**Dataset**[**¶**](#gjdgxs)

Dataset is about bike rental service. It contains bike sharing counts aggregated on hourly basis. Total number of records: 17379 hours (2 years of rental services). There are following features:

* instant: record index
* dteday : date of record
* hr : hour (0 to 23) of record
* season : season (1:springer, 2:summer, 3:fall, 4:winter)
* yr : year (0: 2011, 1:2012)
* mnth : month ( 1 to 12)
* holiday : whether day is holiday or not (extracted from <http://dchr.dc.gov/page/holiday-schedule>)
* weekday : day of the week
* workingday : if day is neither weekend nor holiday is 1, otherwise is 0.
* weathersit : weather situation in the current timeframe
  + 1: Clear, Few clouds, Partly cloudy, Partly cloudy
  + 2: Mist + Cloudy, Mist + Broken clouds, Mist + Few clouds, Mist
  + 3: Light Snow, Light Rain + Thunderstorm + Scattered clouds, Light Rain + Scattered clouds
  + 4: Heavy Rain + Ice Pallets + Thunderstorm + Mist, Snow + Fog
* temp : Normalized temperature in Celsius. The values are divided to 41 (max)
* atemp: Normalized feeling temperature in Celsius. The values are divided to 50 (max)
* hum: Normalized humidity. The values are divided to 100 (max)
* windspeed: Normalized wind speed. The values are divided to 67 (max)
* casual: count of casual users (target 1)
* registered: count of registered users (target 2)
* cnt: count of total rental bikes including both casual and registered (target total)

In [1]:

**import** **pandas** **as** **pd**

In [2]:

pd.read\_csv('data/hour.csv')

Out[2]:

|  | **instant** | **dteday** | **season** | **yr** | **mnth** | **hr** | **holiday** | **weekday** | **workingday** | **weathersit** | **temp** | **atemp** | **hum** | **windspeed** | **casual** | **registered** | **cnt** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **0** | 1 | 2011-01-01 | 1 | 0 | 1 | 0 | 0 | 6 | 0 | 1 | 0.24 | 0.2879 | 0.81 | 0.0000 | 3 | 13 | 16 |
| **1** | 2 | 2011-01-01 | 1 | 0 | 1 | 1 | 0 | 6 | 0 | 1 | 0.22 | 0.2727 | 0.80 | 0.0000 | 8 | 32 | 40 |
| **2** | 3 | 2011-01-01 | 1 | 0 | 1 | 2 | 0 | 6 | 0 | 1 | 0.22 | 0.2727 | 0.80 | 0.0000 | 5 | 27 | 32 |
| **3** | 4 | 2011-01-01 | 1 | 0 | 1 | 3 | 0 | 6 | 0 | 1 | 0.24 | 0.2879 | 0.75 | 0.0000 | 3 | 10 | 13 |
| **4** | 5 | 2011-01-01 | 1 | 0 | 1 | 4 | 0 | 6 | 0 | 1 | 0.24 | 0.2879 | 0.75 | 0.0000 | 0 | 1 | 1 |
| **...** | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| **17374** | 17375 | 2012-12-31 | 1 | 1 | 12 | 19 | 0 | 1 | 1 | 2 | 0.26 | 0.2576 | 0.60 | 0.1642 | 11 | 108 | 119 |
| **17375** | 17376 | 2012-12-31 | 1 | 1 | 12 | 20 | 0 | 1 | 1 | 2 | 0.26 | 0.2576 | 0.60 | 0.1642 | 8 | 81 | 89 |
| **17376** | 17377 | 2012-12-31 | 1 | 1 | 12 | 21 | 0 | 1 | 1 | 1 | 0.26 | 0.2576 | 0.60 | 0.1642 | 7 | 83 | 90 |
| **17377** | 17378 | 2012-12-31 | 1 | 1 | 12 | 22 | 0 | 1 | 1 | 1 | 0.26 | 0.2727 | 0.56 | 0.1343 | 13 | 48 | 61 |
| **17378** | 17379 | 2012-12-31 | 1 | 1 | 12 | 23 | 0 | 1 | 1 | 1 | 0.26 | 0.2727 | 0.65 | 0.1343 | 12 | 37 | 49 |

17379 rows × 17 columns

**Task**[**¶**](#30j0zll)

* Preprocessing (1 point)
* Feature engineering (2 points)
* Use different advanced regression algorithms:
  + KNN Regressor (1 point)
  + Decision Tree Regressor (1 point)
  + Random Forest / Extra Trees Regressor (1 point)
  + SVM Regressor (1 point)
  + Boosting Regressor - any Boosting algorithm with Regression (1 point) NB! The task is considered done for each model if there is hyperparameters tuning and validation is used.
* Build regression model for each year in question (2 points):
  + Target is cnt, exclude casual and registered from the model
  + Validate either on last 7 days of each months or on random subsample
  + Check the quality of prediction
  + Build regression model for the first year and make predictions about the second. The results are better or worse? Why? (1 points)
* Build regression model for each year in question (2 points):
  + Multitarget: casual and registered, exclude cnt from the model
  + Validate either on last 7 days of each months or on random subsample
  + Check the quality of prediction
  + Build regression model for the first year and make predictions about the second. The results are better or worse? Why? (1 points)
  + Use the sum of two targets two predict cnt. Estimate the quality. Is it higher than for one target model? (1 point)
* In the process of completion, answer the following questions:
  + How the temperature and humidity influences rental count rates? What is more important - temperature or feeling temperature? (2 point)
  + What are the most influentual features? (2 points)
  + What is more important: current season or current hour? (1 point)

Total points: 20. Threshold for completion: 15 points.

**Example of solution**[**¶**](#1fob9te)

This example shows possible preprocessing and how to build a model based on one year, estimating it to another year

In [3]:

**import** **numpy** **as** **np**  
**import** **pandas** **as** **pd**  
**from** **sklearn.preprocessing** **import** OneHotEncoder  
**from** **IPython.display** **import** display

**Preprocessing**[**¶**](#3znysh7)

In [4]:

data = pd.read\_csv('data/hour.csv')  
data = data.drop(['instant', 'dteday'], axis=1)  
data

Out[4]:

|  | **season** | **yr** | **mnth** | **hr** | **holiday** | **weekday** | **workingday** | **weathersit** | **temp** | **atemp** | **hum** | **windspeed** | **casual** | **registered** | **cnt** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **0** | 1 | 0 | 1 | 0 | 0 | 6 | 0 | 1 | 0.24 | 0.2879 | 0.81 | 0.0000 | 3 | 13 | 16 |
| **1** | 1 | 0 | 1 | 1 | 0 | 6 | 0 | 1 | 0.22 | 0.2727 | 0.80 | 0.0000 | 8 | 32 | 40 |
| **2** | 1 | 0 | 1 | 2 | 0 | 6 | 0 | 1 | 0.22 | 0.2727 | 0.80 | 0.0000 | 5 | 27 | 32 |
| **3** | 1 | 0 | 1 | 3 | 0 | 6 | 0 | 1 | 0.24 | 0.2879 | 0.75 | 0.0000 | 3 | 10 | 13 |
| **4** | 1 | 0 | 1 | 4 | 0 | 6 | 0 | 1 | 0.24 | 0.2879 | 0.75 | 0.0000 | 0 | 1 | 1 |
| **...** | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| **17374** | 1 | 1 | 12 | 19 | 0 | 1 | 1 | 2 | 0.26 | 0.2576 | 0.60 | 0.1642 | 11 | 108 | 119 |
| **17375** | 1 | 1 | 12 | 20 | 0 | 1 | 1 | 2 | 0.26 | 0.2576 | 0.60 | 0.1642 | 8 | 81 | 89 |
| **17376** | 1 | 1 | 12 | 21 | 0 | 1 | 1 | 1 | 0.26 | 0.2576 | 0.60 | 0.1642 | 7 | 83 | 90 |
| **17377** | 1 | 1 | 12 | 22 | 0 | 1 | 1 | 1 | 0.26 | 0.2727 | 0.56 | 0.1343 | 13 | 48 | 61 |
| **17378** | 1 | 1 | 12 | 23 | 0 | 1 | 1 | 1 | 0.26 | 0.2727 | 0.65 | 0.1343 | 12 | 37 | 49 |

17379 rows × 15 columns

In [5]:

data.info()  
data['workingday'].unique()

<class 'pandas.core.frame.DataFrame'>  
RangeIndex: 17379 entries, 0 to 17378  
Data columns (total 15 columns):  
 # Column Non-Null Count Dtype   
--- ------ -------------- -----   
 0 season 17379 non-null int64   
 1 yr 17379 non-null int64   
 2 mnth 17379 non-null int64   
 3 hr 17379 non-null int64   
 4 holiday 17379 non-null int64   
 5 weekday 17379 non-null int64   
 6 workingday 17379 non-null int64   
 7 weathersit 17379 non-null int64   
 8 temp 17379 non-null float64  
 9 atemp 17379 non-null float64  
 10 hum 17379 non-null float64  
 11 windspeed 17379 non-null float64  
 12 casual 17379 non-null int64   
 13 registered 17379 non-null int64   
 14 cnt 17379 non-null int64   
dtypes: float64(4), int64(11)  
memory usage: 2.0 MB

Out[5]:

array([0, 1])

In [6]:

data\_targets = data[['casual', 'registered', 'cnt']]  
data\_block = data.drop(['casual', 'registered', 'cnt'], axis=1)

In [7]:

onehot\_columns = ['season', 'mnth', 'weekday', 'weathersit']  
data\_onehot = data\_block[onehot\_columns]  
data\_not\_onehot = data\_block.drop(onehot\_columns, axis=1)  
onehot = OneHotEncoder(sparse = **False**, drop='if\_binary')  
data\_onehot\_transformed = onehot.fit\_transform(data\_onehot)  
display(data\_onehot\_transformed.shape)  
onehot\_newcolumns = [x+str(y) **for** i,x **in** enumerate(onehot\_columns) **for** y **in** onehot.categories\_[i]]  
data\_after\_onehot = pd.DataFrame(data\_onehot\_transformed, columns=onehot\_newcolumns)  
data\_preprocessed = pd.concat([data\_not\_onehot, data\_after\_onehot], axis=1)

(17379, 27)

In [8]:

display(data\_preprocessed)  
data\_preprocessed.columns

|  | **yr** | **hr** | **holiday** | **workingday** | **temp** | **atemp** | **hum** | **windspeed** | **season1** | **season2** | **...** | **weekday1** | **weekday2** | **weekday3** | **weekday4** | **weekday5** | **weekday6** | **weathersit1** | **weathersit2** | **weathersit3** | **weathersit4** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **0** | 0 | 0 | 0 | 0 | 0.24 | 0.2879 | 0.81 | 0.0000 | 1.0 | 0.0 | ... | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| **1** | 0 | 1 | 0 | 0 | 0.22 | 0.2727 | 0.80 | 0.0000 | 1.0 | 0.0 | ... | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| **2** | 0 | 2 | 0 | 0 | 0.22 | 0.2727 | 0.80 | 0.0000 | 1.0 | 0.0 | ... | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| **3** | 0 | 3 | 0 | 0 | 0.24 | 0.2879 | 0.75 | 0.0000 | 1.0 | 0.0 | ... | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| **4** | 0 | 4 | 0 | 0 | 0.24 | 0.2879 | 0.75 | 0.0000 | 1.0 | 0.0 | ... | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| **...** | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| **17374** | 1 | 19 | 0 | 1 | 0.26 | 0.2576 | 0.60 | 0.1642 | 1.0 | 0.0 | ... | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 |
| **17375** | 1 | 20 | 0 | 1 | 0.26 | 0.2576 | 0.60 | 0.1642 | 1.0 | 0.0 | ... | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 |
| **17376** | 1 | 21 | 0 | 1 | 0.26 | 0.2576 | 0.60 | 0.1642 | 1.0 | 0.0 | ... | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| **17377** | 1 | 22 | 0 | 1 | 0.26 | 0.2727 | 0.56 | 0.1343 | 1.0 | 0.0 | ... | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| **17378** | 1 | 23 | 0 | 1 | 0.26 | 0.2727 | 0.65 | 0.1343 | 1.0 | 0.0 | ... | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 |

17379 rows × 35 columns

Out[8]:

Index(['yr', 'hr', 'holiday', 'workingday', 'temp', 'atemp', 'hum',  
 'windspeed', 'season1', 'season2', 'season3', 'season4', 'mnth1',  
 'mnth2', 'mnth3', 'mnth4', 'mnth5', 'mnth6', 'mnth7', 'mnth8', 'mnth9',  
 'mnth10', 'mnth11', 'mnth12', 'weekday0', 'weekday1', 'weekday2',  
 'weekday3', 'weekday4', 'weekday5', 'weekday6', 'weathersit1',  
 'weathersit2', 'weathersit3', 'weathersit4'],  
 dtype='object')

**Solution**[**¶**](#2et92p0)

In [9]:

**from** **sklearn.neighbors** **import** KNeighborsRegressor  
**from** **sklearn.tree** **import** DecisionTreeRegressor  
**from** **sklearn.ensemble** **import** RandomForestRegressor, AdaBoostRegressor  
**from** **sklearn.svm** **import** SVR  
**from** **sklearn.model\_selection** **import** KFold, GridSearchCV, train\_test\_split  
**from** **sklearn.metrics** **import** r2\_score, mean\_absolute\_error, mean\_squared\_error

In [37]:

**def** find\_best\_regressor(model, parameters\_grid, data, target):  
 gs = GridSearchCV(model, param\_grid=parameters\_grid, return\_train\_score=**True**,  
 verbose=4, cv=KFold(n\_splits=5, shuffle=**True**), scoring='r2')  
 gs.fit(data, target)  
 display(gs.best\_estimator\_)  
 display(gs.best\_score\_)  
 **return** gs

In [38]:

data\_train = data\_preprocessed[data\_preprocessed['yr']==0].drop('yr', axis=1)  
data\_test = data\_preprocessed[data\_preprocessed['yr']==1].drop('yr', axis=1)  
data\_cnt\_train = data\_targets[data\_preprocessed['yr']==0]['cnt']  
data\_casual\_train = data\_targets[data\_preprocessed['yr']==0]['casual']  
data\_registered\_train = data\_targets[data\_preprocessed['yr']==0]['registered']  
data\_cnt\_test = data\_targets[data\_preprocessed['yr']==1]['cnt']  
data\_casual\_test = data\_targets[data\_preprocessed['yr']==1]['casual']  
data\_registered\_test = data\_targets[data\_preprocessed['yr']==1]['registered']

In [53]:

data\_train.columns

Out[53]:

Index(['hr', 'holiday', 'workingday', 'temp', 'atemp', 'hum', 'windspeed',  
 'season1', 'season2', 'season3', 'season4', 'mnth1', 'mnth2', 'mnth3',  
 'mnth4', 'mnth5', 'mnth6', 'mnth7', 'mnth8', 'mnth9', 'mnth10',  
 'mnth11', 'mnth12', 'weekday0', 'weekday1', 'weekday2', 'weekday3',  
 'weekday4', 'weekday5', 'weekday6', 'weathersit1', 'weathersit2',  
 'weathersit3', 'weathersit4'],  
 dtype='object')

**KNN**[**¶**](#tyjcwt)

In [39]:

parameters\_grid = {  
 'n\_neighbors': range(2, 21),  
 'weights': ('uniform', 'distance')  
}  
model = KNeighborsRegressor()  
model\_gs = find\_best\_regressor(model, parameters\_grid, data\_train, data\_cnt\_train)

Fitting 5 folds for each of 38 candidates, totalling 190 fits  
[CV] n\_neighbors=2, weights=uniform ..................................

[Parallel(n\_jobs=1)]: Using backend SequentialBackend with 1 concurrent workers.

[CV] n\_neighbors=2, weights=uniform, score=(train=0.945, test=0.857), total= 0.2s  
[CV] n\_neighbors=2, weights=uniform ..................................

[Parallel(n\_jobs=1)]: Done 1 out of 1 | elapsed: 0.5s remaining: 0.0s

[CV] n\_neighbors=2, weights=uniform, score=(train=0.947, test=0.851), total= 0.1s  
[CV] n\_neighbors=2, weights=uniform ..................................

[Parallel(n\_jobs=1)]: Done 2 out of 2 | elapsed: 1.0s remaining: 0.0s

[CV] n\_neighbors=2, weights=uniform, score=(train=0.948, test=0.843), total= 0.1s  
[CV] n\_neighbors=2, weights=uniform ..................................

