.70758620689656, 'gini = 0.0\nsamples = 13\nvalue = [13, 0]'
Text(90.04707820197044, 176.20137931034483, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(123.82858374384236, 198.6951724137931, 'X[3] <= 120.0\ngini = 0.438\nsamples = 909
Text(104.80023399014779, 191.19724137931036, 'X[19] <= 0.5\ngini = 0.228\nsamples = 198
Text(102.5634236453202, 183.69931034482758, 'X[2] <= 69.875\ngini = 0.211\nsamples = 19
Text(102.23357142857142, 176.20137931034483, 'gini = 0.0\nsamples = 34\nvalue = [0, 34]
Text(102.89327586206896, 176.20137931034483, 'X[3] <= 74.375\ngini = 0.249\nsamples = 1
Text(99.4092118226601, 168.70344827586206, 'X[0] <= 0.5\ngini = 0.375\nsamples = 56\nva
Text(96.2343842364532, 161.2055172413793, 'X[27] <= 0.5\ngini = 0.326\nsamples = 39\nva
Text(95.57467980295566, 153.70758620689656, 'X[6] <= 0.5\ngini = 0.307\nsamples = 37\nv
Text(95.2448275862069, 146.2096551724138, 'X[3] <= 70.325\ngini = 0.358\nsamples = 30\n
Text(94.007881773399, 138.71172413793101, 'X[3] <= 70.125\ngini = 0.245\nsamples = 14\n
Text(93.67802955665024, 131.21379310344827, 'X[2] <= 70.075\ngini = 0.346\nsamples = 9\
Text(93.0183251231527, 123.71586206896552, 'X[3] <= 69.925\ngini = 0.245\nsamples = 7\n
Text(92.68847290640394, 116.21793103448276, 'gini = 0.444\nsamples = 3\nvalue = [1, 2]
Text(93.34817733990148, 116.21793103448276, 'gini = 0.0\nsamples = 4\nvalue = [0, 4]'),
Text(94.33773399014778, 123.71586206896552, 'X[26] <= 0.5\ngini = 0.5\nsamples = 2\nval
Text(94.007881773399, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(94.66758620689654, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(94.33773399014778, 131.21379310344827, 'gini = 0.0\nsamples = 5\nvalue = [0, 5]'),
Text(96.48177339901477, 138.71172413793101, 'X[3] <= 70.375\ngini = 0.43\nsamples = 16\
Text(96.15192118226601, 131.21379310344827, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(96.81162561576355, 131.21379310344827, 'X[29] <= 0.5\ngini = 0.391\nsamples = 15\n
Text(95.65714285714286, 123.71586206896552, 'X[2] <= 73.925\ngini = 0.245\nsamples = 7\
Text(95.32729064039408, 116.21793103448276, 'gini = 0.0\nsamples = 5\nvalue = [0, 5]'),
Text(95.98699507389162, 116.21793103448276, 'X[26] <= 0.5\ngini = 0.5\nsamples = 2\nval
Text(95.65714285714286, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(96.3168472906404, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
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Text(97.96610837438423, 123.71586206896552, 'X[2] <= 70.725\ngini = 0.469\nsamples = 8\
Text(97.3064039408867, 116.21793103448276, 'X[26] <= 0.5\ngini = 0.444\nsamples = 3\nva
Text(96.97655172413793, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(97.63625615763547, 108.72, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(98.62581280788177, 116.21793103448276, 'X[2] <= 71.0\ngini = 0.32\nsamples = 5\nva
Text(98.29596059113301, 108.72, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]'),
Text(98.95566502463053, 108.72, 'X[3] <= 72.675\ngini = 0.5\nsamples = 2\nvalue = [1, 1
Text(98.62581280788177, 101.22206896551724, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(99.28551724137931, 101.22206896551724, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(95.90453201970443, 146.2096551724138, 'gini = 0.0\nsamples = 7\nvalue = [0, 7]'),
Text(96.89408866995073, 153.70758620689656, 'X[6] <= 0.5\ngini = 0.5\nsamples = 2\nvalu
Text(96.56423645320197, 146.2096551724138, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(97.22394088669951, 146.2096551724138, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(102.584039408867, 161.2055172413793, 'X[3] <= 74.25\ngini = 0.457\nsamples = 17\nv
Text(102.25418719211822, 153.70758620689656, 'X[5] <= 0.5\ngini = 0.43\nsamples = 16\nv
Text(101.92433497536946, 146.2096551724138, 'X[2] <= 72.875\ngini = 0.486\nsamples = 12
Text(101.59448275862069, 138.71172413793101, 'X[3] <= 71.2\ngini = 0.5\nsamples = 10\nv
Text(101.26463054187192, 131.21379310344827, 'X[4] <= 0.5\ngini = 0.469\nsamples = 8\nv
Text(100.93477832512315, 123.71586206896552, 'X[29] <= 0.5\ngini = 0.408\nsamples = 7\n
Text(100.60492610837439, 116.21793103448276, 'X[2] <= 70.375\ngini = 0.278\nsamples = 6
Text(100.27507389162561, 108.72, 'X[2] <= 70.175\ngini = 0.444\nsamples = 3\nvalue = [1
Text(99.94522167487685, 101.22206896551724, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(100.60492610837439, 101.22206896551724, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
Text(100.93477832512315, 108.72, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]'),
Text(101.26463054187192, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
Text(101.59448275862069, 123.71586206896552, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
Text(101.92433497536946, 131.21379310344827, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]')
Text(102.25418719211822, 138.71172413793101, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]')
Text(102.584039408867, 146.2096551724138, 'gini = 0.0\nsamples = 4\nvalue = [0, 4]'),
Text(102.91389162561576, 153.70758620689656, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
Text(106.37733990147782, 168.70344827586206, 'X[0] <= 0.5\ngini = 0.161\nsamples = 102\
Text(106.04748768472906, 161.2055172413793, 'X[5] <= 0.5\ngini = 0.204\nsamples = 78\nv
Text(104.89300492610838, 153.70758620689656, 'X[2] <= 89.575\ngini = 0.165\nsamples = 6
Text(104.5631527093596, 146.2096551724138, 'X[3] <= 89.175\ngini = 0.201\nsamples = 53\
Text(104.23330049261084, 138.71172413793101, 'X[9] <= 0.5\ngini = 0.174\nsamples = 52\n
Text(102.91389162561576, 131.21379310344827, 'X[2] <= 75.625\ngini = 0.108\nsamples = 3
Text(102.25418719211822, 123.71586206896552, 'X[2] <= 75.45\ngini = 0.245\nsamples = 7\
Text(101.92433497536946, 116.21793103448276, 'gini = 0.0\nsamples = 6\nvalue = [0, 6]')
Text(102.584039408867, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(103.5735960591133, 123.71586206896552, 'X[2] <= 80.525\ngini = 0.069\nsamples = 28
Text(103.24374384236452, 116.21793103448276, 'gini = 0.0\nsamples = 15\nvalue = [0, 15]
Text(103.90344827586206, 116.21793103448276, 'X[3] <= 80.675\ngini = 0.142\nsamples = 1
Text(103.5735960591133, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(104.23330049261084, 108.72, 'gini = 0.0\nsamples = 12\nvalue = [0, 12]'),
Text(105.55270935960591, 131.21379310344827, 'X[2] <= 75.075\ngini = 0.291\nsamples = 1
Text(105.22285714285714, 123.71586206896552, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]')
Text(105.88256157635468, 123.71586206896552, 'X[2] <= 75.2\ngini = 0.337\nsamples = 14\
Text(105.22285714285714, 116.21793103448276, 'X[4] <= 0.5\ngini = 0.5\nsamples = 2\nval
Text(104.89300492610838, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(105.55270935960591, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(106.54226600985221, 116.21793103448276, 'X[4] <= 0.5\ngini = 0.278\nsamples = 12\n
Text(106.21241379310345, 108.72, 'X[3] <= 82.4\ngini = 0.444\nsamples = 6\nvalue = [2,
Text(105.88256157635468, 101.22206896551724, 'X[15] <= 0.5\ngini = 0.32\nsamples = 5\nv
Text(105.55270935960591, 93.72413793103449, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]'),
Text(106.21241379310345, 93.72413793103449, 'X[3] <= 79.675\ngini = 0.5\nsamples = 2\nv
Text(105.88256157635468, 86.22620689655173, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(106.54226600985221, 86.22620689655173, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(106.54226600985221, 101.22206896551724, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
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Text(106.87211822660099, 108.72, 'gini = 0.0\nsamples = 6\nvalue = [0, 6]'),
Text(104.89300492610838, 138.71172413793101, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
Text(105.22285714285714, 146.2096551724138, 'gini = 0.0\nsamples = 13\nvalue = [0, 13]
Text(107.20197044334975, 153.70758620689656, 'X[27] <= 0.5\ngini = 0.375\nsamples = 12\
Text(106.87211822660099, 146.2096551724138, 'X[3] <= 80.8\ngini = 0.298\nsamples = 11\n
Text(106.54226600985221, 138.71172413793101, 'gini = 0.0\nsamples = 6\nvalue = [0, 6]')
Text(107.20197044334975, 138.71172413793101, 'X[3] <= 92.55\ngini = 0.48\nsamples = 5\n
Text(106.87211822660099, 131.21379310344827, 'X[26] <= 0.5\ngini = 0.444\nsamples = 3\n
Text(106.54226600985221, 123.71586206896552, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(107.20197044334975, 123.71586206896552, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]')
Text(107.53182266009853, 131.21379310344827, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]')
Text(107.53182266009853, 146.2096551724138, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(106.7071921182266, 161.2055172413793, 'gini = 0.0\nsamples = 24\nvalue = [0, 24]')
Text(107.03704433497536, 183.69931034482758, 'X[3] <= 75.1\ngini = 0.5\nsamples = 6\nva
Text(106.7071921182266, 176.20137931034483, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(107.36689655172414, 176.20137931034483, 'X[2] <= 93.775\ngini = 0.375\nsamples = 4