[Parallel(n\_jobs=1)]: Done 3 out of 3 | elapsed: 1.5s remaining: 0.0s

[CV] n\_neighbors=2, weights=uniform, score=(train=0.947, test=0.852), total= 0.2s  
[CV] n\_neighbors=2, weights=uniform ..................................  
[CV] n\_neighbors=2, weights=uniform, score=(train=0.949, test=0.851), total= 0.1s  
[CV] n\_neighbors=2, weights=distance .................................  
[CV] n\_neighbors=2, weights=distance, score=(train=1.000, test=0.867), total= 0.1s  
[CV] n\_neighbors=2, weights=distance .................................  
[CV] n\_neighbors=2, weights=distance, score=(train=1.000, test=0.855), total= 0.1s  
[CV] n\_neighbors=2, weights=distance .................................  
[CV] n\_neighbors=2, weights=distance, score=(train=1.000, test=0.846), total= 0.1s  
[CV] n\_neighbors=2, weights=distance .................................  
[CV] n\_neighbors=2, weights=distance, score=(train=1.000, test=0.853), total= 0.1s  
[CV] n\_neighbors=2, weights=distance .................................  
[CV] n\_neighbors=2, weights=distance, score=(train=1.000, test=0.853), total= 0.1s  
[CV] n\_neighbors=3, weights=uniform ..................................  
[CV] n\_neighbors=3, weights=uniform, score=(train=0.931, test=0.868), total= 0.1s  
[CV] n\_neighbors=3, weights=uniform ..................................  
[CV] n\_neighbors=3, weights=uniform, score=(train=0.934, test=0.872), total= 0.1s  
[CV] n\_neighbors=3, weights=uniform ..................................  
[CV] n\_neighbors=3, weights=uniform, score=(train=0.935, test=0.856), total= 0.1s  
[CV] n\_neighbors=3, weights=uniform ..................................  
[CV] n\_neighbors=3, weights=uniform, score=(train=0.933, test=0.869), total= 0.1s  
[CV] n\_neighbors=3, weights=uniform ..................................  
[CV] n\_neighbors=3, weights=uniform, score=(train=0.933, test=0.873), total= 0.1s  
[CV] n\_neighbors=3, weights=distance .................................  
[CV] n\_neighbors=3, weights=distance, score=(train=1.000, test=0.879), total= 0.2s  
[CV] n\_neighbors=3, weights=distance .................................  
[CV] n\_neighbors=3, weights=distance, score=(train=1.000, test=0.875), total= 0.1s  
[CV] n\_neighbors=3, weights=distance .................................  
[CV] n\_neighbors=3, weights=distance, score=(train=1.000, test=0.861), total= 0.1s  
[CV] n\_neighbors=3, weights=distance .................................  
[CV] n\_neighbors=3, weights=distance, score=(train=1.000, test=0.875), total= 0.1s  
[CV] n\_neighbors=3, weights=distance .................................  
[CV] n\_neighbors=3, weights=distance, score=(train=1.000, test=0.876), total= 0.1s  
[CV] n\_neighbors=4, weights=uniform ..................................  
[CV] n\_neighbors=4, weights=uniform, score=(train=0.923, test=0.870), total= 0.1s  
[CV] n\_neighbors=4, weights=uniform ..................................  
[CV] n\_neighbors=4, weights=uniform, score=(train=0.928, test=0.877), total= 0.1s  
[CV] n\_neighbors=4, weights=uniform ..................................  
[CV] n\_neighbors=4, weights=uniform, score=(train=0.928, test=0.865), total= 0.1s  
[CV] n\_neighbors=4, weights=uniform ..................................  
[CV] n\_neighbors=4, weights=uniform, score=(train=0.927, test=0.876), total= 0.1s  
[CV] n\_neighbors=4, weights=uniform ..................................  
[CV] n\_neighbors=4, weights=uniform, score=(train=0.927, test=0.872), total= 0.1s  
[CV] n\_neighbors=4, weights=distance .................................  
[CV] n\_neighbors=4, weights=distance, score=(train=1.000, test=0.884), total= 0.1s  
[CV] n\_neighbors=4, weights=distance .................................  
[CV] n\_neighbors=4, weights=distance, score=(train=1.000, test=0.882), total= 0.1s  
[CV] n\_neighbors=4, weights=distance .................................  
[CV] n\_neighbors=4, weights=distance, score=(train=1.000, test=0.870), total= 0.1s  
[CV] n\_neighbors=4, weights=distance .................................  
[CV] n\_neighbors=4, weights=distance, score=(train=1.000, test=0.880), total= 0.1s  
[CV] n\_neighbors=4, weights=distance .................................  
[CV] n\_neighbors=4, weights=distance, score=(train=1.000, test=0.879), total= 0.1s  
[CV] n\_neighbors=5, weights=uniform ..................................  
[CV] n\_neighbors=5, weights=uniform, score=(train=0.915, test=0.871), total= 0.2s  
[CV] n\_neighbors=5, weights=uniform ..................................  
[CV] n\_neighbors=5, weights=uniform, score=(train=0.921, test=0.880), total= 0.2s  
[CV] n\_neighbors=5, weights=uniform ..................................  
[CV] n\_neighbors=5, weights=uniform, score=(train=0.921, test=0.875), total= 0.1s  
[CV] n\_neighbors=5, weights=uniform ..................................  
[CV] n\_neighbors=5, weights=uniform, score=(train=0.920, test=0.879), total= 0.2s  
[CV] n\_neighbors=5, weights=uniform ..................................  
[CV] n\_neighbors=5, weights=uniform, score=(train=0.920, test=0.877), total= 0.2s  
[CV] n\_neighbors=5, weights=distance .................................  
[CV] n\_neighbors=5, weights=distance, score=(train=1.000, test=0.885), total= 0.2s  
[CV] n\_neighbors=5, weights=distance .................................  
[CV] n\_neighbors=5, weights=distance, score=(train=1.000, test=0.886), total= 0.2s  
[CV] n\_neighbors=5, weights=distance .................................  
[CV] n\_neighbors=5, weights=distance, score=(train=1.000, test=0.877), total= 0.2s  
[CV] n\_neighbors=5, weights=distance .................................  
[CV] n\_neighbors=5, weights=distance, score=(train=1.000, test=0.883), total= 0.2s  
[CV] n\_neighbors=5, weights=distance .................................  
[CV] n\_neighbors=5, weights=distance, score=(train=1.000, test=0.883), total= 0.1s  
[CV] n\_neighbors=6, weights=uniform ..................................  
[CV] n\_neighbors=6, weights=uniform, score=(train=0.911, test=0.871), total= 0.1s  
[CV] n\_neighbors=6, weights=uniform ..................................  
[CV] n\_neighbors=6, weights=uniform, score=(train=0.916, test=0.880), total= 0.1s  
[CV] n\_neighbors=6, weights=uniform ..................................  
[CV] n\_neighbors=6, weights=uniform, score=(train=0.915, test=0.878), total= 0.1s  
[CV] n\_neighbors=6, weights=uniform ..................................  
[CV] n\_neighbors=6, weights=uniform, score=(train=0.913, test=0.883), total= 0.2s  
[CV] n\_neighbors=6, weights=uniform ..................................  
[CV] n\_neighbors=6, weights=uniform, score=(train=0.914, test=0.879), total= 0.2s  
[CV] n\_neighbors=6, weights=distance .................................  
[CV] n\_neighbors=6, weights=distance, score=(train=1.000, test=0.885), total= 0.2s  
[CV] n\_neighbors=6, weights=distance .................................  
[CV] n\_neighbors=6, weights=distance, score=(train=1.000, test=0.887), total= 0.1s  
[CV] n\_neighbors=6, weights=distance .................................  
[CV] n\_neighbors=6, weights=distance, score=(train=1.000, test=0.881), total= 0.1s  
[CV] n\_neighbors=6, weights=distance .................................  
[CV] n\_neighbors=6, weights=distance, score=(train=1.000, test=0.886), total= 0.1s  
[CV] n\_neighbors=6, weights=distance .................................  
[CV] n\_neighbors=6, weights=distance, score=(train=1.000, test=0.886), total= 0.1s  
[CV] n\_neighbors=7, weights=uniform ..................................  
[CV] n\_neighbors=7, weights=uniform, score=(train=0.908, test=0.877), total= 0.2s  
[CV] n\_neighbors=7, weights=uniform ..................................  
[CV] n\_neighbors=7, weights=uniform, score=(train=0.910, test=0.880), total= 0.2s  
[CV] n\_neighbors=7, weights=uniform ..................................  
[CV] n\_neighbors=7, weights=uniform, score=(train=0.909, test=0.881), total= 0.1s  
[CV] n\_neighbors=7, weights=uniform ..................................  
[CV] n\_neighbors=7, weights=uniform, score=(train=0.909, test=0.885), total= 0.1s  
[CV] n\_neighbors=7, weights=uniform ..................................  
[CV] n\_neighbors=7, weights=uniform, score=(train=0.909, test=0.880), total= 0.1s  
[CV] n\_neighbors=7, weights=distance .................................  
[CV] n\_neighbors=7, weights=distance, score=(train=1.000, test=0.888), total= 0.1s  
[CV] n\_neighbors=7, weights=distance .................................  
[CV] n\_neighbors=7, weights=distance, score=(train=1.000, test=0.888), total= 0.1s  
[CV] n\_neighbors=7, weights=distance .................................  
[CV] n\_neighbors=7, weights=distance, score=(train=1.000, test=0.884), total= 0.2s  
[CV] n\_neighbors=7, weights=distance .................................  
[CV] n\_neighbors=7, weights=distance, score=(train=1.000, test=0.888), total= 0.1s  
[CV] n\_neighbors=7, weights=distance .................................  
[CV] n\_neighbors=7, weights=distance, score=(train=1.000, test=0.887), total= 0.1s  
[CV] n\_neighbors=8, weights=uniform ..................................  
[CV] n\_neighbors=8, weights=uniform, score=(train=0.907, test=0.878), total= 0.2s  
[CV] n\_neighbors=8, weights=uniform ..................................  
[CV] n\_neighbors=8, weights=uniform, score=(train=0.908, test=0.882), total= 0.1s  
[CV] n\_neighbors=8, weights=uniform ..................................  
[CV] n\_neighbors=8, weights=uniform, score=(train=0.906, test=0.883), total= 0.2s  
[CV] n\_neighbors=8, weights=uniform ..................................  
[CV] n\_neighbors=8, weights=uniform, score=(train=0.906, test=0.884), total= 0.1s  
[CV] n\_neighbors=8, weights=uniform ..................................  
[CV] n\_neighbors=8, weights=uniform, score=(train=0.906, test=0.880), total= 0.1s  
[CV] n\_neighbors=8, weights=distance .................................  
[CV] n\_neighbors=8, weights=distance, score=(train=1.000, test=0.888), total= 0.1s  
[CV] n\_neighbors=8, weights=distance .................................  
[CV] n\_neighbors=8, weights=distance, score=(train=1.000, test=0.889), total= 0.1s  
[CV] n\_neighbors=8, weights=distance .................................  
[CV] n\_neighbors=8, weights=distance, score=(train=1.000, test=0.886), total= 0.2s  
[CV] n\_neighbors=8, weights=distance .................................  
[CV] n\_neighbors=8, weights=distance, score=(train=1.000, test=0.888), total= 0.2s  
[CV] n\_neighbors=8, weights=distance .................................  
[CV] n\_neighbors=8, weights=distance, score=(train=1.000, test=0.888), total= 0.1s  
[CV] n\_neighbors=9, weights=uniform ..................................  
[CV] n\_neighbors=9, weights=uniform, score=(train=0.906, test=0.880), total= 0.1s  
[CV] n\_neighbors=9, weights=uniform ..................................  
[CV] n\_neighbors=9, weights=uniform, score=(train=0.907, test=0.882), total= 0.2s  
[CV] n\_neighbors=9, weights=uniform ..................................  
[CV] n\_neighbors=9, weights=uniform, score=(train=0.904, test=0.886), total= 0.2s  
[CV] n\_neighbors=9, weights=uniform ..................................  
[CV] n\_neighbors=9, weights=uniform, score=(train=0.906, test=0.887), total= 0.2s  
[CV] n\_neighbors=9, weights=uniform ..................................  
[CV] n\_neighbors=9, weights=uniform, score=(train=0.905, test=0.881), total= 0.2s  
[CV] n\_neighbors=9, weights=distance .................................  
[CV] n\_neighbors=9, weights=distance, score=(train=1.000, test=0.890), total= 0.2s  
[CV] n\_neighbors=9, weights=distance .................................  
[CV] n\_neighbors=9, weights=distance, score=(train=1.000, test=0.890), total= 0.2s  
[CV] n\_neighbors=9, weights=distance .................................  
[CV] n\_neighbors=9, weights=distance, score=(train=1.000, test=0.889), total= 0.2s  
[CV] n\_neighbors=9, weights=distance .................................  
[CV] n\_neighbors=9, weights=distance, score=(train=1.000, test=0.890), total= 0.2s  
[CV] n\_neighbors=9, weights=distance .................................  
[CV] n\_neighbors=9, weights=distance, score=(train=1.000, test=0.888), total= 0.2s  
[CV] n\_neighbors=10, weights=uniform .................................  
[CV] n\_neighbors=10, weights=uniform, score=(train=0.903, test=0.882), total= 0.2s  
[CV] n\_neighbors=10, weights=uniform .................................  
[CV] n\_neighbors=10, weights=uniform, score=(train=0.906, test=0.881), total= 0.2s  
[CV] n\_neighbors=10, weights=uniform .................................  
[CV] n\_neighbors=10, weights=uniform, score=(train=0.903, test=0.890), total= 0.2s  
[CV] n\_neighbors=10, weights=uniform .................................  
[CV] n\_neighbors=10, weights=uniform, score=(train=0.905, test=0.887), total= 0.2s  
[CV] n\_neighbors=10, weights=uniform .................................  
[CV] n\_neighbors=10, weights=uniform, score=(train=0.904, test=0.882), total= 0.2s  
[CV] n\_neighbors=10, weights=distance ................................  
[CV] n\_neighbors=10, weights=distance, score=(train=1.000, test=0.891), total= 0.2s  
[CV] n\_neighbors=10, weights=distance ................................  
[CV] n\_neighbors=10, weights=distance, score=(train=1.000, test=0.888), total= 0.2s  
[CV] n\_neighbors=10, weights=distance ................................  
[CV] n\_neighbors=10, weights=distance, score=(train=1.000, test=0.892), total= 0.2s  
[CV] n\_neighbors=10, weights=distance ................................  
[CV] n\_neighbors=10, weights=distance, score=(train=1.000, test=0.891), total= 0.2s  
[CV] n\_neighbors=10, weights=distance ................................  
[CV] n\_neighbors=10, weights=distance, score=(train=1.000, test=0.888), total= 0.2s  
[CV] n\_neighbors=11, weights=uniform .................................  
[CV] n\_neighbors=11, weights=uniform, score=(train=0.902, test=0.881), total= 0.2s  
[CV] n\_neighbors=11, weights=uniform .................................  
[CV] n\_neighbors=11, weights=uniform, score=(train=0.905, test=0.881), total= 0.2s  
[CV] n\_neighbors=11, weights=uniform .................................  
[CV] n\_neighbors=11, weights=uniform, score=(train=0.903, test=0.891), total= 0.2s  
[CV] n\_neighbors=11, weights=uniform .................................  
[CV] n\_neighbors=11, weights=uniform, score=(train=0.904, test=0.889), total= 0.2s  
[CV] n\_neighbors=11, weights=uniform .................................  
[CV] n\_neighbors=11, weights=uniform, score=(train=0.902, test=0.883), total= 0.2s  
[CV] n\_neighbors=11, weights=distance ................................  
[CV] n\_neighbors=11, weights=distance, score=(train=1.000, test=0.891), total= 0.2s  
[CV] n\_neighbors=11, weights=distance ................................  
[CV] n\_neighbors=11, weights=distance, score=(train=1.000, test=0.888), total= 0.2s  
[CV] n\_neighbors=11, weights=distance ................................  
[CV] n\_neighbors=11, weights=distance, score=(train=1.000, test=0.892), total= 0.2s  
[CV] n\_neighbors=11, weights=distance ................................  
[CV] n\_neighbors=11, weights=distance, score=(train=1.000, test=0.892), total= 0.2s  
[CV] n\_neighbors=11, weights=distance ................................  
[CV] n\_neighbors=11, weights=distance, score=(train=1.000, test=0.889), total= 0.2s  
[CV] n\_neighbors=12, weights=uniform .................................  
[CV] n\_neighbors=12, weights=uniform, score=(train=0.901, test=0.881), total= 0.2s  
[CV] n\_neighbors=12, weights=uniform .................................  
[CV] n\_neighbors=12, weights=uniform, score=(train=0.903, test=0.881), total= 0.2s  
[CV] n\_neighbors=12, weights=uniform .................................  
[CV] n\_neighbors=12, weights=uniform, score=(train=0.902, test=0.889), total= 0.2s  
[CV] n\_neighbors=12, weights=uniform .................................  
[CV] n\_neighbors=12, weights=uniform, score=(train=0.903, test=0.889), total= 0.2s  
[CV] n\_neighbors=12, weights=uniform .................................  
[CV] n\_neighbors=12, weights=uniform, score=(train=0.901, test=0.883), total= 0.2s  
[CV] n\_neighbors=12, weights=distance ................................  
[CV] n\_neighbors=12, weights=distance, score=(train=1.000, test=0.890), total= 0.2s  
[CV] n\_neighbors=12, weights=distance ................................  
[CV] n\_neighbors=12, weights=distance, score=(train=1.000, test=0.888), total= 0.2s  
[CV] n\_neighbors=12, weights=distance ................................  
[CV] n\_neighbors=12, weights=distance, score=(train=1.000, test=0.891), total= 0.2s  
[CV] n\_neighbors=12, weights=distance ................................  
[CV] n\_neighbors=12, weights=distance, score=(train=1.000, test=0.892), total= 0.2s  
[CV] n\_neighbors=12, weights=distance ................................  
[CV] n\_neighbors=12, weights=distance, score=(train=1.000, test=0.889), total= 0.2s  
[CV] n\_neighbors=13, weights=uniform .................................  
[CV] n\_neighbors=13, weights=uniform, score=(train=0.899, test=0.879), total= 0.2s  
[CV] n\_neighbors=13, weights=uniform .................................  
[CV] n\_neighbors=13, weights=uniform, score=(train=0.902, test=0.880), total= 0.2s  
[CV] n\_neighbors=13, weights=uniform .................................  
[CV] n\_neighbors=13, weights=uniform, score=(train=0.900, test=0.887), total= 0.2s  
[CV] n\_neighbors=13, weights=uniform .................................  
[CV] n\_neighbors=13, weights=uniform, score=(train=0.901, test=0.887), total= 0.2s  
[CV] n\_neighbors=13, weights=uniform .................................  
[CV] n\_neighbors=13, weights=uniform, score=(train=0.899, test=0.883), total= 0.2s  
[CV] n\_neighbors=13, weights=distance ................................  
[CV] n\_neighbors=13, weights=distance, score=(train=1.000, test=0.889), total= 0.1s  
[CV] n\_neighbors=13, weights=distance ................................  
[CV] n\_neighbors=13, weights=distance, score=(train=1.000, test=0.887), total= 0.2s  
[CV] n\_neighbors=13, weights=distance ................................  
[CV] n\_neighbors=13, weights=distance, score=(train=1.000, test=0.890), total= 0.2s  
[CV] n\_neighbors=13, weights=distance ................................  
[CV] n\_neighbors=13, weights=distance, score=(train=1.000, test=0.891), total= 0.2s  
[CV] n\_neighbors=13, weights=distance ................................  
[CV] n\_neighbors=13, weights=distance, score=(train=1.000, test=0.889), total= 0.2s  
[CV] n\_neighbors=14, weights=uniform .................................  
[CV] n\_neighbors=14, weights=uniform, score=(train=0.897, test=0.879), total= 0.2s  
[CV] n\_neighbors=14, weights=uniform .................................  
[CV] n\_neighbors=14, weights=uniform, score=(train=0.901, test=0.878), total= 0.2s  
[CV] n\_neighbors=14, weights=uniform .................................  
[CV] n\_neighbors=14, weights=uniform, score=(train=0.898, test=0.884), total= 0.2s  
[CV] n\_neighbors=14, weights=uniform .................................  
[CV] n\_neighbors=14, weights=uniform, score=(train=0.900, test=0.886), total= 0.2s  
[CV] n\_neighbors=14, weights=uniform .................................  
[CV] n\_neighbors=14, weights=uniform, score=(train=0.897, test=0.882), total= 0.2s  
[CV] n\_neighbors=14, weights=distance ................................  
[CV] n\_neighbors=14, weights=distance, score=(train=1.000, test=0.888), total= 0.2s  
[CV] n\_neighbors=14, weights=distance ................................  
[CV] n\_neighbors=14, weights=distance, score=(train=1.000, test=0.885), total= 0.2s  
[CV] n\_neighbors=14, weights=distance ................................  
[CV] n\_neighbors=14, weights=distance, score=(train=1.000, test=0.887), total= 0.2s  
[CV] n\_neighbors=14, weights=distance ................................  
[CV] n\_neighbors=14, weights=distance, score=(train=1.000, test=0.890), total= 0.2s  
[CV] n\_neighbors=14, weights=distance ................................  
[CV] n\_neighbors=14, weights=distance, score=(train=1.000, test=0.888), total= 0.2s  
[CV] n\_neighbors=15, weights=uniform .................................  
[CV] n\_neighbors=15, weights=uniform, score=(train=0.895, test=0.877), total= 0.2s  
[CV] n\_neighbors=15, weights=uniform .................................  
[CV] n\_neighbors=15, weights=uniform, score=(train=0.898, test=0.876), total= 0.2s  
[CV] n\_neighbors=15, weights=uniform .................................  
[CV] n\_neighbors=15, weights=uniform, score=(train=0.895, test=0.881), total= 0.2s  
[CV] n\_neighbors=15, weights=uniform .................................  
[CV] n\_neighbors=15, weights=uniform, score=(train=0.897, test=0.884), total= 0.2s  
[CV] n\_neighbors=15, weights=uniform .................................  
[CV] n\_neighbors=15, weights=uniform, score=(train=0.895, test=0.879), total= 0.2s  
[CV] n\_neighbors=15, weights=distance ................................  
[CV] n\_neighbors=15, weights=distance, score=(train=1.000, test=0.887), total= 0.2s  
[CV] n\_neighbors=15, weights=distance ................................  
[CV] n\_neighbors=15, weights=distance, score=(train=1.000, test=0.884), total= 0.2s  
[CV] n\_neighbors=15, weights=distance ................................  
[CV] n\_neighbors=15, weights=distance, score=(train=1.000, test=0.886), total= 0.2s  
[CV] n\_neighbors=15, weights=distance ................................  
[CV] n\_neighbors=15, weights=distance, score=(train=1.000, test=0.890), total= 0.2s  
[CV] n\_neighbors=15, weights=distance ................................  
[CV] n\_neighbors=15, weights=distance, score=(train=1.000, test=0.886), total= 0.2s  
[CV] n\_neighbors=16, weights=uniform .................................  
[CV] n\_neighbors=16, weights=uniform, score=(train=0.892, test=0.876), total= 0.2s  
[CV] n\_neighbors=16, weights=uniform .................................  
[CV] n\_neighbors=16, weights=uniform, score=(train=0.896, test=0.874), total= 0.2s  
[CV] n\_neighbors=16, weights=uniform .................................  
[CV] n\_neighbors=16, weights=uniform, score=(train=0.892, test=0.878), total= 0.2s  
[CV] n\_neighbors=16, weights=uniform .................................  
[CV] n\_neighbors=16, weights=uniform, score=(train=0.895, test=0.882), total= 0.2s  
[CV] n\_neighbors=16, weights=uniform .................................  
[CV] n\_neighbors=16, weights=uniform, score=(train=0.891, test=0.877), total= 0.2s  
[CV] n\_neighbors=16, weights=distance ................................  
[CV] n\_neighbors=16, weights=distance, score=(train=1.000, test=0.886), total= 0.2s  
[CV] n\_neighbors=16, weights=distance ................................  
[CV] n\_neighbors=16, weights=distance, score=(train=1.000, test=0.882), total= 0.2s  
[CV] n\_neighbors=16, weights=distance ................................  
[CV] n\_neighbors=16, weights=distance, score=(train=1.000, test=0.884), total= 0.2s  
[CV] n\_neighbors=16, weights=distance ................................  
[CV] n\_neighbors=16, weights=distance, score=(train=1.000, test=0.888), total= 0.2s  
[CV] n\_neighbors=16, weights=distance ................................  
[CV] n\_neighbors=16, weights=distance, score=(train=1.000, test=0.885), total= 0.2s  
[CV] n\_neighbors=17, weights=uniform .................................  
[CV] n\_neighbors=17, weights=uniform, score=(train=0.890, test=0.873), total= 0.2s  
[CV] n\_neighbors=17, weights=uniform .................................  
[CV] n\_neighbors=17, weights=uniform, score=(train=0.893, test=0.871), total= 0.2s  
[CV] n\_neighbors=17, weights=uniform .................................  
[CV] n\_neighbors=17, weights=uniform, score=(train=0.889, test=0.876), total= 0.4s  
[CV] n\_neighbors=17, weights=uniform .................................  
[CV] n\_neighbors=17, weights=uniform, score=(train=0.892, test=0.880), total= 0.3s  
[CV] n\_neighbors=17, weights=uniform .................................  
[CV] n\_neighbors=17, weights=uniform, score=(train=0.889, test=0.875), total= 0.2s  
[CV] n\_neighbors=17, weights=distance ................................  
[CV] n\_neighbors=17, weights=distance, score=(train=1.000, test=0.885), total= 0.3s  
[CV] n\_neighbors=17, weights=distance ................................  
[CV] n\_neighbors=17, weights=distance, score=(train=1.000, test=0.880), total= 0.3s  
[CV] n\_neighbors=17, weights=distance ................................  
[CV] n\_neighbors=17, weights=distance, score=(train=1.000, test=0.882), total= 0.2s  
[CV] n\_neighbors=17, weights=distance ................................  
[CV] n\_neighbors=17, weights=distance, score=(train=1.000, test=0.887), total= 0.2s  
[CV] n\_neighbors=17, weights=distance ................................  
[CV] n\_neighbors=17, weights=distance, score=(train=1.000, test=0.884), total= 0.2s  
[CV] n\_neighbors=18, weights=uniform .................................  
[CV] n\_neighbors=18, weights=uniform, score=(train=0.887, test=0.870), total= 0.2s  
[CV] n\_neighbors=18, weights=uniform .................................  
[CV] n\_neighbors=18, weights=uniform, score=(train=0.890, test=0.868), total= 0.3s  
[CV] n\_neighbors=18, weights=uniform .................................  
[CV] n\_neighbors=18, weights=uniform, score=(train=0.887, test=0.874), total= 0.2s  
[CV] n\_neighbors=18, weights=uniform .................................  
[CV] n\_neighbors=18, weights=uniform, score=(train=0.889, test=0.879), total= 0.2s  
[CV] n\_neighbors=18, weights=uniform .................................  
[CV] n\_neighbors=18, weights=uniform, score=(train=0.886, test=0.874), total= 0.2s  
[CV] n\_neighbors=18, weights=distance ................................  
[CV] n\_neighbors=18, weights=distance, score=(train=1.000, test=0.882), total= 0.3s  
[CV] n\_neighbors=18, weights=distance ................................  
[CV] n\_neighbors=18, weights=distance, score=(train=1.000, test=0.878), total= 0.2s  
[CV] n\_neighbors=18, weights=distance ................................  
[CV] n\_neighbors=18, weights=distance, score=(train=1.000, test=0.881), total= 0.2s  
[CV] n\_neighbors=18, weights=distance ................................  
[CV] n\_neighbors=18, weights=distance, score=(train=1.000, test=0.886), total= 0.2s  
[CV] n\_neighbors=18, weights=distance ................................  
[CV] n\_neighbors=18, weights=distance, score=(train=1.000, test=0.883), total= 0.2s  
[CV] n\_neighbors=19, weights=uniform .................................  
[CV] n\_neighbors=19, weights=uniform, score=(train=0.884, test=0.868), total= 0.2s  
[CV] n\_neighbors=19, weights=uniform .................................  
[CV] n\_neighbors=19, weights=uniform, score=(train=0.887, test=0.866), total= 0.2s  
[CV] n\_neighbors=19, weights=uniform .................................  
[CV] n\_neighbors=19, weights=uniform, score=(train=0.885, test=0.872), total= 0.4s  
[CV] n\_neighbors=19, weights=uniform .................................  
[CV] n\_neighbors=19, weights=uniform, score=(train=0.886, test=0.876), total= 0.4s  
[CV] n\_neighbors=19, weights=uniform .................................  
[CV] n\_neighbors=19, weights=uniform, score=(train=0.884, test=0.872), total= 0.2s  
[CV] n\_neighbors=19, weights=distance ................................  
[CV] n\_neighbors=19, weights=distance, score=(train=1.000, test=0.881), total= 0.2s  
[CV] n\_neighbors=19, weights=distance ................................  
[CV] n\_neighbors=19, weights=distance, score=(train=1.000, test=0.876), total= 0.2s  
[CV] n\_neighbors=19, weights=distance ................................  
[CV] n\_neighbors=19, weights=distance, score=(train=1.000, test=0.879), total= 0.2s  
[CV] n\_neighbors=19, weights=distance ................................  
[CV] n\_neighbors=19, weights=distance, score=(train=1.000, test=0.885), total= 0.2s  
[CV] n\_neighbors=19, weights=distance ................................  
[CV] n\_neighbors=19, weights=distance, score=(train=1.000, test=0.882), total= 0.2s  
[CV] n\_neighbors=20, weights=uniform .................................  
[CV] n\_neighbors=20, weights=uniform, score=(train=0.881, test=0.866), total= 0.2s  
[CV] n\_neighbors=20, weights=uniform .................................  
[CV] n\_neighbors=20, weights=uniform, score=(train=0.885, test=0.864), total= 0.2s  
[CV] n\_neighbors=20, weights=uniform .................................  
[CV] n\_neighbors=20, weights=uniform, score=(train=0.882, test=0.869), total= 0.2s  
[CV] n\_neighbors=20, weights=uniform .................................  
[CV] n\_neighbors=20, weights=uniform, score=(train=0.883, test=0.874), total= 0.2s  
[CV] n\_neighbors=20, weights=uniform .................................  
[CV] n\_neighbors=20, weights=uniform, score=(train=0.882, test=0.870), total= 0.2s  
[CV] n\_neighbors=20, weights=distance ................................  
[CV] n\_neighbors=20, weights=distance, score=(train=1.000, test=0.879), total= 0.2s  
[CV] n\_neighbors=20, weights=distance ................................  
[CV] n\_neighbors=20, weights=distance, score=(train=1.000, test=0.875), total= 0.4s  
[CV] n\_neighbors=20, weights=distance ................................  
[CV] n\_neighbors=20, weights=distance, score=(train=1.000, test=0.878), total= 0.2s  
[CV] n\_neighbors=20, weights=distance ................................  
[CV] n\_neighbors=20, weights=distance, score=(train=1.000, test=0.884), total= 0.3s  
[CV] n\_neighbors=20, weights=distance ................................  
[CV] n\_neighbors=20, weights=distance, score=(train=1.000, test=0.881), total= 0.2s

[Parallel(n\_jobs=1)]: Done 190 out of 190 | elapsed: 2.0min finished

KNeighborsRegressor(n\_neighbors=11, weights='distance')

0.8903810164642827

In [42]:

y\_pred1 = model\_gs.predict(data\_test)  
r2\_score(data\_cnt\_test, y\_pred1)

Out[42]:

0.5914738718365848

**Decision Tree + Analysis**[**¶**](#3dy6vkm)

In [51]:

parameters\_grid = {  
 'max\_depth': range(1, 21),  
 'min\_samples\_split': range(2, 21)  
}  
model = DecisionTreeRegressor()  
model\_gs = find\_best\_regressor(model, parameters\_grid, data\_train, data\_cnt\_train)  
y\_pred1 = model\_gs.predict(data\_test)  
r2\_score(data\_cnt\_test, y\_pred1)

Fitting 5 folds for each of 380 candidates, totalling 1900 fits  
[CV] max\_depth=1, min\_samples\_split=2 ................................  
[CV] max\_depth=1, min\_samples\_split=2, score=(train=0.310, test=0.318), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=2 ................................  
[CV] max\_depth=1, min\_samples\_split=2, score=(train=0.308, test=0.329), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=2 ................................  
[CV] max\_depth=1, min\_samples\_split=2, score=(train=0.314, test=0.304), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=2 ................................  
[CV] max\_depth=1, min\_samples\_split=2, score=(train=0.311, test=0.315), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=2 ................................  
[CV] max\_depth=1, min\_samples\_split=2, score=(train=0.316, test=0.293), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=3 ................................  
[CV] max\_depth=1, min\_samples\_split=3, score=(train=0.310, test=0.318), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=3 ................................  
[CV] max\_depth=1, min\_samples\_split=3, score=(train=0.308, test=0.329), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=3 ................................  
[CV] max\_depth=1, min\_samples\_split=3, score=(train=0.314, test=0.304), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=3 ................................  
[CV] max\_depth=1, min\_samples\_split=3, score=(train=0.311, test=0.315), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=3 ................................  
[CV] max\_depth=1, min\_samples\_split=3, score=(train=0.316, test=0.293), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=4 ................................  
[CV] max\_depth=1, min\_samples\_split=4, score=(train=0.310, test=0.318), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=4 ................................

[Parallel(n\_jobs=1)]: Using backend SequentialBackend with 1 concurrent workers.  
[Parallel(n\_jobs=1)]: Done 1 out of 1 | elapsed: 0.0s remaining: 0.0s  
[Parallel(n\_jobs=1)]: Done 2 out of 2 | elapsed: 0.1s remaining: 0.0s  
[Parallel(n\_jobs=1)]: Done 3 out of 3 | elapsed: 0.1s remaining: 0.0s