Text(107.03704433497536, 168.70344827586206, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]')
Text(107.6967487684729, 168.70344827586206, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(142.85693349753694, 191.19724137931036, 'X[9] <= 0.5\ngini = 0.47\nsamples = 711\n
Text(123.9187777093596, 183.69931034482758, 'X[2] <= 76.55\ngini = 0.497\nsamples = 369
Text(113.46916256157635, 176.20137931034483, 'X[3] <= 350.575\ngini = 0.491\nsamples =
Text(110.33556650246305, 168.70344827586206, 'X[2] <= 69.45\ngini = 0.499\nsamples = 59
Text(110.00571428571429, 161.2055172413793, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]'),
Text(110.66541871921181, 161.2055172413793, 'X[3] <= 321.15\ngini = 0.494\nsamples = 56
Text(110.33556650246305, 153.70758620689656, 'X[29] <= 0.5\ngini = 0.5\nsamples = 51\nv
Text(110.00571428571429, 146.2096551724138, 'X[2] <= 71.1\ngini = 0.494\nsamples = 47\n
Text(108.52137931034483, 138.71172413793101, 'X[3] <= 127.725\ngini = 0.451\nsamples =
Text(108.19152709359605, 131.21379310344827, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]')
Text(108.85123152709359, 131.21379310344827, 'X[3] <= 276.675\ngini = 0.42\nsamples = 3
Text(108.19152709359605, 123.71586206896552, 'X[3] <= 202.275\ngini = 0.33\nsamples = 2
Text(107.86167487684729, 116.21793103448276, 'X[26] <= 0.5\ngini = 0.444\nsamples = 15\
Text(107.53182266009853, 108.72, 'gini = 0.0\nsamples = 6\nvalue = [0, 6]'),
Text(108.19152709359605, 108.72, 'X[0] <= 0.5\ngini = 0.494\nsamples = 9\nvalue = [5, 4
Text(107.86167487684729, 101.22206896551724, 'X[2] <= 70.5\ngini = 0.408\nsamples = 7\n
Text(107.53182266009853, 93.72413793103449, 'X[3] <= 134.95\ngini = 0.278\nsamples = 6\
Text(107.20197044334975, 86.22620689655173, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(107.86167487684729, 86.22620689655173, 'gini = 0.0\nsamples = 5\nvalue = [5, 0]'),
Text(108.19152709359605, 93.72413793103449, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(108.52137931034483, 101.22206896551724, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]')
Text(108.52137931034483, 116.21793103448276, 'gini = 0.0\nsamples = 9\nvalue = [0, 9]')
Text(109.51093596059113, 123.71586206896552, 'X[5] <= 0.5\ngini = 0.444\nsamples = 6\nv
Text(109.18108374384236, 116.21793103448276, 'X[2] <= 70.525\ngini = 0.444\nsamples = 3
Text(108.85123152709359, 108.72, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(109.51093596059113, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(109.84078881773399, 116.21793103448276, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]'),
Text(111.49004926108374, 138.71172413793101, 'X[2] <= 75.325\ngini = 0.444\nsamples = 1
Text(111.16019704433498, 131.21379310344827, 'X[2] <= 74.425\ngini = 0.355\nsamples = 1
Text(110.8303448275862, 123.71586206896552, 'X[2] <= 73.875\ngini = 0.469\nsamples = 8\
Text(110.50049261083744, 116.21793103448276, 'X[15] <= 0.5\ngini = 0.278\nsamples = 6\n
Text(110.17064039408866, 108.72, 'gini = 0.0\nsamples = 4\nvalue = [4, 0]'),
Text(110.8303448275862, 108.72, 'X[6] <= 0.5\ngini = 0.5\nsamples = 2\nvalue = [1, 1]')
Text(110.50049261083744, 101.22206896551724, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
Text(111.16019704433498, 101.22206896551724, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(111.16019704433498, 116.21793103448276, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]')
Text(111.49004926108374, 123.71586206896552, 'gini = 0.0\nsamples = 5\nvalue = [5, 0]')
Text(111.81990147783252, 131.21379310344827, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]')
Text(110.66541871921181, 146.2096551724138, 'gini = 0.0\nsamples = 4\nvalue = [4, 0]'),
Text(110.99527093596059, 153.70758620689656, 'gini = 0.0\nsamples = 5\nvalue = [0, 5]')
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Text(116.60275862068966, 168.70344827586206, 'X[5] <= 0.5\ngini = 0.459\nsamples = 73\r
Text(115.11842364532019, 161.2055172413793, 'X[1] <= 9.5\ngini = 0.385\nsamples = 50\nv
Text(113.46916256157635, 153.70758620689656, 'X[0] <= 0.5\ngini = 0.278\nsamples = 30\r
Text(112.47960591133005, 146.2096551724138, 'X[29] <= 0.5\ngini = 0.165\nsamples = 22\r
Text(112.14975369458128, 138.71172413793101, 'gini = 0.0\nsamples = 16\nvalue = [16, 0]
Text(112.80945812807882, 138.71172413793101, 'X[2] <= 69.575\ngini = 0.444\nsamples = 6
Text(112.47960591133005, 131.21379310344827, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(113.13931034482758, 131.21379310344827, 'X[17] <= 0.5\ngini = 0.32\nsamples = 5\nv
Text(112.80945812807882, 123.71586206896552, 'gini = 0.0\nsamples = 4\nvalue = [4, 0]')
Text(113.46916256157635, 123.71586206896552, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(114.45871921182265, 146.2096551724138, 'X[28] <= 0.5\ngini = 0.469\nsamples = 8\nv
Text(114.12886699507389, 138.71172413793101, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]')
Text(114.78857142857143, 138.71172413793101, 'X[2] <= 74.25\ngini = 0.48\nsamples = 5\r
Text(114.45871921182265, 131.21379310344827, 'X[13] <= 0.5\ngini = 0.444\nsamples = 3\r
Text(114.12886699507389, 123.71586206896552, 'X[3] <= 566.85\ngini = 0.5\nsamples = 2\r
Text(113.79901477832512, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(114.45871921182265, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
Text(114.78857142857143, 123.71586206896552, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
Text(115.11842364532019, 131.21379310344827, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]')
Text(116.76768472906404, 153.70758620689656, 'X[3] <= 1034.625\ngini = 0.48\nsamples =
Text(116.43783251231527, 146.2096551724138, 'X[29] <= 0.5\ngini = 0.498\nsamples = 15\r
Text(116.1079802955665, 138.71172413793101, 'X[4] <= 0.5\ngini = 0.444\nsamples = 12\nv
Text(115.77812807881773, 131.21379310344827, 'gini = 0.0\nsamples = 4\nvalue = [0, 4]')
Text(116.43783251231527, 131.21379310344827, 'X[26] <= 0.5\ngini = 0.5\nsamples = 8\nva
Text(116.1079802955665, 123.71586206896552, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(116.76768472906404, 123.71586206896552, 'X[1] <= 12.0\ngini = 0.444\nsamples = 6\r
Text(116.43783251231527, 116.21793103448276, 'gini = 0.0\nsamples = 4\nvalue = [0, 4]')
Text(117.0975369458128, 116.21793103448276, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(116.76768472906404, 138.71172413793101, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]')
Text(117.0975369458128, 146.2096551724138, 'gini = 0.0\nsamples = 5\nvalue = [5, 0]'),
Text(118.0870935960591, 161.2055172413793, 'X[3] <= 414.475\ngini = 0.491\nsamples = 23
Text(117.75724137931034, 153.70758620689656, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]')
Text(118.41694581280788, 153.70758620689656, 'X[3] <= 640.225\ngini = 0.472\nsamples =
Text(117.75724137931034, 146.2096551724138, 'X[2] <= 69.275\ngini = 0.219\nsamples = 8\
Text(117.42738916256157, 138.71172413793101, 'X[2] <= 69.1\ngini = 0.5\nsamples = 2\nva
Text(117.0975369458128, 131.21379310344827, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(117.75724137931034, 131.21379310344827, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
Text(118.0870935960591, 138.71172413793101, 'gini = 0.0\nsamples = 6\nvalue = [0, 6]'),
Text(119.07665024630542, 146.2096551724138, 'X[26] <= 0.5\ngini = 0.497\nsamples = 13\r
Text(118.74679802955664, 138.71172413793101, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]')
Text(119.40650246305418, 138.71172413793101, 'X[2] <= 69.35\ngini = 0.48\nsamples = 10\
Text(119.07665024630542, 131.21379310344827, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
Text(119.73635467980296, 131.21379310344827, 'X[2] <= 74.65\ngini = 0.444\nsamples = 9\
Text(119.07665024630542, 123.71586206896552, 'X[2] <= 70.25\ngini = 0.278\nsamples = 6\
Text(118.74679802955664, 116.21793103448276, 'X[2] <= 70.175\ngini = 0.444\nsamples = 3
Text(118.41694581280788, 108.72, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(119.07665024630542, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(119.40650246305418, 116.21793103448276, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]')
Text(120.3960591133005, 123.71586206896552, 'X[17] <= 0.5\ngini = 0.444\nsamples = 3\nv
Text(120.06620689655172, 116.21793103448276, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]')
Text(120.72591133004926, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(134.36839285714285, 176.20137931034483, 'X[3] <= 755.6\ngini = 0.48\nsamples = 237
Text(130.19885467980296, 168.70344827586206, 'X[2] <= 100.075\ngini = 0.444\nsamples =
Text(129.8690024630542, 161.2055172413793, 'X[2] <= 94.125\ngini = 0.434\nsamples = 138
Text(127.38480295566502, 153.70758620689656, 'X[2] <= 89.8\ngini = 0.462\nsamples = 113
Text(125.05522167487685, 146.2096551724138, 'X[2] <= 79.925\ngini = 0.433\nsamples = 98
Text(122.3751724137931, 138.71172413793101, 'X[6] <= 0.5\ngini = 0.278\nsamples = 24\nv
```