[CV] max\_depth=1, min\_samples\_split=4, score=(train=0.308, test=0.329), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=4 ................................  
[CV] max\_depth=1, min\_samples\_split=4, score=(train=0.314, test=0.304), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=4 ................................  
[CV] max\_depth=1, min\_samples\_split=4, score=(train=0.311, test=0.315), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=4 ................................  
[CV] max\_depth=1, min\_samples\_split=4, score=(train=0.316, test=0.293), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=5 ................................  
[CV] max\_depth=1, min\_samples\_split=5, score=(train=0.310, test=0.318), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=5 ................................  
[CV] max\_depth=1, min\_samples\_split=5, score=(train=0.308, test=0.329), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=5 ................................  
[CV] max\_depth=1, min\_samples\_split=5, score=(train=0.314, test=0.304), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=5 ................................  
[CV] max\_depth=1, min\_samples\_split=5, score=(train=0.311, test=0.315), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=5 ................................  
[CV] max\_depth=1, min\_samples\_split=5, score=(train=0.316, test=0.293), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=6 ................................  
[CV] max\_depth=1, min\_samples\_split=6, score=(train=0.310, test=0.318), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=6 ................................  
[CV] max\_depth=1, min\_samples\_split=6, score=(train=0.308, test=0.329), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=6 ................................  
[CV] max\_depth=1, min\_samples\_split=6, score=(train=0.314, test=0.304), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=6 ................................  
[CV] max\_depth=1, min\_samples\_split=6, score=(train=0.311, test=0.315), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=6 ................................  
[CV] max\_depth=1, min\_samples\_split=6, score=(train=0.316, test=0.293), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=7 ................................  
[CV] max\_depth=1, min\_samples\_split=7, score=(train=0.310, test=0.318), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=7 ................................  
[CV] max\_depth=1, min\_samples\_split=7, score=(train=0.308, test=0.329), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=7 ................................  
[CV] max\_depth=1, min\_samples\_split=7, score=(train=0.314, test=0.304), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=7 ................................  
[CV] max\_depth=1, min\_samples\_split=7, score=(train=0.311, test=0.315), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=7 ................................  
[CV] max\_depth=1, min\_samples\_split=7, score=(train=0.316, test=0.293), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=8 ................................  
[CV] max\_depth=1, min\_samples\_split=8, score=(train=0.310, test=0.318), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=8 ................................  
[CV] max\_depth=1, min\_samples\_split=8, score=(train=0.308, test=0.329), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=8 ................................  
[CV] max\_depth=1, min\_samples\_split=8, score=(train=0.314, test=0.304), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=8 ................................  
[CV] max\_depth=1, min\_samples\_split=8, score=(train=0.311, test=0.315), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=8 ................................  
[CV] max\_depth=1, min\_samples\_split=8, score=(train=0.316, test=0.293), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=9 ................................  
[CV] max\_depth=1, min\_samples\_split=9, score=(train=0.310, test=0.318), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=9 ................................  
[CV] max\_depth=1, min\_samples\_split=9, score=(train=0.308, test=0.329), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=9 ................................  
[CV] max\_depth=1, min\_samples\_split=9, score=(train=0.314, test=0.304), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=9 ................................  
[CV] max\_depth=1, min\_samples\_split=9, score=(train=0.311, test=0.315), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=9 ................................  
[CV] max\_depth=1, min\_samples\_split=9, score=(train=0.316, test=0.293), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=10 ...............................  
[CV] max\_depth=1, min\_samples\_split=10, score=(train=0.310, test=0.318), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=10 ...............................  
[CV] max\_depth=1, min\_samples\_split=10, score=(train=0.308, test=0.329), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=10 ...............................  
[CV] max\_depth=1, min\_samples\_split=10, score=(train=0.314, test=0.304), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=10 ...............................  
[CV] max\_depth=1, min\_samples\_split=10, score=(train=0.311, test=0.315), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=10 ...............................  
[CV] max\_depth=1, min\_samples\_split=10, score=(train=0.316, test=0.293), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=11 ...............................  
[CV] max\_depth=1, min\_samples\_split=11, score=(train=0.310, test=0.318), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=11 ...............................  
[CV] max\_depth=1, min\_samples\_split=11, score=(train=0.308, test=0.329), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=11 ...............................  
[CV] max\_depth=1, min\_samples\_split=11, score=(train=0.314, test=0.304), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=11 ...............................  
[CV] max\_depth=1, min\_samples\_split=11, score=(train=0.311, test=0.315), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=11 ...............................  
[CV] max\_depth=1, min\_samples\_split=11, score=(train=0.316, test=0.293), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=12 ...............................  
[CV] max\_depth=1, min\_samples\_split=12, score=(train=0.310, test=0.318), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=12 ...............................  
[CV] max\_depth=1, min\_samples\_split=12, score=(train=0.308, test=0.329), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=12 ...............................  
[CV] max\_depth=1, min\_samples\_split=12, score=(train=0.314, test=0.304), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=12 ...............................  
[CV] max\_depth=1, min\_samples\_split=12, score=(train=0.311, test=0.315), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=12 ...............................  
[CV] max\_depth=1, min\_samples\_split=12, score=(train=0.316, test=0.293), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=13 ...............................  
[CV] max\_depth=1, min\_samples\_split=13, score=(train=0.310, test=0.318), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=13 ...............................  
[CV] max\_depth=1, min\_samples\_split=13, score=(train=0.308, test=0.329), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=13 ...............................  
[CV] max\_depth=1, min\_samples\_split=13, score=(train=0.314, test=0.304), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=13 ...............................  
[CV] max\_depth=1, min\_samples\_split=13, score=(train=0.311, test=0.315), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=13 ...............................  
[CV] max\_depth=1, min\_samples\_split=13, score=(train=0.316, test=0.293), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=14 ...............................  
[CV] max\_depth=1, min\_samples\_split=14, score=(train=0.310, test=0.318), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=14 ...............................  
[CV] max\_depth=1, min\_samples\_split=14, score=(train=0.308, test=0.329), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=14 ...............................  
[CV] max\_depth=1, min\_samples\_split=14, score=(train=0.314, test=0.304), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=14 ...............................  
[CV] max\_depth=1, min\_samples\_split=14, score=(train=0.311, test=0.315), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=14 ...............................  
[CV] max\_depth=1, min\_samples\_split=14, score=(train=0.316, test=0.293), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=15 ...............................  
[CV] max\_depth=1, min\_samples\_split=15, score=(train=0.310, test=0.318), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=15 ...............................  
[CV] max\_depth=1, min\_samples\_split=15, score=(train=0.308, test=0.329), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=15 ...............................  
[CV] max\_depth=1, min\_samples\_split=15, score=(train=0.314, test=0.304), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=15 ...............................  
[CV] max\_depth=1, min\_samples\_split=15, score=(train=0.311, test=0.315), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=15 ...............................  
[CV] max\_depth=1, min\_samples\_split=15, score=(train=0.316, test=0.293), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=16 ...............................  
[CV] max\_depth=1, min\_samples\_split=16, score=(train=0.310, test=0.318), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=16 ...............................  
[CV] max\_depth=1, min\_samples\_split=16, score=(train=0.308, test=0.329), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=16 ...............................  
[CV] max\_depth=1, min\_samples\_split=16, score=(train=0.314, test=0.304), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=16 ...............................  
[CV] max\_depth=1, min\_samples\_split=16, score=(train=0.311, test=0.315), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=16 ...............................  
[CV] max\_depth=1, min\_samples\_split=16, score=(train=0.316, test=0.293), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=17 ...............................  
[CV] max\_depth=1, min\_samples\_split=17, score=(train=0.310, test=0.318), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=17 ...............................  
[CV] max\_depth=1, min\_samples\_split=17, score=(train=0.308, test=0.329), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=17 ...............................  
[CV] max\_depth=1, min\_samples\_split=17, score=(train=0.314, test=0.304), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=17 ...............................  
[CV] max\_depth=1, min\_samples\_split=17, score=(train=0.311, test=0.315), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=17 ...............................  
[CV] max\_depth=1, min\_samples\_split=17, score=(train=0.316, test=0.293), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=18 ...............................  
[CV] max\_depth=1, min\_samples\_split=18, score=(train=0.310, test=0.318), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=18 ...............................  
[CV] max\_depth=1, min\_samples\_split=18, score=(train=0.308, test=0.329), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=18 ...............................  
[CV] max\_depth=1, min\_samples\_split=18, score=(train=0.314, test=0.304), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=18 ...............................  
[CV] max\_depth=1, min\_samples\_split=18, score=(train=0.311, test=0.315), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=18 ...............................  
[CV] max\_depth=1, min\_samples\_split=18, score=(train=0.316, test=0.293), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=19 ...............................  
[CV] max\_depth=1, min\_samples\_split=19, score=(train=0.310, test=0.318), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=19 ...............................  
[CV] max\_depth=1, min\_samples\_split=19, score=(train=0.308, test=0.329), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=19 ...............................  
[CV] max\_depth=1, min\_samples\_split=19, score=(train=0.314, test=0.304), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=19 ...............................  
[CV] max\_depth=1, min\_samples\_split=19, score=(train=0.311, test=0.315), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=19 ...............................  
[CV] max\_depth=1, min\_samples\_split=19, score=(train=0.316, test=0.293), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=20 ...............................  
[CV] max\_depth=1, min\_samples\_split=20, score=(train=0.310, test=0.318), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=20 ...............................  
[CV] max\_depth=1, min\_samples\_split=20, score=(train=0.308, test=0.329), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=20 ...............................  
[CV] max\_depth=1, min\_samples\_split=20, score=(train=0.314, test=0.304), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=20 ...............................  
[CV] max\_depth=1, min\_samples\_split=20, score=(train=0.311, test=0.315), total= 0.0s  
[CV] max\_depth=1, min\_samples\_split=20 ...............................  
[CV] max\_depth=1, min\_samples\_split=20, score=(train=0.316, test=0.293), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=2 ................................  
[CV] max\_depth=2, min\_samples\_split=2, score=(train=0.453, test=0.467), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=2 ................................  
[CV] max\_depth=2, min\_samples\_split=2, score=(train=0.453, test=0.468), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=2 ................................  
[CV] max\_depth=2, min\_samples\_split=2, score=(train=0.454, test=0.457), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=2 ................................  
[CV] max\_depth=2, min\_samples\_split=2, score=(train=0.459, test=0.442), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=2 ................................  
[CV] max\_depth=2, min\_samples\_split=2, score=(train=0.461, test=0.435), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=3 ................................  
[CV] max\_depth=2, min\_samples\_split=3, score=(train=0.453, test=0.467), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=3 ................................  
[CV] max\_depth=2, min\_samples\_split=3, score=(train=0.453, test=0.468), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=3 ................................  
[CV] max\_depth=2, min\_samples\_split=3, score=(train=0.454, test=0.457), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=3 ................................  
[CV] max\_depth=2, min\_samples\_split=3, score=(train=0.459, test=0.442), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=3 ................................  
[CV] max\_depth=2, min\_samples\_split=3, score=(train=0.461, test=0.435), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=4 ................................  
[CV] max\_depth=2, min\_samples\_split=4, score=(train=0.453, test=0.467), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=4 ................................  
[CV] max\_depth=2, min\_samples\_split=4, score=(train=0.453, test=0.468), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=4 ................................  
[CV] max\_depth=2, min\_samples\_split=4, score=(train=0.454, test=0.457), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=4 ................................  
[CV] max\_depth=2, min\_samples\_split=4, score=(train=0.459, test=0.442), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=4 ................................  
[CV] max\_depth=2, min\_samples\_split=4, score=(train=0.461, test=0.435), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=5 ................................  
[CV] max\_depth=2, min\_samples\_split=5, score=(train=0.453, test=0.467), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=5 ................................  
[CV] max\_depth=2, min\_samples\_split=5, score=(train=0.453, test=0.468), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=5 ................................  
[CV] max\_depth=2, min\_samples\_split=5, score=(train=0.454, test=0.457), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=5 ................................  
[CV] max\_depth=2, min\_samples\_split=5, score=(train=0.459, test=0.442), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=5 ................................  
[CV] max\_depth=2, min\_samples\_split=5, score=(train=0.461, test=0.435), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=6 ................................  
[CV] max\_depth=2, min\_samples\_split=6, score=(train=0.453, test=0.467), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=6 ................................  
[CV] max\_depth=2, min\_samples\_split=6, score=(train=0.453, test=0.468), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=6 ................................  
[CV] max\_depth=2, min\_samples\_split=6, score=(train=0.454, test=0.457), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=6 ................................  
[CV] max\_depth=2, min\_samples\_split=6, score=(train=0.459, test=0.442), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=6 ................................  
[CV] max\_depth=2, min\_samples\_split=6, score=(train=0.461, test=0.435), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=7 ................................  
[CV] max\_depth=2, min\_samples\_split=7, score=(train=0.453, test=0.467), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=7 ................................  
[CV] max\_depth=2, min\_samples\_split=7, score=(train=0.453, test=0.468), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=7 ................................  
[CV] max\_depth=2, min\_samples\_split=7, score=(train=0.454, test=0.457), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=7 ................................  
[CV] max\_depth=2, min\_samples\_split=7, score=(train=0.459, test=0.442), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=7 ................................  
[CV] max\_depth=2, min\_samples\_split=7, score=(train=0.461, test=0.435), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=8 ................................  
[CV] max\_depth=2, min\_samples\_split=8, score=(train=0.453, test=0.467), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=8 ................................  
[CV] max\_depth=2, min\_samples\_split=8, score=(train=0.453, test=0.468), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=8 ................................  
[CV] max\_depth=2, min\_samples\_split=8, score=(train=0.454, test=0.457), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=8 ................................  
[CV] max\_depth=2, min\_samples\_split=8, score=(train=0.459, test=0.442), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=8 ................................  
[CV] max\_depth=2, min\_samples\_split=8, score=(train=0.461, test=0.435), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=9 ................................  
[CV] max\_depth=2, min\_samples\_split=9, score=(train=0.453, test=0.467), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=9 ................................  
[CV] max\_depth=2, min\_samples\_split=9, score=(train=0.453, test=0.468), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=9 ................................  
[CV] max\_depth=2, min\_samples\_split=9, score=(train=0.454, test=0.457), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=9 ................................  
[CV] max\_depth=2, min\_samples\_split=9, score=(train=0.459, test=0.442), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=9 ................................  
[CV] max\_depth=2, min\_samples\_split=9, score=(train=0.461, test=0.435), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=10 ...............................  
[CV] max\_depth=2, min\_samples\_split=10, score=(train=0.453, test=0.467), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=10 ...............................  
[CV] max\_depth=2, min\_samples\_split=10, score=(train=0.453, test=0.468), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=10 ...............................  
[CV] max\_depth=2, min\_samples\_split=10, score=(train=0.454, test=0.457), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=10 ...............................  
[CV] max\_depth=2, min\_samples\_split=10, score=(train=0.459, test=0.442), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=10 ...............................  
[CV] max\_depth=2, min\_samples\_split=10, score=(train=0.461, test=0.435), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=11 ...............................  
[CV] max\_depth=2, min\_samples\_split=11, score=(train=0.453, test=0.467), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=11 ...............................  
[CV] max\_depth=2, min\_samples\_split=11, score=(train=0.453, test=0.468), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=11 ...............................  
[CV] max\_depth=2, min\_samples\_split=11, score=(train=0.454, test=0.457), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=11 ...............................  
[CV] max\_depth=2, min\_samples\_split=11, score=(train=0.459, test=0.442), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=11 ...............................  
[CV] max\_depth=2, min\_samples\_split=11, score=(train=0.461, test=0.435), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=12 ...............................  
[CV] max\_depth=2, min\_samples\_split=12, score=(train=0.453, test=0.467), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=12 ...............................  
[CV] max\_depth=2, min\_samples\_split=12, score=(train=0.453, test=0.468), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=12 ...............................  
[CV] max\_depth=2, min\_samples\_split=12, score=(train=0.454, test=0.457), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=12 ...............................  
[CV] max\_depth=2, min\_samples\_split=12, score=(train=0.459, test=0.442), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=12 ...............................  
[CV] max\_depth=2, min\_samples\_split=12, score=(train=0.461, test=0.435), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=13 ...............................  
[CV] max\_depth=2, min\_samples\_split=13, score=(train=0.453, test=0.467), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=13 ...............................  
[CV] max\_depth=2, min\_samples\_split=13, score=(train=0.453, test=0.468), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=13 ...............................  
[CV] max\_depth=2, min\_samples\_split=13, score=(train=0.454, test=0.457), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=13 ...............................  
[CV] max\_depth=2, min\_samples\_split=13, score=(train=0.459, test=0.442), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=13 ...............................  
[CV] max\_depth=2, min\_samples\_split=13, score=(train=0.461, test=0.435), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=14 ...............................  
[CV] max\_depth=2, min\_samples\_split=14, score=(train=0.453, test=0.467), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=14 ...............................  
[CV] max\_depth=2, min\_samples\_split=14, score=(train=0.453, test=0.468), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=14 ...............................  
[CV] max\_depth=2, min\_samples\_split=14, score=(train=0.454, test=0.457), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=14 ...............................  
[CV] max\_depth=2, min\_samples\_split=14, score=(train=0.459, test=0.442), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=14 ...............................  
[CV] max\_depth=2, min\_samples\_split=14, score=(train=0.461, test=0.435), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=15 ...............................  
[CV] max\_depth=2, min\_samples\_split=15, score=(train=0.453, test=0.467), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=15 ...............................  
[CV] max\_depth=2, min\_samples\_split=15, score=(train=0.453, test=0.468), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=15 ...............................  
[CV] max\_depth=2, min\_samples\_split=15, score=(train=0.454, test=0.457), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=15 ...............................  
[CV] max\_depth=2, min\_samples\_split=15, score=(train=0.459, test=0.442), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=15 ...............................  
[CV] max\_depth=2, min\_samples\_split=15, score=(train=0.461, test=0.435), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=16 ...............................  
[CV] max\_depth=2, min\_samples\_split=16, score=(train=0.453, test=0.467), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=16 ...............................  
[CV] max\_depth=2, min\_samples\_split=16, score=(train=0.453, test=0.468), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=16 ...............................  
[CV] max\_depth=2, min\_samples\_split=16, score=(train=0.454, test=0.457), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=16 ...............................  
[CV] max\_depth=2, min\_samples\_split=16, score=(train=0.459, test=0.442), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=16 ...............................  
[CV] max\_depth=2, min\_samples\_split=16, score=(train=0.461, test=0.435), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=17 ...............................  
[CV] max\_depth=2, min\_samples\_split=17, score=(train=0.453, test=0.467), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=17 ...............................  
[CV] max\_depth=2, min\_samples\_split=17, score=(train=0.453, test=0.468), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=17 ...............................  
[CV] max\_depth=2, min\_samples\_split=17, score=(train=0.454, test=0.457), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=17 ...............................  
[CV] max\_depth=2, min\_samples\_split=17, score=(train=0.459, test=0.442), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=17 ...............................  
[CV] max\_depth=2, min\_samples\_split=17, score=(train=0.461, test=0.435), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=18 ...............................  
[CV] max\_depth=2, min\_samples\_split=18, score=(train=0.453, test=0.467), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=18 ...............................  
[CV] max\_depth=2, min\_samples\_split=18, score=(train=0.453, test=0.468), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=18 ...............................  
[CV] max\_depth=2, min\_samples\_split=18, score=(train=0.454, test=0.457), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=18 ...............................  
[CV] max\_depth=2, min\_samples\_split=18, score=(train=0.459, test=0.442), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=18 ...............................  
[CV] max\_depth=2, min\_samples\_split=18, score=(train=0.461, test=0.435), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=19 ...............................  
[CV] max\_depth=2, min\_samples\_split=19, score=(train=0.453, test=0.467), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=19 ...............................  
[CV] max\_depth=2, min\_samples\_split=19, score=(train=0.453, test=0.468), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=19 ...............................  
[CV] max\_depth=2, min\_samples\_split=19, score=(train=0.454, test=0.457), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=19 ...............................  
[CV] max\_depth=2, min\_samples\_split=19, score=(train=0.459, test=0.442), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=19 ...............................  
[CV] max\_depth=2, min\_samples\_split=19, score=(train=0.461, test=0.435), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=20 ...............................  
[CV] max\_depth=2, min\_samples\_split=20, score=(train=0.453, test=0.467), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=20 ...............................  
[CV] max\_depth=2, min\_samples\_split=20, score=(train=0.453, test=0.468), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=20 ...............................  
[CV] max\_depth=2, min\_samples\_split=20, score=(train=0.454, test=0.457), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=20 ...............................  
[CV] max\_depth=2, min\_samples\_split=20, score=(train=0.459, test=0.442), total= 0.0s  
[CV] max\_depth=2, min\_samples\_split=20 ...............................  
[CV] max\_depth=2, min\_samples\_split=20, score=(train=0.461, test=0.435), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=2 ................................  
[CV] max\_depth=3, min\_samples\_split=2, score=(train=0.529, test=0.532), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=2 ................................  
[CV] max\_depth=3, min\_samples\_split=2, score=(train=0.527, test=0.539), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=2 ................................  
[CV] max\_depth=3, min\_samples\_split=2, score=(train=0.526, test=0.543), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=2 ................................  
[CV] max\_depth=3, min\_samples\_split=2, score=(train=0.534, test=0.512), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=2 ................................  
[CV] max\_depth=3, min\_samples\_split=2, score=(train=0.534, test=0.511), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=3 ................................  
[CV] max\_depth=3, min\_samples\_split=3, score=(train=0.529, test=0.532), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=3 ................................  
[CV] max\_depth=3, min\_samples\_split=3, score=(train=0.527, test=0.539), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=3 ................................  
[CV] max\_depth=3, min\_samples\_split=3, score=(train=0.526, test=0.543), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=3 ................................  
[CV] max\_depth=3, min\_samples\_split=3, score=(train=0.534, test=0.512), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=3 ................................  
[CV] max\_depth=3, min\_samples\_split=3, score=(train=0.534, test=0.511), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=4 ................................  
[CV] max\_depth=3, min\_samples\_split=4, score=(train=0.529, test=0.532), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=4 ................................  
[CV] max\_depth=3, min\_samples\_split=4, score=(train=0.527, test=0.539), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=4 ................................  
[CV] max\_depth=3, min\_samples\_split=4, score=(train=0.526, test=0.543), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=4 ................................  
[CV] max\_depth=3, min\_samples\_split=4, score=(train=0.534, test=0.512), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=4 ................................  
[CV] max\_depth=3, min\_samples\_split=4, score=(train=0.534, test=0.511), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=5 ................................  
[CV] max\_depth=3, min\_samples\_split=5, score=(train=0.529, test=0.532), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=5 ................................  
[CV] max\_depth=3, min\_samples\_split=5, score=(train=0.527, test=0.539), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=5 ................................  
[CV] max\_depth=3, min\_samples\_split=5, score=(train=0.526, test=0.543), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=5 ................................  
[CV] max\_depth=3, min\_samples\_split=5, score=(train=0.534, test=0.512), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=5 ................................  
[CV] max\_depth=3, min\_samples\_split=5, score=(train=0.534, test=0.511), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=6 ................................  
[CV] max\_depth=3, min\_samples\_split=6, score=(train=0.529, test=0.532), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=6 ................................  
[CV] max\_depth=3, min\_samples\_split=6, score=(train=0.527, test=0.539), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=6 ................................  
[CV] max\_depth=3, min\_samples\_split=6, score=(train=0.526, test=0.543), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=6 ................................  
[CV] max\_depth=3, min\_samples\_split=6, score=(train=0.534, test=0.512), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=6 ................................  
[CV] max\_depth=3, min\_samples\_split=6, score=(train=0.534, test=0.511), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=7 ................................  
[CV] max\_depth=3, min\_samples\_split=7, score=(train=0.529, test=0.532), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=7 ................................  
[CV] max\_depth=3, min\_samples\_split=7, score=(train=0.527, test=0.539), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=7 ................................  
[CV] max\_depth=3, min\_samples\_split=7, score=(train=0.526, test=0.543), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=7 ................................  
[CV] max\_depth=3, min\_samples\_split=7, score=(train=0.534, test=0.512), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=7 ................................  
[CV] max\_depth=3, min\_samples\_split=7, score=(train=0.534, test=0.511), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=8 ................................  
[CV] max\_depth=3, min\_samples\_split=8, score=(train=0.529, test=0.532), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=8 ................................  
[CV] max\_depth=3, min\_samples\_split=8, score=(train=0.527, test=0.539), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=8 ................................  
[CV] max\_depth=3, min\_samples\_split=8, score=(train=0.526, test=0.543), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=8 ................................  
[CV] max\_depth=3, min\_samples\_split=8, score=(train=0.534, test=0.512), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=8 ................................  
[CV] max\_depth=3, min\_samples\_split=8, score=(train=0.534, test=0.511), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=9 ................................  
[CV] max\_depth=3, min\_samples\_split=9, score=(train=0.529, test=0.532), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=9 ................................  
[CV] max\_depth=3, min\_samples\_split=9, score=(train=0.527, test=0.539), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=9 ................................  
[CV] max\_depth=3, min\_samples\_split=9, score=(train=0.526, test=0.543), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=9 ................................  
[CV] max\_depth=3, min\_samples\_split=9, score=(train=0.534, test=0.512), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=9 ................................  
[CV] max\_depth=3, min\_samples\_split=9, score=(train=0.534, test=0.511), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=10 ...............................  
[CV] max\_depth=3, min\_samples\_split=10, score=(train=0.529, test=0.532), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=10 ...............................  
[CV] max\_depth=3, min\_samples\_split=10, score=(train=0.527, test=0.539), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=10 ...............................  
[CV] max\_depth=3, min\_samples\_split=10, score=(train=0.526, test=0.543), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=10 ...............................  
[CV] max\_depth=3, min\_samples\_split=10, score=(train=0.534, test=0.512), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=10 ...............................  
[CV] max\_depth=3, min\_samples\_split=10, score=(train=0.534, test=0.511), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=11 ...............................  
[CV] max\_depth=3, min\_samples\_split=11, score=(train=0.529, test=0.532), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=11 ...............................  
[CV] max\_depth=3, min\_samples\_split=11, score=(train=0.527, test=0.539), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=11 ...............................  
[CV] max\_depth=3, min\_samples\_split=11, score=(train=0.526, test=0.543), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=11 ...............................  
[CV] max\_depth=3, min\_samples\_split=11, score=(train=0.534, test=0.512), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=11 ...............................  
[CV] max\_depth=3, min\_samples\_split=11, score=(train=0.534, test=0.511), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=12 ...............................  
[CV] max\_depth=3, min\_samples\_split=12, score=(train=0.529, test=0.532), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=12 ...............................  
[CV] max\_depth=3, min\_samples\_split=12, score=(train=0.527, test=0.539), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=12 ...............................  
[CV] max\_depth=3, min\_samples\_split=12, score=(train=0.526, test=0.543), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=12 ...............................  
[CV] max\_depth=3, min\_samples\_split=12, score=(train=0.534, test=0.512), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=12 ...............................  
[CV] max\_depth=3, min\_samples\_split=12, score=(train=0.534, test=0.511), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=13 ...............................  
[CV] max\_depth=3, min\_samples\_split=13, score=(train=0.529, test=0.532), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=13 ...............................  
[CV] max\_depth=3, min\_samples\_split=13, score=(train=0.527, test=0.539), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=13 ...............................  
[CV] max\_depth=3, min\_samples\_split=13, score=(train=0.526, test=0.543), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=13 ...............................  
[CV] max\_depth=3, min\_samples\_split=13, score=(train=0.534, test=0.512), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=13 ...............................  
[CV] max\_depth=3, min\_samples\_split=13, score=(train=0.534, test=0.511), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=14 ...............................  
[CV] max\_depth=3, min\_samples\_split=14, score=(train=0.529, test=0.532), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=14 ...............................  
[CV] max\_depth=3, min\_samples\_split=14, score=(train=0.527, test=0.539), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=14 ...............................  
[CV] max\_depth=3, min\_samples\_split=14, score=(train=0.526, test=0.543), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=14 ...............................  
[CV] max\_depth=3, min\_samples\_split=14, score=(train=0.534, test=0.512), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=14 ...............................  
[CV] max\_depth=3, min\_samples\_split=14, score=(train=0.534, test=0.511), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=15 ...............................  
[CV] max\_depth=3, min\_samples\_split=15, score=(train=0.529, test=0.532), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=15 ...............................  
[CV] max\_depth=3, min\_samples\_split=15, score=(train=0.527, test=0.539), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=15 ...............................  
[CV] max\_depth=3, min\_samples\_split=15, score=(train=0.526, test=0.543), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=15 ...............................  
[CV] max\_depth=3, min\_samples\_split=15, score=(train=0.534, test=0.512), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=15 ...............................  
[CV] max\_depth=3, min\_samples\_split=15, score=(train=0.534, test=0.511), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=16 ...............................  
[CV] max\_depth=3, min\_samples\_split=16, score=(train=0.529, test=0.532), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=16 ...............................  
[CV] max\_depth=3, min\_samples\_split=16, score=(train=0.527, test=0.539), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=16 ...............................  
[CV] max\_depth=3, min\_samples\_split=16, score=(train=0.526, test=0.543), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=16 ...............................  
[CV] max\_depth=3, min\_samples\_split=16, score=(train=0.534, test=0.512), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=16 ...............................  
[CV] max\_depth=3, min\_samples\_split=16, score=(train=0.534, test=0.511), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=17 ...............................  
[CV] max\_depth=3, min\_samples\_split=17, score=(train=0.529, test=0.532), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=17 ...............................  
[CV] max\_depth=3, min\_samples\_split=17, score=(train=0.527, test=0.539), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=17 ...............................  
[CV] max\_depth=3, min\_samples\_split=17, score=(train=0.526, test=0.543), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=17 ...............................  
[CV] max\_depth=3, min\_samples\_split=17, score=(train=0.534, test=0.512), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=17 ...............................  
[CV] max\_depth=3, min\_samples\_split=17, score=(train=0.534, test=0.511), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=18 ...............................  
[CV] max\_depth=3, min\_samples\_split=18, score=(train=0.529, test=0.532), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=18 ...............................  
[CV] max\_depth=3, min\_samples\_split=18, score=(train=0.527, test=0.539), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=18 ...............................  
[CV] max\_depth=3, min\_samples\_split=18, score=(train=0.526, test=0.543), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=18 ...............................  
[CV] max\_depth=3, min\_samples\_split=18, score=(train=0.534, test=0.512), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=18 ...............................  
[CV] max\_depth=3, min\_samples\_split=18, score=(train=0.534, test=0.511), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=19 ...............................  
[CV] max\_depth=3, min\_samples\_split=19, score=(train=0.529, test=0.532), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=19 ...............................  
[CV] max\_depth=3, min\_samples\_split=19, score=(train=0.527, test=0.539), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=19 ...............................  
[CV] max\_depth=3, min\_samples\_split=19, score=(train=0.526, test=0.543), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=19 ...............................  
[CV] max\_depth=3, min\_samples\_split=19, score=(train=0.534, test=0.512), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=19 ...............................  
[CV] max\_depth=3, min\_samples\_split=19, score=(train=0.534, test=0.511), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=20 ...............................  
[CV] max\_depth=3, min\_samples\_split=20, score=(train=0.529, test=0.532), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=20 ...............................  
[CV] max\_depth=3, min\_samples\_split=20, score=(train=0.527, test=0.539), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=20 ...............................  
[CV] max\_depth=3, min\_samples\_split=20, score=(train=0.526, test=0.543), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=20 ...............................  
[CV] max\_depth=3, min\_samples\_split=20, score=(train=0.534, test=0.512), total= 0.0s  
[CV] max\_depth=3, min\_samples\_split=20 ...............................  
[CV] max\_depth=3, min\_samples\_split=20, score=(train=0.534, test=0.511), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=2 ................................  
[CV] max\_depth=4, min\_samples\_split=2, score=(train=0.618, test=0.616), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=2 ................................  
[CV] max\_depth=4, min\_samples\_split=2, score=(train=0.613, test=0.634), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=2 ................................  
[CV] max\_depth=4, min\_samples\_split=2, score=(train=0.615, test=0.625), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=2 ................................  
[CV] max\_depth=4, min\_samples\_split=2, score=(train=0.620, test=0.603), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=2 ................................  
[CV] max\_depth=4, min\_samples\_split=2, score=(train=0.622, test=0.597), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=3 ................................  
[CV] max\_depth=4, min\_samples\_split=3, score=(train=0.618, test=0.616), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=3 ................................  
[CV] max\_depth=4, min\_samples\_split=3, score=(train=0.613, test=0.634), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=3 ................................  
[CV] max\_depth=4, min\_samples\_split=3, score=(train=0.615, test=0.625), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=3 ................................  
[CV] max\_depth=4, min\_samples\_split=3, score=(train=0.620, test=0.603), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=3 ................................  
[CV] max\_depth=4, min\_samples\_split=3, score=(train=0.622, test=0.597), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=4 ................................  
[CV] max\_depth=4, min\_samples\_split=4, score=(train=0.618, test=0.616), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=4 ................................  
[CV] max\_depth=4, min\_samples\_split=4, score=(train=0.613, test=0.634), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=4 ................................  
[CV] max\_depth=4, min\_samples\_split=4, score=(train=0.615, test=0.625), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=4 ................................  
[CV] max\_depth=4, min\_samples\_split=4, score=(train=0.620, test=0.603), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=4 ................................  
[CV] max\_depth=4, min\_samples\_split=4, score=(train=0.622, test=0.597), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=5 ................................  
[CV] max\_depth=4, min\_samples\_split=5, score=(train=0.618, test=0.616), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=5 ................................  
[CV] max\_depth=4, min\_samples\_split=5, score=(train=0.613, test=0.634), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=5 ................................  
[CV] max\_depth=4, min\_samples\_split=5, score=(train=0.615, test=0.625), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=5 ................................  
[CV] max\_depth=4, min\_samples\_split=5, score=(train=0.620, test=0.603), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=5 ................................  
[CV] max\_depth=4, min\_samples\_split=5, score=(train=0.622, test=0.597), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=6 ................................  
[CV] max\_depth=4, min\_samples\_split=6, score=(train=0.618, test=0.616), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=6 ................................  
[CV] max\_depth=4, min\_samples\_split=6, score=(train=0.613, test=0.634), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=6 ................................  
[CV] max\_depth=4, min\_samples\_split=6, score=(train=0.615, test=0.625), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=6 ................................  
[CV] max\_depth=4, min\_samples\_split=6, score=(train=0.620, test=0.603), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=6 ................................  
[CV] max\_depth=4, min\_samples\_split=6, score=(train=0.622, test=0.597), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=7 ................................  
[CV] max\_depth=4, min\_samples\_split=7, score=(train=0.618, test=0.616), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=7 ................................  
[CV] max\_depth=4, min\_samples\_split=7, score=(train=0.613, test=0.634), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=7 ................................  
[CV] max\_depth=4, min\_samples\_split=7, score=(train=0.615, test=0.625), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=7 ................................  
[CV] max\_depth=4, min\_samples\_split=7, score=(train=0.620, test=0.603), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=7 ................................  
[CV] max\_depth=4, min\_samples\_split=7, score=(train=0.622, test=0.597), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=8 ................................  
[CV] max\_depth=4, min\_samples\_split=8, score=(train=0.618, test=0.616), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=8 ................................  
[CV] max\_depth=4, min\_samples\_split=8, score=(train=0.613, test=0.634), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=8 ................................  
[CV] max\_depth=4, min\_samples\_split=8, score=(train=0.615, test=0.625), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=8 ................................  
[CV] max\_depth=4, min\_samples\_split=8, score=(train=0.620, test=0.603), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=8 ................................  
[CV] max\_depth=4, min\_samples\_split=8, score=(train=0.622, test=0.597), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=9 ................................  
[CV] max\_depth=4, min\_samples\_split=9, score=(train=0.618, test=0.616), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=9 ................................  
[CV] max\_depth=4, min\_samples\_split=9, score=(train=0.613, test=0.634), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=9 ................................  
[CV] max\_depth=4, min\_samples\_split=9, score=(train=0.615, test=0.625), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=9 ................................  
[CV] max\_depth=4, min\_samples\_split=9, score=(train=0.620, test=0.603), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=9 ................................  
[CV] max\_depth=4, min\_samples\_split=9, score=(train=0.622, test=0.597), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=10 ...............................  
[CV] max\_depth=4, min\_samples\_split=10, score=(train=0.618, test=0.616), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=10 ...............................  
[CV] max\_depth=4, min\_samples\_split=10, score=(train=0.613, test=0.634), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=10 ...............................  
[CV] max\_depth=4, min\_samples\_split=10, score=(train=0.615, test=0.625), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=10 ...............................  
[CV] max\_depth=4, min\_samples\_split=10, score=(train=0.620, test=0.603), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=10 ...............................  
[CV] max\_depth=4, min\_samples\_split=10, score=(train=0.622, test=0.597), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=11 ...............................  
[CV] max\_depth=4, min\_samples\_split=11, score=(train=0.618, test=0.616), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=11 ...............................  
[CV] max\_depth=4, min\_samples\_split=11, score=(train=0.613, test=0.634), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=11 ...............................  
[CV] max\_depth=4, min\_samples\_split=11, score=(train=0.615, test=0.625), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=11 ...............................  
[CV] max\_depth=4, min\_samples\_split=11, score=(train=0.620, test=0.603), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=11 ...............................  
[CV] max\_depth=4, min\_samples\_split=11, score=(train=0.622, test=0.597), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=12 ...............................  
[CV] max\_depth=4, min\_samples\_split=12, score=(train=0.618, test=0.616), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=12 ...............................  
[CV] max\_depth=4, min\_samples\_split=12, score=(train=0.613, test=0.634), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=12 ...............................  
[CV] max\_depth=4, min\_samples\_split=12, score=(train=0.615, test=0.625), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=12 ...............................  
[CV] max\_depth=4, min\_samples\_split=12, score=(train=0.620, test=0.603), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=12 ...............................  
[CV] max\_depth=4, min\_samples\_split=12, score=(train=0.622, test=0.597), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=13 ...............................  
[CV] max\_depth=4, min\_samples\_split=13, score=(train=0.618, test=0.616), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=13 ...............................  
[CV] max\_depth=4, min\_samples\_split=13, score=(train=0.613, test=0.634), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=13 ...............................  
[CV] max\_depth=4, min\_samples\_split=13, score=(train=0.615, test=0.625), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=13 ...............................  