```
Text(122.04532019704433, 131.21379310344827, 'X[13] <= 0.5\ngini = 0.227\nsamples = 23'
Text(121.71546798029557, 123.71586206896552, 'X[0] <= 0.5\ngini = 0.165\nsamples = 22\n
Text(121.3856157635468, 116.21793103448276, 'gini = 0.0\nsamples = 16\nvalue = [0, 16]
Text(122.04532019704433, 116.21793103448276, 'X[1] <= 5.5\ngini = 0.444\nsamples = 6\nv
Text(121.71546798029557, 108.72, 'gini = 0.0\nsamples = 4\nvalue = [0, 4]'),
Text(122.3751724137931, 108.72, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(122.3751724137931, 123.71586206896552, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(122.70502463054187, 131.21379310344827, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
Text(127.73527093596059, 138.71172413793101, 'X[2] <= 80.05\ngini = 0.463\nsamples = 74
Text(127.40541871921182, 131.21379310344827, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]')
Text(128.06512315270936, 131.21379310344827, 'X[5] <= 0.5\ngini = 0.448\nsamples = 71\n
Text(126.16847290640393, 123.71586206896552, 'X[0] <= 0.5\ngini = 0.484\nsamples = 51\n
Text(124.35428571428571, 116.21793103448276, 'X[17] <= 0.5\ngini = 0.439\nsamples = 40\
Text(123.03487684729063, 108.72, 'X[29] <= 0.5\ngini = 0.375\nsamples = 32\nvalue = [8,
Text(122.04532019704433, 101.22206896551724, 'X[2] <= 80.525\ngini = 0.252\nsamples = 2
Text(121.05576354679803, 93.72413793103449, 'X[3] <= 206.725\ngini = 0.469\nsamples = 8
Text(120.72591133004926, 86.22620689655173, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]'),
Text(121.3856157635468, 86.22620689655173, 'X[1] <= 5.5\ngini = 0.48\nsamples = 5\nvalu
Text(121.05576354679803, 78.72827586206895, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]'),
Text(121.71546798029557, 78.72827586206895, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(123.03487684729063, 93.72413793103449, 'X[26] <= 0.5\ngini = 0.1\nsamples = 19\nva
Text(122.70502463054187, 86.22620689655173, 'X[4] <= 0.5\ngini = 0.278\nsamples = 6\nva
Text(122.3751724137931, 78.72827586206895, 'gini = 0.0\nsamples = 5\nvalue = [0, 5]'),
Text(123.03487684729063, 78.72827586206895, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(123.36472906403941, 86.22620689655173, 'gini = 0.0\nsamples = 13\nvalue = [0, 13]
Text(124.02443349753695, 101.22206896551724, 'X[1] <= 6.5\ngini = 0.32\nsamples = 5\nva
Text(123.69458128078817, 93.72413793103449, 'gini = 0.0\nsamples = 4\nvalue = [4, 0]'),
Text(124.35428571428571, 93.72413793103449, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(125.67369458128078, 108.72, 'X[29] <= 0.5\ngini = 0.469\nsamples = 8\nvalue = [5,
Text(125.34384236453202, 101.22206896551724, 'X[2] <= 80.275\ngini = 0.408\nsamples = 7
Text(125.01399014778325, 93.72413793103449, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(125.67369458128078, 93.72413793103449, 'X[3] <= 492.3\ngini = 0.278\nsamples = 6\n
Text(125.34384236453202, 86.22620689655173, 'gini = 0.0\nsamples = 4\nvalue = [4, 0]'),
Text(126.00354679802956, 86.22620689655173, 'X[23] <= 0.5\ngini = 0.5\nsamples = 2\nval
Text(125.67369458128078, 78.72827586206895, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(126.33339901477832, 78.72827586206895, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(126.00354679802956, 101.22206896551724, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(127.98266009852216, 116.21793103448276, 'X[3] <= 732.625\ngini = 0.397\nsamples =
Text(127.6528078817734, 108.72, 'X[15] <= 0.5\ngini = 0.32\nsamples = 10\nvalue = [8, 2
Text(127.32295566502462, 101.22206896551724, 'X[3] <= 535.7\ngini = 0.444\nsamples = 6\
Text(126.99310344827586, 93.72413793103449, 'X[29] <= 0.5\ngini = 0.444\nsamples = 3\nv
Text(126.66325123152708, 86.22620689655173, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(127.32295566502462, 86.22620689655173, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(127.6528078817734, 93.72413793103449, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]'),
Text(127.98266009852216, 101.22206896551724, 'gini = 0.0\nsamples = 4\nvalue = [4, 0]')
Text(128.31251231527094, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(129.9617733990148, 123.71586206896552, 'X[2] <= 80.975\ngini = 0.255\nsamples = 20
Text(129.30206896551724, 116.21793103448276, 'X[2] <= 80.575\ngini = 0.444\nsamples = 6
Text(128.97221674876846, 108.72, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]'),
Text(129.631921182266, 108.72, 'X[23] <= 0.5\ngini = 0.444\nsamples = 3\nvalue = [2, 1]
Text(129.30206896551724, 101.22206896551724, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]')
Text(129.9617733990148, 101.22206896551724, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(130.6214778325123, 116.21793103448276, 'X[3] <= 596.275\ngini = 0.133\nsamples = 1
Text(130.29162561576354, 108.72, 'gini = 0.0\nsamples = 10\nvalue = [0, 10]'),
Text(130.9513300492611, 108.72, 'X[3] <= 607.125\ngini = 0.375\nsamples = 4\nvalue = [1
Text(130.6214778325123, 101.22206896551724, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(131.28118226600986, 101.22206896551724, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]')
Text(129.7143842364532, 146.2096551724138, 'X[3] <= 442.125\ngini = 0.444\nsamples = 15
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Text(129.05467980295566, 138.71172413793101, 'X[27] <= 0.5\ngini = 0.18\nsamples = 10\r
Text(128.72482758620689, 131.21379310344827, 'gini = 0.0\nsamples = 9\nvalue = [9, 0]')
Text(129.38453201970444, 131.21379310344827, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(130.37408866995074, 138.71172413793101, 'X[28] <= 0.5\ngini = 0.32\nsamples = 5\nv
Text(130.04423645320196, 131.21379310344827, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
Text(130.7039408866995, 131.21379310344827, 'gini = 0.0\nsamples = 4\nvalue = [0, 4]'),
Text(132.35320197044334, 153.70758620689656, 'X[3] <= 432.625\ngini = 0.211\nsamples =
Text(132.0233497536946, 146.2096551724138, 'X[3] <= 409.35\ngini = 0.375\nsamples = 12\
Text(131.6934975369458, 138.71172413793101, 'X[26] <= 0.5\ngini = 0.298\nsamples = 11\r
Text(131.36364532019704, 131.21379310344827, 'X[3] <= 181.125\ngini = 0.5\nsamples = 4\
Text(131.03379310344826, 123.71586206896552, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]')
Text(131.6934975369458, 123.71586206896552, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(132.0233497536946, 131.21379310344827, 'gini = 0.0\nsamples = 7\nvalue = [0, 7]'),
Text(132.35320197044334, 138.71172413793101, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
Text(132.6830541871921, 146.2096551724138, 'gini = 0.0\nsamples = 13\nvalue = [0, 13]')
Text(130.5287068965517, 161.2055172413793, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]'),
Text(138.53793103448277, 168.70344827586206, 'X[3] <= 1045.75\ngini = 0.5\nsamples = 96
Text(135.23940886699506, 161.2055172413793, 'X[3] <= 791.075\ngini = 0.469\nsamples = 4
Text(134.90955665024632, 153.70758620689656, 'gini = 0.0\nsamples = 5\nvalue = [5, 0]')
Text(135.56926108374384, 153.70758620689656, 'X[3] <= 869.375\ngini = 0.487\nsamples =
Text(133.6726108374384, 146.2096551724138, 'X[3] <= 835.3\ngini = 0.444\nsamples = 15\r
Text(133.0129064039409, 138.71172413793101, 'X[3] <= 810.7\ngini = 0.444\nsamples = 6\r
Text(132.6830541871921, 131.21379310344827, 'X[1] <= 10.5\ngini = 0.444\nsamples = 3\nv
Text(132.35320197044334, 123.71586206896552, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]')
Text(133.0129064039409, 123.71586206896552, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(133.34275862068966, 131.21379310344827, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]')
Text(134.33231527093596, 138.71172413793101, 'X[27] <= 0.5\ngini = 0.198\nsamples = 9\r
Text(134.0024630541872, 131.21379310344827, 'gini = 0.0\nsamples = 7\nvalue = [0, 7]'),
Text(134.66216748768474, 131.21379310344827, 'X[2] <= 89.85\ngini = 0.5\nsamples = 2\nv
Text(134.33231527093596, 123.71586206896552, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(134.9920197044335, 123.71586206896552, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(137.46591133004927, 146.2096551724138, 'X[2] <= 94.525\ngini = 0.408\nsamples = 28
Text(136.64128078817734, 138.71172413793101, 'X[0] <= 0.5\ngini = 0.33\nsamples = 24\nv
Text(135.9815763546798, 131.21379310344827, 'X[2] <= 78.2\ngini = 0.198\nsamples = 18\r
Text(135.65172413793104, 123.71586206896552, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(136.31142857142856, 123.71586206896552, 'X[1] <= 12.5\ngini = 0.111\nsamples = 17\
Text(135.9815763546798, 116.21793103448276, 'gini = 0.0\nsamples = 13\nvalue = [13, 0]
Text(136.64128078817734, 116.21793103448276, 'X[3] <= 1010.25\ngini = 0.375\nsamples =
Text(136.31142857142856, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(136.97113300492612, 108.72, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]'),
Text(137.30098522167486, 131.21379310344827, 'X[28] <= 0.5\ngini = 0.5\nsamples = 6\nva
Text(136.97113300492612, 123.71586206896552, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]')
Text(137.63083743842364, 123.71586206896552, 'X[2] <= 79.65\ngini = 0.375\nsamples = 4\
Text(137.30098522167486, 116.21793103448276, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]')
Text(137.96068965517242, 116.21793103448276, 'X[23] <= 0.5\ngini = 0.5\nsamples = 2\nva
Text(137.63083743842364, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(138.2905418719212, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(138.2905418719212, 138.71172413793101, 'X[6] <= 0.5\ngini = 0.375\nsamples = 4\nva
Text(137.96068965517242, 131.21379310344827, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]')
Text(138.62039408866994, 131.21379310344827, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
Text(141.83645320197044, 161.2055172413793, 'X[5] <= 0.5\ngini = 0.469\nsamples = 48\nv
Text(140.76443349753694, 153.70758620689656, 'X[24] <= 0.5\ngini = 0.383\nsamples = 31\
Text(140.43458128078817, 146.2096551724138, 'X[23] <= 0.5\ngini = 0.328\nsamples = 29\r
Text(139.60995073891624, 138.71172413793101, 'X[28] <= 0.5\ngini = 0.5\nsamples = 6\nva
Text(139.2800985221675, 131.21379310344827, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(139.93980295566502, 131.21379310344827, 'X[4] <= 0.5\ngini = 0.375\nsamples = 4\nv
Text(139.60995073891624, 123.71586206896552, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]')
Text(140.2696551724138, 123.71586206896552, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
```
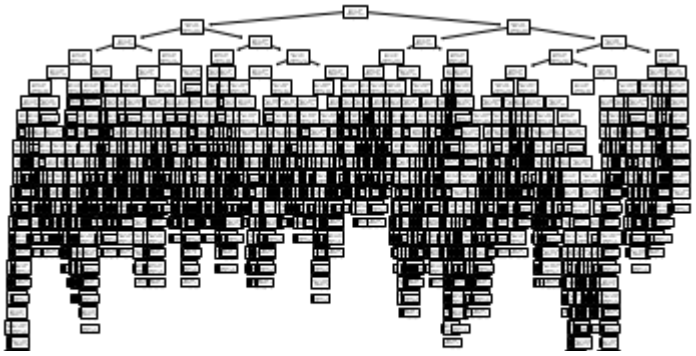