[CV] max\_depth=4, min\_samples\_split=13, score=(train=0.620, test=0.603), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=13 ...............................  
[CV] max\_depth=4, min\_samples\_split=13, score=(train=0.622, test=0.597), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=14 ...............................  
[CV] max\_depth=4, min\_samples\_split=14, score=(train=0.618, test=0.616), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=14 ...............................  
[CV] max\_depth=4, min\_samples\_split=14, score=(train=0.613, test=0.634), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=14 ...............................  
[CV] max\_depth=4, min\_samples\_split=14, score=(train=0.615, test=0.625), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=14 ...............................  
[CV] max\_depth=4, min\_samples\_split=14, score=(train=0.620, test=0.603), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=14 ...............................  
[CV] max\_depth=4, min\_samples\_split=14, score=(train=0.622, test=0.597), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=15 ...............................  
[CV] max\_depth=4, min\_samples\_split=15, score=(train=0.618, test=0.616), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=15 ...............................  
[CV] max\_depth=4, min\_samples\_split=15, score=(train=0.613, test=0.634), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=15 ...............................  
[CV] max\_depth=4, min\_samples\_split=15, score=(train=0.615, test=0.625), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=15 ...............................  
[CV] max\_depth=4, min\_samples\_split=15, score=(train=0.620, test=0.603), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=15 ...............................  
[CV] max\_depth=4, min\_samples\_split=15, score=(train=0.622, test=0.597), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=16 ...............................  
[CV] max\_depth=4, min\_samples\_split=16, score=(train=0.618, test=0.616), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=16 ...............................  
[CV] max\_depth=4, min\_samples\_split=16, score=(train=0.613, test=0.634), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=16 ...............................  
[CV] max\_depth=4, min\_samples\_split=16, score=(train=0.615, test=0.625), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=16 ...............................  
[CV] max\_depth=4, min\_samples\_split=16, score=(train=0.620, test=0.603), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=16 ...............................  
[CV] max\_depth=4, min\_samples\_split=16, score=(train=0.622, test=0.597), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=17 ...............................  
[CV] max\_depth=4, min\_samples\_split=17, score=(train=0.618, test=0.616), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=17 ...............................  
[CV] max\_depth=4, min\_samples\_split=17, score=(train=0.613, test=0.634), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=17 ...............................  
[CV] max\_depth=4, min\_samples\_split=17, score=(train=0.615, test=0.625), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=17 ...............................  
[CV] max\_depth=4, min\_samples\_split=17, score=(train=0.620, test=0.603), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=17 ...............................  
[CV] max\_depth=4, min\_samples\_split=17, score=(train=0.622, test=0.597), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=18 ...............................  
[CV] max\_depth=4, min\_samples\_split=18, score=(train=0.618, test=0.616), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=18 ...............................  
[CV] max\_depth=4, min\_samples\_split=18, score=(train=0.613, test=0.634), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=18 ...............................  
[CV] max\_depth=4, min\_samples\_split=18, score=(train=0.615, test=0.625), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=18 ...............................  
[CV] max\_depth=4, min\_samples\_split=18, score=(train=0.620, test=0.603), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=18 ...............................  
[CV] max\_depth=4, min\_samples\_split=18, score=(train=0.622, test=0.597), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=19 ...............................  
[CV] max\_depth=4, min\_samples\_split=19, score=(train=0.618, test=0.616), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=19 ...............................  
[CV] max\_depth=4, min\_samples\_split=19, score=(train=0.613, test=0.634), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=19 ...............................  
[CV] max\_depth=4, min\_samples\_split=19, score=(train=0.615, test=0.625), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=19 ...............................  
[CV] max\_depth=4, min\_samples\_split=19, score=(train=0.620, test=0.603), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=19 ...............................  
[CV] max\_depth=4, min\_samples\_split=19, score=(train=0.622, test=0.597), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=20 ...............................  
[CV] max\_depth=4, min\_samples\_split=20, score=(train=0.618, test=0.616), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=20 ...............................  
[CV] max\_depth=4, min\_samples\_split=20, score=(train=0.613, test=0.634), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=20 ...............................  
[CV] max\_depth=4, min\_samples\_split=20, score=(train=0.615, test=0.625), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=20 ...............................  
[CV] max\_depth=4, min\_samples\_split=20, score=(train=0.620, test=0.603), total= 0.0s  
[CV] max\_depth=4, min\_samples\_split=20 ...............................  
[CV] max\_depth=4, min\_samples\_split=20, score=(train=0.622, test=0.597), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=2 ................................  
[CV] max\_depth=5, min\_samples\_split=2, score=(train=0.670, test=0.660), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=2 ................................  
[CV] max\_depth=5, min\_samples\_split=2, score=(train=0.661, test=0.687), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=2 ................................  
[CV] max\_depth=5, min\_samples\_split=2, score=(train=0.661, test=0.670), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=2 ................................  
[CV] max\_depth=5, min\_samples\_split=2, score=(train=0.673, test=0.645), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=2 ................................  
[CV] max\_depth=5, min\_samples\_split=2, score=(train=0.672, test=0.646), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=3 ................................  
[CV] max\_depth=5, min\_samples\_split=3, score=(train=0.670, test=0.661), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=3 ................................  
[CV] max\_depth=5, min\_samples\_split=3, score=(train=0.661, test=0.687), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=3 ................................  
[CV] max\_depth=5, min\_samples\_split=3, score=(train=0.661, test=0.670), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=3 ................................  
[CV] max\_depth=5, min\_samples\_split=3, score=(train=0.673, test=0.645), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=3 ................................  
[CV] max\_depth=5, min\_samples\_split=3, score=(train=0.672, test=0.646), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=4 ................................  
[CV] max\_depth=5, min\_samples\_split=4, score=(train=0.670, test=0.660), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=4 ................................  
[CV] max\_depth=5, min\_samples\_split=4, score=(train=0.661, test=0.687), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=4 ................................  
[CV] max\_depth=5, min\_samples\_split=4, score=(train=0.661, test=0.670), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=4 ................................  
[CV] max\_depth=5, min\_samples\_split=4, score=(train=0.673, test=0.645), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=4 ................................  
[CV] max\_depth=5, min\_samples\_split=4, score=(train=0.672, test=0.646), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=5 ................................  
[CV] max\_depth=5, min\_samples\_split=5, score=(train=0.670, test=0.660), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=5 ................................  
[CV] max\_depth=5, min\_samples\_split=5, score=(train=0.661, test=0.687), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=5 ................................  
[CV] max\_depth=5, min\_samples\_split=5, score=(train=0.661, test=0.670), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=5 ................................  
[CV] max\_depth=5, min\_samples\_split=5, score=(train=0.673, test=0.645), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=5 ................................  
[CV] max\_depth=5, min\_samples\_split=5, score=(train=0.672, test=0.646), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=6 ................................  
[CV] max\_depth=5, min\_samples\_split=6, score=(train=0.670, test=0.660), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=6 ................................  
[CV] max\_depth=5, min\_samples\_split=6, score=(train=0.661, test=0.687), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=6 ................................  
[CV] max\_depth=5, min\_samples\_split=6, score=(train=0.661, test=0.670), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=6 ................................  
[CV] max\_depth=5, min\_samples\_split=6, score=(train=0.673, test=0.645), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=6 ................................  
[CV] max\_depth=5, min\_samples\_split=6, score=(train=0.672, test=0.646), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=7 ................................  
[CV] max\_depth=5, min\_samples\_split=7, score=(train=0.670, test=0.660), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=7 ................................  
[CV] max\_depth=5, min\_samples\_split=7, score=(train=0.661, test=0.687), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=7 ................................  
[CV] max\_depth=5, min\_samples\_split=7, score=(train=0.661, test=0.670), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=7 ................................  
[CV] max\_depth=5, min\_samples\_split=7, score=(train=0.673, test=0.645), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=7 ................................  
[CV] max\_depth=5, min\_samples\_split=7, score=(train=0.672, test=0.646), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=8 ................................  
[CV] max\_depth=5, min\_samples\_split=8, score=(train=0.670, test=0.661), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=8 ................................  
[CV] max\_depth=5, min\_samples\_split=8, score=(train=0.661, test=0.687), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=8 ................................  
[CV] max\_depth=5, min\_samples\_split=8, score=(train=0.661, test=0.670), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=8 ................................  
[CV] max\_depth=5, min\_samples\_split=8, score=(train=0.673, test=0.645), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=8 ................................  
[CV] max\_depth=5, min\_samples\_split=8, score=(train=0.672, test=0.646), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=9 ................................  
[CV] max\_depth=5, min\_samples\_split=9, score=(train=0.670, test=0.660), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=9 ................................  
[CV] max\_depth=5, min\_samples\_split=9, score=(train=0.661, test=0.687), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=9 ................................  
[CV] max\_depth=5, min\_samples\_split=9, score=(train=0.661, test=0.670), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=9 ................................  
[CV] max\_depth=5, min\_samples\_split=9, score=(train=0.673, test=0.645), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=9 ................................  
[CV] max\_depth=5, min\_samples\_split=9, score=(train=0.672, test=0.646), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=10 ...............................  
[CV] max\_depth=5, min\_samples\_split=10, score=(train=0.670, test=0.660), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=10 ...............................  
[CV] max\_depth=5, min\_samples\_split=10, score=(train=0.661, test=0.687), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=10 ...............................  
[CV] max\_depth=5, min\_samples\_split=10, score=(train=0.661, test=0.670), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=10 ...............................  
[CV] max\_depth=5, min\_samples\_split=10, score=(train=0.673, test=0.645), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=10 ...............................  
[CV] max\_depth=5, min\_samples\_split=10, score=(train=0.672, test=0.646), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=11 ...............................  
[CV] max\_depth=5, min\_samples\_split=11, score=(train=0.670, test=0.661), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=11 ...............................  
[CV] max\_depth=5, min\_samples\_split=11, score=(train=0.661, test=0.687), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=11 ...............................  
[CV] max\_depth=5, min\_samples\_split=11, score=(train=0.661, test=0.670), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=11 ...............................  
[CV] max\_depth=5, min\_samples\_split=11, score=(train=0.673, test=0.645), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=11 ...............................  
[CV] max\_depth=5, min\_samples\_split=11, score=(train=0.672, test=0.646), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=12 ...............................  
[CV] max\_depth=5, min\_samples\_split=12, score=(train=0.670, test=0.660), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=12 ...............................  
[CV] max\_depth=5, min\_samples\_split=12, score=(train=0.661, test=0.687), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=12 ...............................  
[CV] max\_depth=5, min\_samples\_split=12, score=(train=0.661, test=0.670), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=12 ...............................  
[CV] max\_depth=5, min\_samples\_split=12, score=(train=0.673, test=0.645), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=12 ...............................  
[CV] max\_depth=5, min\_samples\_split=12, score=(train=0.672, test=0.646), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=13 ...............................  
[CV] max\_depth=5, min\_samples\_split=13, score=(train=0.670, test=0.660), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=13 ...............................  
[CV] max\_depth=5, min\_samples\_split=13, score=(train=0.661, test=0.687), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=13 ...............................  
[CV] max\_depth=5, min\_samples\_split=13, score=(train=0.661, test=0.670), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=13 ...............................  
[CV] max\_depth=5, min\_samples\_split=13, score=(train=0.673, test=0.645), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=13 ...............................  
[CV] max\_depth=5, min\_samples\_split=13, score=(train=0.672, test=0.646), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=14 ...............................  
[CV] max\_depth=5, min\_samples\_split=14, score=(train=0.670, test=0.661), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=14 ...............................  
[CV] max\_depth=5, min\_samples\_split=14, score=(train=0.661, test=0.687), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=14 ...............................  
[CV] max\_depth=5, min\_samples\_split=14, score=(train=0.661, test=0.670), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=14 ...............................  
[CV] max\_depth=5, min\_samples\_split=14, score=(train=0.673, test=0.645), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=14 ...............................  
[CV] max\_depth=5, min\_samples\_split=14, score=(train=0.672, test=0.646), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=15 ...............................  
[CV] max\_depth=5, min\_samples\_split=15, score=(train=0.670, test=0.661), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=15 ...............................  
[CV] max\_depth=5, min\_samples\_split=15, score=(train=0.661, test=0.687), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=15 ...............................  
[CV] max\_depth=5, min\_samples\_split=15, score=(train=0.661, test=0.670), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=15 ...............................  
[CV] max\_depth=5, min\_samples\_split=15, score=(train=0.673, test=0.645), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=15 ...............................  
[CV] max\_depth=5, min\_samples\_split=15, score=(train=0.672, test=0.646), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=16 ...............................  
[CV] max\_depth=5, min\_samples\_split=16, score=(train=0.670, test=0.661), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=16 ...............................  
[CV] max\_depth=5, min\_samples\_split=16, score=(train=0.661, test=0.687), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=16 ...............................  
[CV] max\_depth=5, min\_samples\_split=16, score=(train=0.661, test=0.670), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=16 ...............................  
[CV] max\_depth=5, min\_samples\_split=16, score=(train=0.673, test=0.645), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=16 ...............................  
[CV] max\_depth=5, min\_samples\_split=16, score=(train=0.672, test=0.646), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=17 ...............................  
[CV] max\_depth=5, min\_samples\_split=17, score=(train=0.670, test=0.661), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=17 ...............................  
[CV] max\_depth=5, min\_samples\_split=17, score=(train=0.661, test=0.687), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=17 ...............................  
[CV] max\_depth=5, min\_samples\_split=17, score=(train=0.661, test=0.670), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=17 ...............................  
[CV] max\_depth=5, min\_samples\_split=17, score=(train=0.673, test=0.645), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=17 ...............................  
[CV] max\_depth=5, min\_samples\_split=17, score=(train=0.672, test=0.646), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=18 ...............................  
[CV] max\_depth=5, min\_samples\_split=18, score=(train=0.670, test=0.660), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=18 ...............................  
[CV] max\_depth=5, min\_samples\_split=18, score=(train=0.661, test=0.687), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=18 ...............................  
[CV] max\_depth=5, min\_samples\_split=18, score=(train=0.661, test=0.670), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=18 ...............................  
[CV] max\_depth=5, min\_samples\_split=18, score=(train=0.673, test=0.645), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=18 ...............................  
[CV] max\_depth=5, min\_samples\_split=18, score=(train=0.672, test=0.646), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=19 ...............................  
[CV] max\_depth=5, min\_samples\_split=19, score=(train=0.670, test=0.661), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=19 ...............................  
[CV] max\_depth=5, min\_samples\_split=19, score=(train=0.661, test=0.687), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=19 ...............................  
[CV] max\_depth=5, min\_samples\_split=19, score=(train=0.661, test=0.670), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=19 ...............................  
[CV] max\_depth=5, min\_samples\_split=19, score=(train=0.673, test=0.645), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=19 ...............................  
[CV] max\_depth=5, min\_samples\_split=19, score=(train=0.672, test=0.646), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=20 ...............................  
[CV] max\_depth=5, min\_samples\_split=20, score=(train=0.670, test=0.661), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=20 ...............................  
[CV] max\_depth=5, min\_samples\_split=20, score=(train=0.661, test=0.687), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=20 ...............................  
[CV] max\_depth=5, min\_samples\_split=20, score=(train=0.661, test=0.670), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=20 ...............................  
[CV] max\_depth=5, min\_samples\_split=20, score=(train=0.673, test=0.645), total= 0.0s  
[CV] max\_depth=5, min\_samples\_split=20 ...............................  
[CV] max\_depth=5, min\_samples\_split=20, score=(train=0.672, test=0.646), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=2 ................................  
[CV] max\_depth=6, min\_samples\_split=2, score=(train=0.778, test=0.776), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=2 ................................  
[CV] max\_depth=6, min\_samples\_split=2, score=(train=0.763, test=0.773), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=2 ................................  
[CV] max\_depth=6, min\_samples\_split=2, score=(train=0.765, test=0.762), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=2 ................................  
[CV] max\_depth=6, min\_samples\_split=2, score=(train=0.772, test=0.750), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=2 ................................  
[CV] max\_depth=6, min\_samples\_split=2, score=(train=0.779, test=0.768), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=3 ................................  
[CV] max\_depth=6, min\_samples\_split=3, score=(train=0.778, test=0.776), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=3 ................................  
[CV] max\_depth=6, min\_samples\_split=3, score=(train=0.763, test=0.773), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=3 ................................  
[CV] max\_depth=6, min\_samples\_split=3, score=(train=0.765, test=0.762), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=3 ................................  
[CV] max\_depth=6, min\_samples\_split=3, score=(train=0.772, test=0.750), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=3 ................................  
[CV] max\_depth=6, min\_samples\_split=3, score=(train=0.779, test=0.768), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=4 ................................  
[CV] max\_depth=6, min\_samples\_split=4, score=(train=0.778, test=0.776), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=4 ................................  
[CV] max\_depth=6, min\_samples\_split=4, score=(train=0.763, test=0.773), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=4 ................................  
[CV] max\_depth=6, min\_samples\_split=4, score=(train=0.765, test=0.762), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=4 ................................  
[CV] max\_depth=6, min\_samples\_split=4, score=(train=0.772, test=0.750), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=4 ................................  
[CV] max\_depth=6, min\_samples\_split=4, score=(train=0.779, test=0.768), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=5 ................................  
[CV] max\_depth=6, min\_samples\_split=5, score=(train=0.778, test=0.776), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=5 ................................  
[CV] max\_depth=6, min\_samples\_split=5, score=(train=0.763, test=0.773), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=5 ................................  
[CV] max\_depth=6, min\_samples\_split=5, score=(train=0.765, test=0.762), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=5 ................................  
[CV] max\_depth=6, min\_samples\_split=5, score=(train=0.772, test=0.750), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=5 ................................  
[CV] max\_depth=6, min\_samples\_split=5, score=(train=0.779, test=0.768), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=6 ................................  
[CV] max\_depth=6, min\_samples\_split=6, score=(train=0.778, test=0.776), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=6 ................................  
[CV] max\_depth=6, min\_samples\_split=6, score=(train=0.763, test=0.773), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=6 ................................  
[CV] max\_depth=6, min\_samples\_split=6, score=(train=0.765, test=0.762), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=6 ................................  
[CV] max\_depth=6, min\_samples\_split=6, score=(train=0.772, test=0.750), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=6 ................................  
[CV] max\_depth=6, min\_samples\_split=6, score=(train=0.779, test=0.768), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=7 ................................  
[CV] max\_depth=6, min\_samples\_split=7, score=(train=0.778, test=0.776), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=7 ................................  
[CV] max\_depth=6, min\_samples\_split=7, score=(train=0.763, test=0.773), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=7 ................................  
[CV] max\_depth=6, min\_samples\_split=7, score=(train=0.765, test=0.762), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=7 ................................  
[CV] max\_depth=6, min\_samples\_split=7, score=(train=0.772, test=0.750), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=7 ................................  
[CV] max\_depth=6, min\_samples\_split=7, score=(train=0.779, test=0.768), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=8 ................................  
[CV] max\_depth=6, min\_samples\_split=8, score=(train=0.778, test=0.776), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=8 ................................  
[CV] max\_depth=6, min\_samples\_split=8, score=(train=0.763, test=0.773), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=8 ................................  
[CV] max\_depth=6, min\_samples\_split=8, score=(train=0.765, test=0.762), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=8 ................................  
[CV] max\_depth=6, min\_samples\_split=8, score=(train=0.772, test=0.750), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=8 ................................  
[CV] max\_depth=6, min\_samples\_split=8, score=(train=0.779, test=0.768), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=9 ................................  
[CV] max\_depth=6, min\_samples\_split=9, score=(train=0.778, test=0.776), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=9 ................................  
[CV] max\_depth=6, min\_samples\_split=9, score=(train=0.763, test=0.773), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=9 ................................  
[CV] max\_depth=6, min\_samples\_split=9, score=(train=0.765, test=0.762), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=9 ................................  
[CV] max\_depth=6, min\_samples\_split=9, score=(train=0.772, test=0.750), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=9 ................................  
[CV] max\_depth=6, min\_samples\_split=9, score=(train=0.779, test=0.768), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=10 ...............................  
[CV] max\_depth=6, min\_samples\_split=10, score=(train=0.778, test=0.776), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=10 ...............................  
[CV] max\_depth=6, min\_samples\_split=10, score=(train=0.763, test=0.773), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=10 ...............................  
[CV] max\_depth=6, min\_samples\_split=10, score=(train=0.765, test=0.762), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=10 ...............................  
[CV] max\_depth=6, min\_samples\_split=10, score=(train=0.772, test=0.750), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=10 ...............................  
[CV] max\_depth=6, min\_samples\_split=10, score=(train=0.779, test=0.768), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=11 ...............................  
[CV] max\_depth=6, min\_samples\_split=11, score=(train=0.778, test=0.776), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=11 ...............................  
[CV] max\_depth=6, min\_samples\_split=11, score=(train=0.763, test=0.773), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=11 ...............................  
[CV] max\_depth=6, min\_samples\_split=11, score=(train=0.765, test=0.762), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=11 ...............................  
[CV] max\_depth=6, min\_samples\_split=11, score=(train=0.772, test=0.750), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=11 ...............................  
[CV] max\_depth=6, min\_samples\_split=11, score=(train=0.779, test=0.768), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=12 ...............................  
[CV] max\_depth=6, min\_samples\_split=12, score=(train=0.778, test=0.776), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=12 ...............................  
[CV] max\_depth=6, min\_samples\_split=12, score=(train=0.763, test=0.773), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=12 ...............................  
[CV] max\_depth=6, min\_samples\_split=12, score=(train=0.765, test=0.762), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=12 ...............................  
[CV] max\_depth=6, min\_samples\_split=12, score=(train=0.772, test=0.750), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=12 ...............................  
[CV] max\_depth=6, min\_samples\_split=12, score=(train=0.779, test=0.768), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=13 ...............................  
[CV] max\_depth=6, min\_samples\_split=13, score=(train=0.778, test=0.776), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=13 ...............................  
[CV] max\_depth=6, min\_samples\_split=13, score=(train=0.763, test=0.773), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=13 ...............................  
[CV] max\_depth=6, min\_samples\_split=13, score=(train=0.765, test=0.762), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=13 ...............................  
[CV] max\_depth=6, min\_samples\_split=13, score=(train=0.772, test=0.750), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=13 ...............................  
[CV] max\_depth=6, min\_samples\_split=13, score=(train=0.779, test=0.768), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=14 ...............................  
[CV] max\_depth=6, min\_samples\_split=14, score=(train=0.778, test=0.776), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=14 ...............................  
[CV] max\_depth=6, min\_samples\_split=14, score=(train=0.763, test=0.773), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=14 ...............................  
[CV] max\_depth=6, min\_samples\_split=14, score=(train=0.765, test=0.762), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=14 ...............................  
[CV] max\_depth=6, min\_samples\_split=14, score=(train=0.772, test=0.750), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=14 ...............................  
[CV] max\_depth=6, min\_samples\_split=14, score=(train=0.779, test=0.768), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=15 ...............................  
[CV] max\_depth=6, min\_samples\_split=15, score=(train=0.778, test=0.776), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=15 ...............................  
[CV] max\_depth=6, min\_samples\_split=15, score=(train=0.763, test=0.773), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=15 ...............................  
[CV] max\_depth=6, min\_samples\_split=15, score=(train=0.765, test=0.762), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=15 ...............................  
[CV] max\_depth=6, min\_samples\_split=15, score=(train=0.772, test=0.750), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=15 ...............................  
[CV] max\_depth=6, min\_samples\_split=15, score=(train=0.779, test=0.768), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=16 ...............................  
[CV] max\_depth=6, min\_samples\_split=16, score=(train=0.778, test=0.776), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=16 ...............................  
[CV] max\_depth=6, min\_samples\_split=16, score=(train=0.763, test=0.773), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=16 ...............................  
[CV] max\_depth=6, min\_samples\_split=16, score=(train=0.765, test=0.762), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=16 ...............................  
[CV] max\_depth=6, min\_samples\_split=16, score=(train=0.772, test=0.750), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=16 ...............................  
[CV] max\_depth=6, min\_samples\_split=16, score=(train=0.779, test=0.768), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=17 ...............................  
[CV] max\_depth=6, min\_samples\_split=17, score=(train=0.778, test=0.776), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=17 ...............................  
[CV] max\_depth=6, min\_samples\_split=17, score=(train=0.763, test=0.773), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=17 ...............................  
[CV] max\_depth=6, min\_samples\_split=17, score=(train=0.765, test=0.762), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=17 ...............................  
[CV] max\_depth=6, min\_samples\_split=17, score=(train=0.772, test=0.750), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=17 ...............................  
[CV] max\_depth=6, min\_samples\_split=17, score=(train=0.779, test=0.768), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=18 ...............................  
[CV] max\_depth=6, min\_samples\_split=18, score=(train=0.778, test=0.776), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=18 ...............................  
[CV] max\_depth=6, min\_samples\_split=18, score=(train=0.763, test=0.773), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=18 ...............................  
[CV] max\_depth=6, min\_samples\_split=18, score=(train=0.765, test=0.762), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=18 ...............................  
[CV] max\_depth=6, min\_samples\_split=18, score=(train=0.772, test=0.750), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=18 ...............................  
[CV] max\_depth=6, min\_samples\_split=18, score=(train=0.779, test=0.768), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=19 ...............................  
[CV] max\_depth=6, min\_samples\_split=19, score=(train=0.778, test=0.776), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=19 ...............................  
[CV] max\_depth=6, min\_samples\_split=19, score=(train=0.763, test=0.773), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=19 ...............................  
[CV] max\_depth=6, min\_samples\_split=19, score=(train=0.765, test=0.762), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=19 ...............................  
[CV] max\_depth=6, min\_samples\_split=19, score=(train=0.772, test=0.750), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=19 ...............................  
[CV] max\_depth=6, min\_samples\_split=19, score=(train=0.779, test=0.768), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=20 ...............................  
[CV] max\_depth=6, min\_samples\_split=20, score=(train=0.778, test=0.776), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=20 ...............................  
[CV] max\_depth=6, min\_samples\_split=20, score=(train=0.763, test=0.773), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=20 ...............................  
[CV] max\_depth=6, min\_samples\_split=20, score=(train=0.765, test=0.762), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=20 ...............................  
[CV] max\_depth=6, min\_samples\_split=20, score=(train=0.772, test=0.750), total= 0.0s  
[CV] max\_depth=6, min\_samples\_split=20 ...............................  
[CV] max\_depth=6, min\_samples\_split=20, score=(train=0.779, test=0.768), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=2 ................................  
[CV] max\_depth=7, min\_samples\_split=2, score=(train=0.825, test=0.820), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=2 ................................  
[CV] max\_depth=7, min\_samples\_split=2, score=(train=0.817, test=0.811), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=2 ................................  
[CV] max\_depth=7, min\_samples\_split=2, score=(train=0.810, test=0.799), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=2 ................................  
[CV] max\_depth=7, min\_samples\_split=2, score=(train=0.819, test=0.780), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=2 ................................  
[CV] max\_depth=7, min\_samples\_split=2, score=(train=0.826, test=0.812), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=3 ................................  
[CV] max\_depth=7, min\_samples\_split=3, score=(train=0.825, test=0.821), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=3 ................................  
[CV] max\_depth=7, min\_samples\_split=3, score=(train=0.817, test=0.810), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=3 ................................  
[CV] max\_depth=7, min\_samples\_split=3, score=(train=0.810, test=0.799), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=3 ................................  
[CV] max\_depth=7, min\_samples\_split=3, score=(train=0.819, test=0.780), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=3 ................................  
[CV] max\_depth=7, min\_samples\_split=3, score=(train=0.826, test=0.812), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=4 ................................  
[CV] max\_depth=7, min\_samples\_split=4, score=(train=0.825, test=0.820), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=4 ................................  
[CV] max\_depth=7, min\_samples\_split=4, score=(train=0.817, test=0.810), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=4 ................................  
[CV] max\_depth=7, min\_samples\_split=4, score=(train=0.810, test=0.799), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=4 ................................  
[CV] max\_depth=7, min\_samples\_split=4, score=(train=0.819, test=0.780), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=4 ................................  
[CV] max\_depth=7, min\_samples\_split=4, score=(train=0.826, test=0.812), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=5 ................................  
[CV] max\_depth=7, min\_samples\_split=5, score=(train=0.825, test=0.820), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=5 ................................  
[CV] max\_depth=7, min\_samples\_split=5, score=(train=0.817, test=0.810), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=5 ................................  
[CV] max\_depth=7, min\_samples\_split=5, score=(train=0.810, test=0.798), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=5 ................................  
[CV] max\_depth=7, min\_samples\_split=5, score=(train=0.819, test=0.780), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=5 ................................  
[CV] max\_depth=7, min\_samples\_split=5, score=(train=0.826, test=0.812), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=6 ................................  
[CV] max\_depth=7, min\_samples\_split=6, score=(train=0.825, test=0.820), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=6 ................................  
[CV] max\_depth=7, min\_samples\_split=6, score=(train=0.817, test=0.810), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=6 ................................  
[CV] max\_depth=7, min\_samples\_split=6, score=(train=0.810, test=0.799), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=6 ................................  
[CV] max\_depth=7, min\_samples\_split=6, score=(train=0.819, test=0.780), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=6 ................................  
[CV] max\_depth=7, min\_samples\_split=6, score=(train=0.826, test=0.812), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=7 ................................  
[CV] max\_depth=7, min\_samples\_split=7, score=(train=0.825, test=0.821), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=7 ................................  
[CV] max\_depth=7, min\_samples\_split=7, score=(train=0.817, test=0.810), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=7 ................................  
[CV] max\_depth=7, min\_samples\_split=7, score=(train=0.810, test=0.799), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=7 ................................  
[CV] max\_depth=7, min\_samples\_split=7, score=(train=0.819, test=0.780), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=7 ................................  
[CV] max\_depth=7, min\_samples\_split=7, score=(train=0.826, test=0.812), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=8 ................................  
[CV] max\_depth=7, min\_samples\_split=8, score=(train=0.825, test=0.821), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=8 ................................  
[CV] max\_depth=7, min\_samples\_split=8, score=(train=0.817, test=0.810), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=8 ................................  
[CV] max\_depth=7, min\_samples\_split=8, score=(train=0.810, test=0.799), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=8 ................................  
[CV] max\_depth=7, min\_samples\_split=8, score=(train=0.819, test=0.780), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=8 ................................  
[CV] max\_depth=7, min\_samples\_split=8, score=(train=0.826, test=0.812), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=9 ................................  
[CV] max\_depth=7, min\_samples\_split=9, score=(train=0.825, test=0.820), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=9 ................................  
[CV] max\_depth=7, min\_samples\_split=9, score=(train=0.817, test=0.810), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=9 ................................  
[CV] max\_depth=7, min\_samples\_split=9, score=(train=0.810, test=0.798), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=9 ................................  
[CV] max\_depth=7, min\_samples\_split=9, score=(train=0.819, test=0.780), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=9 ................................  
[CV] max\_depth=7, min\_samples\_split=9, score=(train=0.826, test=0.812), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=10 ...............................  
[CV] max\_depth=7, min\_samples\_split=10, score=(train=0.825, test=0.820), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=10 ...............................  
[CV] max\_depth=7, min\_samples\_split=10, score=(train=0.817, test=0.810), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=10 ...............................  
[CV] max\_depth=7, min\_samples\_split=10, score=(train=0.810, test=0.799), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=10 ...............................  
[CV] max\_depth=7, min\_samples\_split=10, score=(train=0.819, test=0.780), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=10 ...............................  
[CV] max\_depth=7, min\_samples\_split=10, score=(train=0.826, test=0.812), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=11 ...............................  
[CV] max\_depth=7, min\_samples\_split=11, score=(train=0.825, test=0.820), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=11 ...............................  
[CV] max\_depth=7, min\_samples\_split=11, score=(train=0.817, test=0.810), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=11 ...............................  
[CV] max\_depth=7, min\_samples\_split=11, score=(train=0.810, test=0.798), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=11 ...............................  
[CV] max\_depth=7, min\_samples\_split=11, score=(train=0.819, test=0.780), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=11 ...............................  
[CV] max\_depth=7, min\_samples\_split=11, score=(train=0.826, test=0.812), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=12 ...............................  
[CV] max\_depth=7, min\_samples\_split=12, score=(train=0.825, test=0.821), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=12 ...............................  
[CV] max\_depth=7, min\_samples\_split=12, score=(train=0.817, test=0.810), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=12 ...............................  
[CV] max\_depth=7, min\_samples\_split=12, score=(train=0.810, test=0.799), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=12 ...............................  
[CV] max\_depth=7, min\_samples\_split=12, score=(train=0.819, test=0.781), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=12 ...............................  
[CV] max\_depth=7, min\_samples\_split=12, score=(train=0.826, test=0.812), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=13 ...............................  
[CV] max\_depth=7, min\_samples\_split=13, score=(train=0.825, test=0.821), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=13 ...............................  
[CV] max\_depth=7, min\_samples\_split=13, score=(train=0.817, test=0.810), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=13 ...............................  
[CV] max\_depth=7, min\_samples\_split=13, score=(train=0.810, test=0.799), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=13 ...............................  
[CV] max\_depth=7, min\_samples\_split=13, score=(train=0.819, test=0.781), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=13 ...............................  
[CV] max\_depth=7, min\_samples\_split=13, score=(train=0.826, test=0.812), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=14 ...............................  
[CV] max\_depth=7, min\_samples\_split=14, score=(train=0.825, test=0.820), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=14 ...............................  
[CV] max\_depth=7, min\_samples\_split=14, score=(train=0.817, test=0.810), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=14 ...............................  
[CV] max\_depth=7, min\_samples\_split=14, score=(train=0.810, test=0.798), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=14 ...............................  
[CV] max\_depth=7, min\_samples\_split=14, score=(train=0.819, test=0.781), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=14 ...............................  
[CV] max\_depth=7, min\_samples\_split=14, score=(train=0.826, test=0.812), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=15 ...............................  
[CV] max\_depth=7, min\_samples\_split=15, score=(train=0.825, test=0.821), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=15 ...............................  
[CV] max\_depth=7, min\_samples\_split=15, score=(train=0.817, test=0.810), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=15 ...............................  
[CV] max\_depth=7, min\_samples\_split=15, score=(train=0.810, test=0.798), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=15 ...............................  
[CV] max\_depth=7, min\_samples\_split=15, score=(train=0.819, test=0.781), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=15 ...............................  
[CV] max\_depth=7, min\_samples\_split=15, score=(train=0.826, test=0.813), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=16 ...............................  
[CV] max\_depth=7, min\_samples\_split=16, score=(train=0.825, test=0.820), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=16 ...............................  
[CV] max\_depth=7, min\_samples\_split=16, score=(train=0.817, test=0.810), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=16 ...............................  
[CV] max\_depth=7, min\_samples\_split=16, score=(train=0.809, test=0.799), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=16 ...............................  
[CV] max\_depth=7, min\_samples\_split=16, score=(train=0.819, test=0.781), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=16 ...............................  
[CV] max\_depth=7, min\_samples\_split=16, score=(train=0.826, test=0.812), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=17 ...............................  
[CV] max\_depth=7, min\_samples\_split=17, score=(train=0.825, test=0.821), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=17 ...............................  
[CV] max\_depth=7, min\_samples\_split=17, score=(train=0.817, test=0.810), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=17 ...............................  
[CV] max\_depth=7, min\_samples\_split=17, score=(train=0.809, test=0.798), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=17 ...............................  
[CV] max\_depth=7, min\_samples\_split=17, score=(train=0.819, test=0.781), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=17 ...............................  
[CV] max\_depth=7, min\_samples\_split=17, score=(train=0.826, test=0.812), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=18 ...............................  
[CV] max\_depth=7, min\_samples\_split=18, score=(train=0.825, test=0.820), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=18 ...............................  
[CV] max\_depth=7, min\_samples\_split=18, score=(train=0.817, test=0.810), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=18 ...............................  
[CV] max\_depth=7, min\_samples\_split=18, score=(train=0.809, test=0.799), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=18 ...............................  
[CV] max\_depth=7, min\_samples\_split=18, score=(train=0.819, test=0.781), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=18 ...............................  
[CV] max\_depth=7, min\_samples\_split=18, score=(train=0.826, test=0.812), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=19 ...............................  
[CV] max\_depth=7, min\_samples\_split=19, score=(train=0.825, test=0.821), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=19 ...............................  
[CV] max\_depth=7, min\_samples\_split=19, score=(train=0.816, test=0.810), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=19 ...............................  
[CV] max\_depth=7, min\_samples\_split=19, score=(train=0.809, test=0.799), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=19 ...............................  
[CV] max\_depth=7, min\_samples\_split=19, score=(train=0.819, test=0.781), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=19 ...............................  
[CV] max\_depth=7, min\_samples\_split=19, score=(train=0.826, test=0.812), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=20 ...............................  
[CV] max\_depth=7, min\_samples\_split=20, score=(train=0.825, test=0.820), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=20 ...............................  
[CV] max\_depth=7, min\_samples\_split=20, score=(train=0.816, test=0.810), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=20 ...............................  
[CV] max\_depth=7, min\_samples\_split=20, score=(train=0.809, test=0.799), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=20 ...............................  
[CV] max\_depth=7, min\_samples\_split=20, score=(train=0.819, test=0.781), total= 0.0s  
[CV] max\_depth=7, min\_samples\_split=20 ...............................  
[CV] max\_depth=7, min\_samples\_split=20, score=(train=0.825, test=0.812), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=2 ................................  
[CV] max\_depth=8, min\_samples\_split=2, score=(train=0.865, test=0.850), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=2 ................................  
[CV] max\_depth=8, min\_samples\_split=2, score=(train=0.871, test=0.838), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=2 ................................  
[CV] max\_depth=8, min\_samples\_split=2, score=(train=0.851, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=2 ................................  
[CV] max\_depth=8, min\_samples\_split=2, score=(train=0.859, test=0.812), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=2 ................................  
[CV] max\_depth=8, min\_samples\_split=2, score=(train=0.877, test=0.845), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=3 ................................  
[CV] max\_depth=8, min\_samples\_split=3, score=(train=0.864, test=0.849), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=3 ................................  
[CV] max\_depth=8, min\_samples\_split=3, score=(train=0.870, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=3 ................................  
[CV] max\_depth=8, min\_samples\_split=3, score=(train=0.851, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=3 ................................  
[CV] max\_depth=8, min\_samples\_split=3, score=(train=0.859, test=0.812), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=3 ................................  
[CV] max\_depth=8, min\_samples\_split=3, score=(train=0.877, test=0.845), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=4 ................................  