```
Text(141.2592118226601, 138.71172413793101, 'X[3] <= 1218.35\ngini = 0.227\nsamples = 2
Text(140.92935960591132, 131.21379310344827, 'gini = 0.0\nsamples = 12\nvalue = [0, 12]
Text(141.58906403940887, 131.21379310344827, 'X[1] <= 14.5\ngini = 0.397\nsamples = 11\
Text(140.92935960591132, 123.71586206896552, 'X[2] <= 91.675\ngini = 0.444\nsamples = 3
Text(140.59950738916257, 116.21793103448276, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(141.2592118226601, 116.21793103448276, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(142.2487684729064, 123.71586206896552, 'X[2] <= 94.125\ngini = 0.219\nsamples = 8\
Text(141.91891625615764, 116.21793103448276, 'X[15] <= 0.5\ngini = 0.5\nsamples = 2\nva
Text(141.58906403940887, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(142.2487684729064, 108.72, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(142.57862068965517, 116.21793103448276, 'gini = 0.0\nsamples = 6\nvalue = [0, 6]')
Text(141.09428571428572, 146.2096551724138, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(142.90847290640394, 153.70758620689656, 'X[3] <= 1445.7\ngini = 0.484\nsamples = 1
Text(142.57862068965517, 146.2096551724138, 'X[2] <= 82.475\ngini = 0.486\nsamples = 12
Text(142.2487684729064, 138.71172413793101, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]'),
Text(142.90847290640394, 138.71172413793101, 'X[2] <= 92.15\ngini = 0.346\nsamples = 9\
Text(142.57862068965517, 131.21379310344827, 'gini = 0.0\nsamples = 5\nvalue = [0, 5]')
Text(143.23832512315272, 131.21379310344827, 'X[2] <= 97.5\ngini = 0.5\nsamples = 4\nva
Text(142.90847290640394, 123.71586206896552, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]')
Text(143.56817733990147, 123.71586206896552, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]')
...]
```



```
tree.plot_tree(dtree.fit(X_test,y_test), fontsize=7)
```

```
[Text(159.16678189817725, 212.004, 'X[1] <= -0.61\ngini = 0.394\nsamples = 1196\nvalue =
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Text(29.03984915147706, 168.516, 'X[28] <= 0.352\ngini = 0.086\nsamples = 67\nvalue =
Text(25.672910119421747, 157.644, 'X[29] <= 0.63\ngini = 0.033\nsamples = 59\nvalue =
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Text(110.89855436832181, 27.180000000000007, 'X[29] <= 0.63\ngini = 0.444\nsamples = 3\
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Text(112.58202388434947, 16.307999999999993, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
Text(112.58202388434947, 38.05199999999999, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]'),
Text(114.26549340037712, 48.92400000000001, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(114.26549340037712, 70.668, 'gini = 0.0\nsamples = 6\nvalue = [6, 0]'),
Text(115.94896291640478, 81.53999999999999, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(125.6289126335638, 92.412, 'X[2] <= 0.702\ngini = 0.493\nsamples = 41\nvalue = [18
Text(119.3159019484601, 81.53999999999999, 'X[1] <= -0.774\ngini = 0.245\nsamples = 14\
Text(117.63243243243244, 70.668, 'gini = 0.0\nsamples = 11\nvalue = [0, 11]'),
Text(120.99937146448775, 70.668, 'X[26] <= -0.186\ngini = 0.444\nsamples = 3\nvalue =
Text(119.3159019484601, 59.79599999999999, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(122.68284098051541, 59.79599999999999, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(131.9419233186675, 81.53999999999999, 'X[2] <= 0.823\ngini = 0.483\nsamples = 27\r
Text(127.73324952859836, 70.668, 'X[3] <= -0.671\ngini = 0.198\nsamples = 9\nvalue = [8
Text(126.04978001257071, 59.79599999999999, 'X[9] <= 0.161\ngini = 0.5\nsamples = 2\nva
Text(124.36631049654305, 48.92400000000001, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(127.73324952859836, 48.92400000000001, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(129.41671904462603, 59.79599999999999, 'gini = 0.0\nsamples = 7\nvalue = [7, 0]'),
Text(136.15059710873663, 70.668, 'X[29] <= 0.63\ngini = 0.494\nsamples = 18\nvalue = [8
Text(134.467127592709, 59.79599999999999, 'X[2] <= 0.975\ngini = 0.498\nsamples = 15\nv
Text(131.1001885606537, 48.92400000000001, 'X[2] <= 0.848\ngini = 0.32\nsamples = 5\nva
Text(129.41671904462603, 38.05199999999999, 'X[21] <= 0.24\ngini = 0.5\nsamples = 2\nva
Text(127.73324952859836, 27.180000000000007, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(131.1001885606537, 27.180000000000007, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(132.78365807668135, 38.05199999999999, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]'),
Text(137.8340666247643, 48.92400000000001, 'X[0] <= 0.915\ngini = 0.42\nsamples = 10\nv
Text(136.15059710873663, 38.05199999999999, 'X[4] <= -0.011\ngini = 0.346\nsamples = 9\
Text(134.467127592709, 27.180000000000007, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(137.8340666247643, 27.180000000000007, 'X[3] <= -0.553\ngini = 0.219\nsamples = 8\
Text(136.15059710873663, 16.307999999999993, 'gini = 0.0\nsamples = 5\nvalue = [5, 0]')
Text(139.51753614079195, 16.307999999999993, 'X[26] <= -0.186\ngini = 0.444\nsamples =
Text(137.8340666247643, 5.436000000000007, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(141.2010056568196, 5.436000000000007, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(139.51753614079195, 38.05199999999999, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(137.8340666247643, 59.79599999999999, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]'),
Text(123.31414204902578, 103.28399999999999, 'gini = 0.0\nsamples = 4\nvalue = [0, 4]')
Text(128.36455059710875, 114.156, 'X[26] <= -0.186\ngini = 0.245\nsamples = 7\nvalue =
Text(126.68108108108109, 103.28399999999999, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
```

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Text(130.0480201131364, 103.28399999999999, 'gini = 0.0\nsamples = 6\nvalue = [6, 0]'),
Text(131.73148962916406, 135.9, 'X[2] <= 1.228\ngini = 0.308\nsamples = 21\nvalue = [4,
Text(130.0480201131364, 125.02799999999999, 'gini = 0.0\nsamples = 14\nvalue = [0, 14]
Text(133.41495914519172, 125.02799999999999, 'X[2] <= 1.275\ngini = 0.49\nsamples = 7\n
Text(131.73148962916406, 114.156, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]'),
Text(135.09842866121937, 114.156, 'X[0] <= 0.915\ngini = 0.375\nsamples = 4\nvalue = [1
Text(133.41495914519172, 103.28399999999999, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]')
Text(136.78189817724703, 103.28399999999999, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
Text(254.7431332495286, 201.132, 'X[28] <= 0.352\ngini = 0.258\nsamples = 756\nvalue =
Text(206.67218730358266, 190.26, 'X[25] <= 0.616\ngini = 0.166\nsamples = 558\nvalue =
Text(171.13519798868637, 179.388, 'X[23] <= 0.231\ngini = 0.242\nsamples = 306\nvalue =
Text(151.0913890634821, 168.516, 'X[24] <= 0.699\ngini = 0.152\nsamples = 181\nvalue =
Text(142.46360779384037, 157.644, 'X[1] <= -0.118\ngini = 0.257\nsamples = 86\nvalue =
Text(137.8340666247643, 146.772, 'X[13] <= 0.478\ngini = 0.105\nsamples = 36\nvalue =
Text(136.15059710873663, 135.9, 'gini = 0.0\nsamples = 31\nvalue = [31, 0]'),
Text(139.51753614079195, 135.9, 'X[29] <= 0.63\ngini = 0.48\nsamples = 5\nvalue = [3, 2
Text(137.8340666247643, 125.02799999999999, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(141.2010056568196, 125.02799999999999, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]'),
Text(147.09314896291642, 146.772, 'X[3] <= -0.716\ngini = 0.343\nsamples = 50\nvalue =
Text(145.40967944688876, 135.9, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(148.77661847894407, 135.9, 'X[27] <= 0.69\ngini = 0.325\nsamples = 49\nvalue = [39
Text(144.56794468887492, 125.02799999999999, 'X[3] <= -0.111\ngini = 0.191\nsamples = 2
Text(142.88447517284726, 114.156, 'X[2] <= -0.327\ngini = 0.375\nsamples = 12\nvalue =
Text(141.2010056568196, 103.28399999999999, 'X[1] <= 0.926\ngini = 0.298\nsamples = 11\
Text(139.51753614079195, 92.412, 'X[13] <= 0.478\ngini = 0.18\nsamples = 10\nvalue = [9
Text(137.8340666247643, 81.53999999999999, 'gini = 0.0\nsamples = 8\nvalue = [8, 0]'),
Text(141.2010056568196, 81.53999999999999, 'X[21] <= 0.24\ngini = 0.5\nsamples = 2\nval
Text(139.51753614079195, 70.668, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(142.88447517284726, 70.668, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(142.88447517284726, 92.412, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(144.56794468887492, 103.28399999999999, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(146.25141420490257, 114.156, 'gini = 0.0\nsamples = 16\nvalue = [16, 0]'),
Text(152.9852922690132, 125.02799999999999, 'X[5] <= 0.036\ngini = 0.444\nsamples = 21\
Text(149.6183532369579, 114.156, 'X[2] <= 0.59\ngini = 0.469\nsamples = 8\nvalue = [3,
Text(147.93488372093023, 103.28399999999999, 'X[2] <= 0.296\ngini = 0.278\nsamples = 6\
Text(146.25141420490257, 92.412, 'X[1] <= 0.475\ngini = 0.5\nsamples = 2\nvalue = [1, 1
Text(144.56794468887492, 81.53999999999999, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(147.93488372093023, 81.53999999999999, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(149.6183532369579, 92.412, 'gini = 0.0\nsamples = 4\nvalue = [0, 4]'),
Text(151.30182275298554, 103.28399999999999, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]')
Text(156.3522313010685, 114.156, 'X[1] <= -0.078\ngini = 0.26\nsamples = 13\nvalue = [1
Text(154.66876178504086, 103.28399999999999, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(158.03570081709617, 103.28399999999999, 'X[0] <= 0.915\ngini = 0.153\nsamples = 12
Text(156.3522313010685, 92.412, 'gini = 0.0\nsamples = 10\nvalue = [10, 0]'),
Text(159.71917033312383, 92.412, 'X[3] <= 0.931\ngini = 0.5\nsamples = 2\nvalue = [1, 1
Text(158.03570081709617, 81.53999999999999, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(161.40263984915148, 81.53999999999999, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(159.71917033312383, 157.644, 'X[21] <= 0.24\ngini = 0.041\nsamples = 95\nvalue =
Text(158.03570081709617, 146.772, 'gini = 0.0\nsamples = 74\nvalue = [74, 0]'),
Text(161.40263984915148, 146.772, 'X[3] <= 0.166\ngini = 0.172\nsamples = 21\nvalue =
Text(159.71917033312383, 135.9, 'X[15] <= 0.31\ngini = 0.444\nsamples = 6\nvalue = [4,
Text(158.03570081709617, 125.02799999999999, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]')
Text(161.40263984915148, 125.02799999999999, 'X[1] <= -0.364\ngini = 0.444\nsamples = 3
Text(159.71917033312383, 114.156, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(163.08610936517914, 114.156, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(163.08610936517914, 135.9, 'gini = 0.0\nsamples = 15\nvalue = [15, 0]'),
Text(191.17900691389065, 168.516, 'X[1] <= 0.578\ngini = 0.348\nsamples = 125\nvalue =
Text(180.34167190446626, 157.644, 'X[0] <= 0.915\ngini = 0.422\nsamples = 53\nvalue = [3
```

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Text(174.0286612193589, 146.772, 'X[1] <= 0.537\ngini = 0.351\nsamples = 44\nvalue = [3
Text(172.34519170333124, 135.9, 'X[2] <= 0.504\ngini = 0.331\nsamples = 43\nvalue = [34
Text(168.1365179132621, 125.02799999999999, 'X[3] <= -0.346\ngini = 0.124\nsamples = 15
Text(166.45304839723445, 114.156, 'X[5] <= 0.036\ngini = 0.32\nsamples = 5\nvalue = [4,
Text(164.7695788812068, 103.28399999999999, 'gini = 0.0\nsamples = 4\nvalue = [4, 0]'),
Text(168.1365179132621, 103.28399999999999, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(169.81998742928977, 114.156, 'gini = 0.0\nsamples = 10\nvalue = [10, 0]'),
Text(176.5538654934004, 125.02799999999999, 'X[1] <= 0.271\ngini = 0.408\nsamples = 28\
Text(174.87039597737274, 114.156, 'X[10] <= 0.13\ngini = 0.463\nsamples = 22\nvalue =
Text(171.50345694531742, 103.28399999999999, 'X[24] <= 0.699\ngini = 0.375\nsamples = 4
Text(169.81998742928977, 92.412, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(173.18692646134508, 92.412, 'gini = 0.0\nsamples = 3\nvalue = [0, 3]'),
Text(178.23733500942802, 103.28399999999999, 'X[4] <= -0.011\ngini = 0.401\nsamples = 1
Text(176.5538654934004, 92.412, 'gini = 0.0\nsamples = 8\nvalue = [8, 0]'),
Text(179.92080452545568, 92.412, 'X[3] <= 0.47\ngini = 0.5\nsamples = 10\nvalue = [5, 5
Text(178.23733500942802, 81.53999999999999, 'X[9] <= 0.161\ngini = 0.469\nsamples = 8\n
Text(176.5538654934004, 70.668, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]'),
Text(179.92080452545568, 70.668, 'X[17] <= 0.337\ngini = 0.48\nsamples = 5\nvalue = [2,
Text(178.23733500942802, 59.79599999999999, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(181.60427404148334, 59.79599999999999, 'X[29] <= 0.63\ngini = 0.444\nsamples = 3\n
Text(179.92080452545568, 48.92400000000001, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(183.287743557511, 48.92400000000001, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(181.60427404148334, 81.53999999999999, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(178.23733500942802, 114.156, 'gini = 0.0\nsamples = 6\nvalue = [6, 0]'),
Text(175.71213073538655, 135.9, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(186.6546825895663, 146.772, 'X[9] <= 0.161\ngini = 0.444\nsamples = 9\nvalue = [3,
Text(184.97121307353865, 135.9, 'X[24] <= 0.699\ngini = 0.48\nsamples = 5\nvalue = [3,
Text(183.287743557511, 125.02799999999999, 'X[2] <= -0.898\ngini = 0.444\nsamples = 3\n
Text(181.60427404148334, 114.156, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(184.97121307353865, 114.156, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(186.6546825895663, 125.02799999999999, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(188.33815210559396, 135.9, 'gini = 0.0\nsamples = 4\nvalue = [0, 4]'),
Text(202.01634192331866, 157.644, 'X[1] <= 0.824\ngini = 0.278\nsamples = 72\nvalue =
Text(193.38856065367693, 146.772, 'X[29] <= 0.63\ngini = 0.105\nsamples = 18\nvalue =
Text(191.70509113764928, 135.9, 'gini = 0.0\nsamples = 14\nvalue = [14, 0]'),
Text(195.0720301697046, 135.9, 'X[9] <= 0.161\ngini = 0.375\nsamples = 4\nvalue = [3, 1
Text(193.38856065367693, 125.02799999999999, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]')
Text(196.75549968573225, 125.02799999999999, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(210.6441231929604, 146.772, 'X[1] <= 1.11\ngini = 0.324\nsamples = 54\nvalue = [43
Text(201.80590823381522, 135.9, 'X[26] <= -0.186\ngini = 0.434\nsamples = 22\nvalue =
Text(200.12243871778756, 125.02799999999999, 'gini = 0.0\nsamples = 5\nvalue = [5, 0]')
Text(203.48937774984287, 125.02799999999999, 'X[15] <= 0.31\ngini = 0.484\nsamples = 17
Text(200.12243871778756, 114.156, 'X[24] <= 0.699\ngini = 0.408\nsamples = 7\nvalue =
Text(198.4389692017599, 103.28399999999999, 'X[27] <= 0.69\ngini = 0.444\nsamples = 3\n
Text(196.75549968573225, 92.412, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(200.12243871778756, 92.412, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(201.80590823381522, 103.28399999999999, 'gini = 0.0\nsamples = 4\nvalue = [0, 4]')
Text(206.8563167818982, 114.156, 'X[3] <= 0.08\ngini = 0.32\nsamples = 10\nvalue = [8,
Text(205.17284726587053, 103.28399999999999, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(208.53978629792584, 103.28399999999999, 'X[4] <= -0.011\ngini = 0.198\nsamples = 9
Text(206.8563167818982, 92.412, 'gini = 0.0\nsamples = 6\nvalue = [6, 0]'),
Text(210.2232558139535, 92.412, 'X[3] <= 1.536\ngini = 0.444\nsamples = 3\nvalue = [2,
Text(208.53978629792584, 81.53999999999999, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(211.90672532998116, 81.53999999999999, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(219.4823381521056, 135.9, 'X[27] <= 0.69\ngini = 0.219\nsamples = 32\nvalue = [28,
Text(215.27366436203647, 125.02799999999999, 'X[9] <= 0.161\ngini = 0.083\nsamples = 23
Text(213.5901948460088, 114.156, 'X[2] <= 0.782\ngini = 0.444\nsamples = 3\nvalue = [2,
Text(211.90672532998116, 103.28399999999999, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]')
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Text(211.90672552998116, 103.28399999999999, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'
Text(215.27366436203647, 103.28399999999999, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'
Text(216.95713387806413, 114.156, 'gini = 0.0\nsamples = 20\nvalue = [20, 0]'),
Text(223.69101194217473, 125.02799999999999, 'X[4] <= -0.011\ngini = 0.444\nsamples = 9
Text(220.32407291011944, 114.156, 'X[1] <= 1.274\ngini = 0.444\nsamples = 3\nvalue = [1
Text(218.64060339409178, 103.28399999999999, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'
Text(222.00754242614707, 103.28399999999999, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'
Text(227.05795097423004, 114.156, 'X[10] <= 0.13\ngini = 0.278\nsamples = 6\nvalue = [5
Text(225.37448145820238, 103.28399999999999, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'
Text(228.7414204902577, 103.28399999999999, 'gini = 0.0\nsamples = 5\nvalue = [5, 0]'),
Text(242.20917661847895, 179.388, 'X[2] <= 1.453\ngini = 0.061\nsamples = 252\nvalue =
Text(237.15876807039598, 168.516, 'X[9] <= 0.161\ngini = 0.026\nsamples = 225\nvalue =
Text(235.47529855436832, 157.644, 'X[3] <= 0.943\ngini = 0.052\nsamples = 112\nvalue =
Text(232.108359522313, 146.772, 'X[2] <= -1.493\ngini = 0.022\nsamples = 92\nvalue = [9
Text(230.42489000628535, 135.9, 'X[2] <= -1.494\ngini = 0.077\nsamples = 25\nvalue = [2
Text(228.7414204902577, 125.02799999999999, 'gini = 0.0\nsamples = 22\nvalue = [22, 0]
Text(232.108359522313, 125.02799999999999, 'X[29] <= 0.63\ngini = 0.444\nsamples = 3\nv
Text(230.42489000628535, 114.156, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(233.79182903834067, 114.156, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(233.79182903834067, 135.9, 'gini = 0.0\nsamples = 67\nvalue = [67, 0]'),
Text(238.84223758642364, 146.772, 'X[17] <= 0.337\ngini = 0.18\nsamples = 20\nvalue =
Text(237.15876807039598, 135.9, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(240.5257071024513, 135.9, 'gini = 0.0\nsamples = 18\nvalue = [18, 0]'),
Text(238.84223758642364, 157.644, 'gini = 0.0\nsamples = 113\nvalue = [113, 0]'),
Text(247.25958516656192, 168.516, 'X[2] <= 1.491\ngini = 0.302\nsamples = 27\nvalue =
Text(243.8926461345066, 157.644, 'X[3] <= 2.379\ngini = 0.32\nsamples = 5\nvalue = [1,
Text(242.20917661847895, 146.772, 'gini = 0.0\nsamples = 4\nvalue = [0, 4]'),
Text(245.57611565053426, 146.772, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(250.62652419861723, 157.644, 'X[1] <= 1.049\ngini = 0.087\nsamples = 22\nvalue =
Text(248.94305468258958, 146.772, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(252.3099937146449, 146.772, 'gini = 0.0\nsamples = 21\nvalue = [21, 0]'),
Text(302.81407919547456, 190.26, 'X[1] <= 0.987\ngini = 0.438\nsamples = 198\nvalue =
Text(283.4541797611565, 179.388, 'X[9] <= 0.161\ngini = 0.475\nsamples = 149\nvalue =
Text(266.61948460087996, 168.516, 'X[15] <= 0.31\ngini = 0.31\nsamples = 47\nvalue = [3
Text(259.0438717787555, 157.644, 'X[3] <= 0.528\ngini = 0.133\nsamples = 28\nvalue = [2
Text(255.6769327467002, 146.772, 'X[19] <= 0.458\ngini = 0.077\nsamples = 25\nvalue =
Text(253.99346323067255, 135.9, 'gini = 0.0\nsamples = 17\nvalue = [17, 0]'),
Text(257.36040226272786, 135.9, 'X[26] <= -0.186\ngini = 0.219\nsamples = 8\nvalue = [7
Text(255.6769327467002, 125.02799999999999, 'gini = 0.0\nsamples = 5\nvalue = [5, 0]'),
Text(259.0438717787555, 125.02799999999999, 'X[5] <= 0.036\ngini = 0.444\nsamples = 3\n
Text(257.36040226272786, 114.156, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(260.7273412947832, 114.156, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(262.4108108108108, 146.772, 'X[21] <= 0.24\ngini = 0.444\nsamples = 3\nvalue = [2,
Text(260.7273412947832, 135.9, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(264.0942803268385, 135.9, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(274.1950974230044, 157.644, 'X[2] <= 0.679\ngini = 0.465\nsamples = 19\nvalue = [1
Text(269.1446888749214, 146.772, 'X[13] <= 0.478\ngini = 0.375\nsamples = 8\nvalue = [2
Text(267.4612193588938, 135.9, 'gini = 0.0\nsamples = 5\nvalue = [0, 5]'),
Text(270.8281583909491, 135.9, 'X[3] <= -0.091\ngini = 0.444\nsamples = 3\nvalue = [2,
Text(269.1446888749214, 125.02799999999999, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(272.51162790697674, 125.02799999999999, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'
Text(279.24550597108737, 146.772, 'X[26] <= -0.186\ngini = 0.165\nsamples = 11\nvalue =
Text(277.56203645505974, 135.9, 'X[23] <= 0.231\ngini = 0.444\nsamples = 3\nvalue = [2,
Text(275.87856693903205, 125.02799999999999, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'
Text(279.24550597108737, 125.02799999999999, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'
Text(280.92897548711505, 135.9, 'gini = 0.0\nsamples = 8\nvalue = [8, 0]'),
Text(300.2888749214331, 168.516, 'X[24] <= 0.699\ngini = 0.499\nsamples = 102\nvalue =
Text(292.7132620993086, 157.644, 'X[2] <= 1.427\ngini = 0.494\nsamples = 76\nvalue = [3
```

```
Text(285.979384035198, 146.772, 'X[3] <= -0.457\ngini = 0.482\nsamples = 69\nvalue = [2
Text(284.29591451917037, 135.9, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]'),
Text(287.6628535512256, 135.9, 'X[3] <= 1.077\ngini = 0.471\nsamples = 66\nvalue = [25,
Text(282.6124450031427, 125.02799999999999, 'X[3] <= 0.13\ngini = 0.488\nsamples = 57\n
Text(277.56203645505974, 114.156, 'X[13] <= 0.478\ngini = 0.4\nsamples = 29\nvalue = [8
Text(275.87856693903205, 103.28399999999999, 'X[3] <= -0.002\ngini = 0.454\nsamples = 2
Text(274.1950974230044, 92.412, 'X[2] <= 0.986\ngini = 0.494\nsamples = 18\nvalue = [8,
Text(272.51162790697674, 81.53999999999999, 'X[26] <= -0.186\ngini = 0.408\nsamples = 1
Text(270.8281583909491, 70.668, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(274.1950974230044, 70.668, 'X[2] <= 0.659\ngini = 0.355\nsamples = 13\nvalue = [3,
Text(272.51162790697674, 59.79599999999999, 'X[23] <= 0.231\ngini = 0.469\nsamples = 8\
Text(270.8281583909491, 48.92400000000001, 'X[21] <= 0.24\ngini = 0.278\nsamples = 6\nv
Text(269.1446888749214, 38.05199999999999, 'gini = 0.0\nsamples = 5\nvalue = [0, 5]'),
Text(272.51162790697674, 38.05199999999999, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(274.1950974230044, 48.92400000000001, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(275.87856693903205, 59.79599999999999, 'gini = 0.0\nsamples = 5\nvalue = [0, 5]'),
Text(275.87856693903205, 81.53999999999999, 'gini = 0.0\nsamples = 4\nvalue = [4, 0]'),
Text(277.56203645505974, 92.412, 'gini = 0.0\nsamples = 5\nvalue = [0, 5]'),
Text(279.24550597108737, 103.28399999999999, 'gini = 0.0\nsamples = 6\nvalue = [0, 6]')
Text(287.6628535512256, 114.156, 'X[3] <= 1.026\ngini = 0.49\nsamples = 28\nvalue = [16
Text(285.979384035198, 103.28399999999999, 'X[3] <= 0.866\ngini = 0.499\nsamples = 25\n
Text(282.6124450031427, 92.412, 'X[23] <= 0.231\ngini = 0.465\nsamples = 19\nvalue = [1
Text(280.92897548711505, 81.53999999999999, 'gini = 0.0\nsamples = 5\nvalue = [5, 0]'),
Text(284.29591451917037, 81.53999999999999, 'X[4] <= -0.011\ngini = 0.5\nsamples = 14\n
Text(280.92897548711505, 70.668, 'X[0] <= 0.915\ngini = 0.408\nsamples = 7\nvalue = [5,
Text(279.24550597108737, 59.79599999999999, 'X[5] <= 0.036\ngini = 0.444\nsamples = 3\n
Text(277.56203645505974, 48.92400000000001, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(280.92897548711505, 48.92400000000001, 'X[21] <= 0.24\ngini = 0.5\nsamples = 2\nva
Text(279.24550597108737, 38.05199999999999, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(282.6124450031427, 38.05199999999999, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(282.6124450031427, 59.79599999999999, 'gini = 0.0\nsamples = 4\nvalue = [4, 0]'),
Text(287.6628535512256, 70.668, 'X[17] <= 0.337\ngini = 0.408\nsamples = 7\nvalue = [2,
Text(285.979384035198, 59.79599999999999, 'gini = 0.0\nsamples = 4\nvalue = [0, 4]'),
Text(289.3463230672533, 59.79599999999999, 'X[3] <= 0.495\ngini = 0.444\nsamples = 3\nv
Text(287.6628535512256, 48.92400000000001, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(291.02979258328094, 48.92400000000001, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(289.3463230672533, 92.412, 'X[19] <= 0.458\ngini = 0.278\nsamples = 6\nvalue = [1,
Text(287.6628535512256, 81.53999999999999, 'gini = 0.0\nsamples = 5\nvalue = [0, 5]'),
Text(291.02979258328094, 81.53999999999999, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(289.3463230672533, 103.28399999999999, 'gini = 0.0\nsamples = 3\nvalue = [3, 0]'),
Text(292.7132620993086, 125.02799999999999, 'X[23] <= 0.231\ngini = 0.198\nsamples = 9\
Text(291.02979258328094, 114.156, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(294.39673161533625, 114.156, 'gini = 0.0\nsamples = 8\nvalue = [0, 8]'),
Text(299.44714016341925, 146.772, 'X[3] <= 0.874\ngini = 0.245\nsamples = 7\nvalue = [6
Text(297.76367064739156, 135.9, 'X[26] <= -0.186\ngini = 0.5\nsamples = 2\nvalue = [1,
Text(296.08020113136394, 125.02799999999999, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
Text(299.44714016341925, 125.02799999999999, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]')
Text(301.1306096794469, 135.9, 'gini = 0.0\nsamples = 5\nvalue = [5, 0]'),
Text(307.8644877435575, 157.644, 'X[2] <= 1.457\ngini = 0.393\nsamples = 26\nvalue = [1
Text(306.1810182275299, 146.772, 'X[1] <= -0.282\ngini = 0.33\nsamples = 24\nvalue = [1
Text(304.4975487115022, 135.9, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(307.8644877435575, 135.9, 'X[19] <= 0.458\ngini = 0.287\nsamples = 23\nvalue = [19
Text(306.1810182275299, 125.02799999999999, 'gini = 0.0\nsamples = 11\nvalue = [11, 0]
Text(309.5479572595852, 125.02799999999999, 'X[1] <= 0.701\ngini = 0.444\nsamples = 12\
Text(307.8644877435575, 114.156, 'X[1] <= 0.23\ngini = 0.5\nsamples = 8\nvalue = [4, 4]
Text(306.1810182275299, 103.28399999999999, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(309.5479572595852, 103.28399999999999, 'X[3] <= 0.998\ngini = 0.444\nsamples = 6\n
Text(307.8644877435575, 92.412, 'gini = 0.0\nsamples = 4\nvalue = [0, 4]'),
```

```
Text(311.2314267756128, 92.412, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(311.2314267756128, 114.156, 'gini = 0.0\nsamples = 4\nvalue = [4, 0]'),
Text(309.5479572595852, 146.772, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
Text(322.1739786297926, 179.388, 'X[17] <= 0.337\ngini = 0.215\nsamples = 49\nvalue =
Text(316.2818353236958, 168.516, 'X[7] <= -1.335\ngini = 0.083\nsamples = 23\nvalue =
Text(314.59836580766813, 157.644, 'X[2] <= -0.551\ngini = 0.375\nsamples = 4\nvalue =
Text(312.9148962916405, 146.772, 'gini = 0.0\nsamples = 2\nvalue = [2, 0]'),
Text(316.2818353236958, 146.772, 'X[19] <= 0.458\ngini = 0.5\nsamples = 2\nvalue = [1,
Text(314.59836580766813, 135.9, 'gini = 0.0\nsamples = 1\nvalue = [0, 1]'),
Text(317.96530483972344, 135.9, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]'),
Text(317.96530483972344, 157.644, 'gini = 0.0\nsamples = 19\nvalue = [19, 0]'),
Text(328.0661219358894, 168.516, 'X[0] <= 0.915\ngini = 0.311\nsamples = 26\nvalue = [2
Text(324.69918290383407, 157.644, 'X[3] <= 1.544\ngini = 0.18\nsamples = 20\nvalue = [1
Text(323.01571338780644, 146.772, 'X[9] <= 0.161\ngini = 0.346\nsamples = 9\nvalue = [7
Text(321.33224387177876, 135.9, 'gini = 0.0\nsamples = 6\nvalue = [6, 0]'),
Text(324.69918290383407, 135.9, 'X[13] <= 0.478\ngini = 0.444\nsamples = 3\nvalue = [1,
Text(323.01571338780644, 125.02799999999999, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
Text(326.38265241986176, 125.02799999999999, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]')
```

SVM

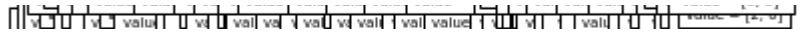
```
Text(328.0661219358894, 135.9, 'gini = 0.0\nsamples = 2\nvalue = [0, 2]'),
```

```
from sklearn.svm import LinearSVC,SVC
```

```
Text(333.1165304839723, 125.02799999999999, 'gini = 0.0\nsamples = 1\nvalue = [1, 0]')
```

```
lsvm = LinearSVC()
lsvm.fit(X_train,y_train)
lsvm.score(X_test,y_test)
```

```
0.8035117056856187
```



```
psvm = SVC(kernel="poly",degree=2)
psvm.fit(X_train,y_train)
psvm.score(X_test,y_test)
```

```
0.7926421404682275
```


```
psvm = SVC(kernel="rbf")
psvm.fit(X_train,y_train)
psvm.score(X_test,y_test)
```

```
0.7934782608695652
```

```
#Conclusion
#Overall Logistic Regression performed the best. Accurancy level in predicting the customers
#However this should give some leads to the company's maangement to take corrective actions f
```