[CV] max\_depth=8, min\_samples\_split=4, score=(train=0.864, test=0.850), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=4 ................................  
[CV] max\_depth=8, min\_samples\_split=4, score=(train=0.870, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=4 ................................  
[CV] max\_depth=8, min\_samples\_split=4, score=(train=0.851, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=4 ................................  
[CV] max\_depth=8, min\_samples\_split=4, score=(train=0.859, test=0.810), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=4 ................................  
[CV] max\_depth=8, min\_samples\_split=4, score=(train=0.877, test=0.844), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=5 ................................  
[CV] max\_depth=8, min\_samples\_split=5, score=(train=0.864, test=0.850), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=5 ................................  
[CV] max\_depth=8, min\_samples\_split=5, score=(train=0.870, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=5 ................................  
[CV] max\_depth=8, min\_samples\_split=5, score=(train=0.851, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=5 ................................  
[CV] max\_depth=8, min\_samples\_split=5, score=(train=0.859, test=0.810), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=5 ................................  
[CV] max\_depth=8, min\_samples\_split=5, score=(train=0.877, test=0.845), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=6 ................................  
[CV] max\_depth=8, min\_samples\_split=6, score=(train=0.864, test=0.849), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=6 ................................  
[CV] max\_depth=8, min\_samples\_split=6, score=(train=0.870, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=6 ................................  
[CV] max\_depth=8, min\_samples\_split=6, score=(train=0.851, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=6 ................................  
[CV] max\_depth=8, min\_samples\_split=6, score=(train=0.859, test=0.812), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=6 ................................  
[CV] max\_depth=8, min\_samples\_split=6, score=(train=0.876, test=0.844), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=7 ................................  
[CV] max\_depth=8, min\_samples\_split=7, score=(train=0.864, test=0.849), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=7 ................................  
[CV] max\_depth=8, min\_samples\_split=7, score=(train=0.870, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=7 ................................  
[CV] max\_depth=8, min\_samples\_split=7, score=(train=0.851, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=7 ................................  
[CV] max\_depth=8, min\_samples\_split=7, score=(train=0.859, test=0.810), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=7 ................................  
[CV] max\_depth=8, min\_samples\_split=7, score=(train=0.876, test=0.845), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=8 ................................  
[CV] max\_depth=8, min\_samples\_split=8, score=(train=0.864, test=0.849), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=8 ................................  
[CV] max\_depth=8, min\_samples\_split=8, score=(train=0.870, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=8 ................................  
[CV] max\_depth=8, min\_samples\_split=8, score=(train=0.851, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=8 ................................  
[CV] max\_depth=8, min\_samples\_split=8, score=(train=0.859, test=0.810), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=8 ................................  
[CV] max\_depth=8, min\_samples\_split=8, score=(train=0.876, test=0.845), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=9 ................................  
[CV] max\_depth=8, min\_samples\_split=9, score=(train=0.864, test=0.850), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=9 ................................  
[CV] max\_depth=8, min\_samples\_split=9, score=(train=0.870, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=9 ................................  
[CV] max\_depth=8, min\_samples\_split=9, score=(train=0.851, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=9 ................................  
[CV] max\_depth=8, min\_samples\_split=9, score=(train=0.859, test=0.811), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=9 ................................  
[CV] max\_depth=8, min\_samples\_split=9, score=(train=0.876, test=0.846), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=10 ...............................  
[CV] max\_depth=8, min\_samples\_split=10, score=(train=0.863, test=0.850), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=10 ...............................  
[CV] max\_depth=8, min\_samples\_split=10, score=(train=0.870, test=0.842), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=10 ...............................  
[CV] max\_depth=8, min\_samples\_split=10, score=(train=0.851, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=10 ...............................  
[CV] max\_depth=8, min\_samples\_split=10, score=(train=0.859, test=0.811), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=10 ...............................  
[CV] max\_depth=8, min\_samples\_split=10, score=(train=0.876, test=0.846), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=11 ...............................  
[CV] max\_depth=8, min\_samples\_split=11, score=(train=0.863, test=0.850), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=11 ...............................  
[CV] max\_depth=8, min\_samples\_split=11, score=(train=0.870, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=11 ...............................  
[CV] max\_depth=8, min\_samples\_split=11, score=(train=0.850, test=0.840), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=11 ...............................  
[CV] max\_depth=8, min\_samples\_split=11, score=(train=0.859, test=0.811), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=11 ...............................  
[CV] max\_depth=8, min\_samples\_split=11, score=(train=0.876, test=0.846), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=12 ...............................  
[CV] max\_depth=8, min\_samples\_split=12, score=(train=0.863, test=0.849), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=12 ...............................  
[CV] max\_depth=8, min\_samples\_split=12, score=(train=0.869, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=12 ...............................  
[CV] max\_depth=8, min\_samples\_split=12, score=(train=0.850, test=0.839), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=12 ...............................  
[CV] max\_depth=8, min\_samples\_split=12, score=(train=0.859, test=0.811), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=12 ...............................  
[CV] max\_depth=8, min\_samples\_split=12, score=(train=0.876, test=0.846), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=13 ...............................  
[CV] max\_depth=8, min\_samples\_split=13, score=(train=0.863, test=0.849), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=13 ...............................  
[CV] max\_depth=8, min\_samples\_split=13, score=(train=0.869, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=13 ...............................  
[CV] max\_depth=8, min\_samples\_split=13, score=(train=0.849, test=0.839), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=13 ...............................  
[CV] max\_depth=8, min\_samples\_split=13, score=(train=0.858, test=0.812), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=13 ...............................  
[CV] max\_depth=8, min\_samples\_split=13, score=(train=0.875, test=0.846), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=14 ...............................  
[CV] max\_depth=8, min\_samples\_split=14, score=(train=0.863, test=0.850), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=14 ...............................  
[CV] max\_depth=8, min\_samples\_split=14, score=(train=0.869, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=14 ...............................  
[CV] max\_depth=8, min\_samples\_split=14, score=(train=0.849, test=0.840), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=14 ...............................  
[CV] max\_depth=8, min\_samples\_split=14, score=(train=0.858, test=0.812), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=14 ...............................  
[CV] max\_depth=8, min\_samples\_split=14, score=(train=0.875, test=0.845), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=15 ...............................  
[CV] max\_depth=8, min\_samples\_split=15, score=(train=0.863, test=0.850), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=15 ...............................  
[CV] max\_depth=8, min\_samples\_split=15, score=(train=0.869, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=15 ...............................  
[CV] max\_depth=8, min\_samples\_split=15, score=(train=0.849, test=0.839), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=15 ...............................  
[CV] max\_depth=8, min\_samples\_split=15, score=(train=0.858, test=0.812), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=15 ...............................  
[CV] max\_depth=8, min\_samples\_split=15, score=(train=0.875, test=0.846), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=16 ...............................  
[CV] max\_depth=8, min\_samples\_split=16, score=(train=0.863, test=0.850), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=16 ...............................  
[CV] max\_depth=8, min\_samples\_split=16, score=(train=0.869, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=16 ...............................  
[CV] max\_depth=8, min\_samples\_split=16, score=(train=0.849, test=0.840), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=16 ...............................  
[CV] max\_depth=8, min\_samples\_split=16, score=(train=0.858, test=0.812), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=16 ...............................  
[CV] max\_depth=8, min\_samples\_split=16, score=(train=0.875, test=0.846), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=17 ...............................  
[CV] max\_depth=8, min\_samples\_split=17, score=(train=0.862, test=0.849), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=17 ...............................  
[CV] max\_depth=8, min\_samples\_split=17, score=(train=0.868, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=17 ...............................  
[CV] max\_depth=8, min\_samples\_split=17, score=(train=0.849, test=0.839), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=17 ...............................  
[CV] max\_depth=8, min\_samples\_split=17, score=(train=0.858, test=0.812), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=17 ...............................  
[CV] max\_depth=8, min\_samples\_split=17, score=(train=0.875, test=0.846), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=18 ...............................  
[CV] max\_depth=8, min\_samples\_split=18, score=(train=0.862, test=0.849), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=18 ...............................  
[CV] max\_depth=8, min\_samples\_split=18, score=(train=0.868, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=18 ...............................  
[CV] max\_depth=8, min\_samples\_split=18, score=(train=0.848, test=0.839), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=18 ...............................  
[CV] max\_depth=8, min\_samples\_split=18, score=(train=0.858, test=0.812), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=18 ...............................  
[CV] max\_depth=8, min\_samples\_split=18, score=(train=0.875, test=0.846), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=19 ...............................  
[CV] max\_depth=8, min\_samples\_split=19, score=(train=0.862, test=0.849), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=19 ...............................  
[CV] max\_depth=8, min\_samples\_split=19, score=(train=0.868, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=19 ...............................  
[CV] max\_depth=8, min\_samples\_split=19, score=(train=0.848, test=0.839), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=19 ...............................  
[CV] max\_depth=8, min\_samples\_split=19, score=(train=0.858, test=0.812), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=19 ...............................  
[CV] max\_depth=8, min\_samples\_split=19, score=(train=0.875, test=0.846), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=20 ...............................  
[CV] max\_depth=8, min\_samples\_split=20, score=(train=0.862, test=0.849), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=20 ...............................  
[CV] max\_depth=8, min\_samples\_split=20, score=(train=0.868, test=0.841), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=20 ...............................  
[CV] max\_depth=8, min\_samples\_split=20, score=(train=0.848, test=0.839), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=20 ...............................  
[CV] max\_depth=8, min\_samples\_split=20, score=(train=0.858, test=0.812), total= 0.0s  
[CV] max\_depth=8, min\_samples\_split=20 ...............................  
[CV] max\_depth=8, min\_samples\_split=20, score=(train=0.875, test=0.846), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=2 ................................  
[CV] max\_depth=9, min\_samples\_split=2, score=(train=0.904, test=0.877), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=2 ................................  
[CV] max\_depth=9, min\_samples\_split=2, score=(train=0.903, test=0.851), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=2 ................................  
[CV] max\_depth=9, min\_samples\_split=2, score=(train=0.894, test=0.862), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=2 ................................  
[CV] max\_depth=9, min\_samples\_split=2, score=(train=0.884, test=0.830), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=2 ................................  
[CV] max\_depth=9, min\_samples\_split=2, score=(train=0.906, test=0.852), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=3 ................................  
[CV] max\_depth=9, min\_samples\_split=3, score=(train=0.904, test=0.878), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=3 ................................  
[CV] max\_depth=9, min\_samples\_split=3, score=(train=0.902, test=0.854), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=3 ................................  
[CV] max\_depth=9, min\_samples\_split=3, score=(train=0.894, test=0.859), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=3 ................................  
[CV] max\_depth=9, min\_samples\_split=3, score=(train=0.884, test=0.827), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=3 ................................  
[CV] max\_depth=9, min\_samples\_split=3, score=(train=0.906, test=0.854), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=4 ................................  
[CV] max\_depth=9, min\_samples\_split=4, score=(train=0.904, test=0.878), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=4 ................................  
[CV] max\_depth=9, min\_samples\_split=4, score=(train=0.902, test=0.854), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=4 ................................  
[CV] max\_depth=9, min\_samples\_split=4, score=(train=0.894, test=0.862), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=4 ................................  
[CV] max\_depth=9, min\_samples\_split=4, score=(train=0.883, test=0.830), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=4 ................................  
[CV] max\_depth=9, min\_samples\_split=4, score=(train=0.906, test=0.854), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=5 ................................  
[CV] max\_depth=9, min\_samples\_split=5, score=(train=0.904, test=0.878), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=5 ................................  
[CV] max\_depth=9, min\_samples\_split=5, score=(train=0.902, test=0.855), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=5 ................................  
[CV] max\_depth=9, min\_samples\_split=5, score=(train=0.894, test=0.862), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=5 ................................  
[CV] max\_depth=9, min\_samples\_split=5, score=(train=0.883, test=0.829), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=5 ................................  
[CV] max\_depth=9, min\_samples\_split=5, score=(train=0.906, test=0.852), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=6 ................................  
[CV] max\_depth=9, min\_samples\_split=6, score=(train=0.904, test=0.878), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=6 ................................  
[CV] max\_depth=9, min\_samples\_split=6, score=(train=0.902, test=0.855), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=6 ................................  
[CV] max\_depth=9, min\_samples\_split=6, score=(train=0.893, test=0.863), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=6 ................................  
[CV] max\_depth=9, min\_samples\_split=6, score=(train=0.883, test=0.834), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=6 ................................  
[CV] max\_depth=9, min\_samples\_split=6, score=(train=0.906, test=0.852), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=7 ................................  
[CV] max\_depth=9, min\_samples\_split=7, score=(train=0.904, test=0.879), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=7 ................................  
[CV] max\_depth=9, min\_samples\_split=7, score=(train=0.902, test=0.855), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=7 ................................  
[CV] max\_depth=9, min\_samples\_split=7, score=(train=0.893, test=0.863), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=7 ................................  
[CV] max\_depth=9, min\_samples\_split=7, score=(train=0.883, test=0.831), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=7 ................................  
[CV] max\_depth=9, min\_samples\_split=7, score=(train=0.906, test=0.853), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=8 ................................  
[CV] max\_depth=9, min\_samples\_split=8, score=(train=0.903, test=0.878), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=8 ................................  
[CV] max\_depth=9, min\_samples\_split=8, score=(train=0.902, test=0.854), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=8 ................................  
[CV] max\_depth=9, min\_samples\_split=8, score=(train=0.893, test=0.863), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=8 ................................  
[CV] max\_depth=9, min\_samples\_split=8, score=(train=0.883, test=0.834), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=8 ................................  
[CV] max\_depth=9, min\_samples\_split=8, score=(train=0.905, test=0.855), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=9 ................................  
[CV] max\_depth=9, min\_samples\_split=9, score=(train=0.903, test=0.879), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=9 ................................  
[CV] max\_depth=9, min\_samples\_split=9, score=(train=0.902, test=0.855), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=9 ................................  
[CV] max\_depth=9, min\_samples\_split=9, score=(train=0.893, test=0.863), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=9 ................................  
[CV] max\_depth=9, min\_samples\_split=9, score=(train=0.882, test=0.830), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=9 ................................  
[CV] max\_depth=9, min\_samples\_split=9, score=(train=0.905, test=0.854), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=10 ...............................  
[CV] max\_depth=9, min\_samples\_split=10, score=(train=0.901, test=0.879), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=10 ...............................  
[CV] max\_depth=9, min\_samples\_split=10, score=(train=0.901, test=0.855), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=10 ...............................  
[CV] max\_depth=9, min\_samples\_split=10, score=(train=0.893, test=0.863), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=10 ...............................  
[CV] max\_depth=9, min\_samples\_split=10, score=(train=0.882, test=0.828), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=10 ...............................  
[CV] max\_depth=9, min\_samples\_split=10, score=(train=0.905, test=0.854), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=11 ...............................  
[CV] max\_depth=9, min\_samples\_split=11, score=(train=0.901, test=0.879), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=11 ...............................  
[CV] max\_depth=9, min\_samples\_split=11, score=(train=0.901, test=0.855), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=11 ...............................  
[CV] max\_depth=9, min\_samples\_split=11, score=(train=0.891, test=0.861), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=11 ...............................  
[CV] max\_depth=9, min\_samples\_split=11, score=(train=0.882, test=0.834), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=11 ...............................  
[CV] max\_depth=9, min\_samples\_split=11, score=(train=0.904, test=0.856), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=12 ...............................  
[CV] max\_depth=9, min\_samples\_split=12, score=(train=0.900, test=0.879), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=12 ...............................  
[CV] max\_depth=9, min\_samples\_split=12, score=(train=0.900, test=0.855), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=12 ...............................  
[CV] max\_depth=9, min\_samples\_split=12, score=(train=0.891, test=0.861), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=12 ...............................  
[CV] max\_depth=9, min\_samples\_split=12, score=(train=0.882, test=0.832), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=12 ...............................  
[CV] max\_depth=9, min\_samples\_split=12, score=(train=0.903, test=0.854), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=13 ...............................  
[CV] max\_depth=9, min\_samples\_split=13, score=(train=0.900, test=0.879), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=13 ...............................  
[CV] max\_depth=9, min\_samples\_split=13, score=(train=0.900, test=0.855), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=13 ...............................  
[CV] max\_depth=9, min\_samples\_split=13, score=(train=0.890, test=0.861), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=13 ...............................  
[CV] max\_depth=9, min\_samples\_split=13, score=(train=0.881, test=0.833), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=13 ...............................  
[CV] max\_depth=9, min\_samples\_split=13, score=(train=0.902, test=0.854), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=14 ...............................  
[CV] max\_depth=9, min\_samples\_split=14, score=(train=0.899, test=0.880), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=14 ...............................  
[CV] max\_depth=9, min\_samples\_split=14, score=(train=0.900, test=0.855), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=14 ...............................  
[CV] max\_depth=9, min\_samples\_split=14, score=(train=0.889, test=0.861), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=14 ...............................  
[CV] max\_depth=9, min\_samples\_split=14, score=(train=0.881, test=0.835), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=14 ...............................  
[CV] max\_depth=9, min\_samples\_split=14, score=(train=0.902, test=0.854), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=15 ...............................  
[CV] max\_depth=9, min\_samples\_split=15, score=(train=0.899, test=0.880), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=15 ...............................  
[CV] max\_depth=9, min\_samples\_split=15, score=(train=0.899, test=0.855), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=15 ...............................  
[CV] max\_depth=9, min\_samples\_split=15, score=(train=0.889, test=0.861), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=15 ...............................  
[CV] max\_depth=9, min\_samples\_split=15, score=(train=0.881, test=0.835), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=15 ...............................  
[CV] max\_depth=9, min\_samples\_split=15, score=(train=0.902, test=0.852), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=16 ...............................  
[CV] max\_depth=9, min\_samples\_split=16, score=(train=0.899, test=0.880), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=16 ...............................  
[CV] max\_depth=9, min\_samples\_split=16, score=(train=0.899, test=0.855), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=16 ...............................  
[CV] max\_depth=9, min\_samples\_split=16, score=(train=0.889, test=0.861), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=16 ...............................  
[CV] max\_depth=9, min\_samples\_split=16, score=(train=0.881, test=0.835), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=16 ...............................  
[CV] max\_depth=9, min\_samples\_split=16, score=(train=0.902, test=0.855), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=17 ...............................  
[CV] max\_depth=9, min\_samples\_split=17, score=(train=0.899, test=0.879), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=17 ...............................  
[CV] max\_depth=9, min\_samples\_split=17, score=(train=0.898, test=0.855), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=17 ...............................  
[CV] max\_depth=9, min\_samples\_split=17, score=(train=0.889, test=0.861), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=17 ...............................  
[CV] max\_depth=9, min\_samples\_split=17, score=(train=0.881, test=0.833), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=17 ...............................  
[CV] max\_depth=9, min\_samples\_split=17, score=(train=0.902, test=0.855), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=18 ...............................  
[CV] max\_depth=9, min\_samples\_split=18, score=(train=0.898, test=0.880), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=18 ...............................  
[CV] max\_depth=9, min\_samples\_split=18, score=(train=0.898, test=0.855), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=18 ...............................  
[CV] max\_depth=9, min\_samples\_split=18, score=(train=0.889, test=0.861), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=18 ...............................  
[CV] max\_depth=9, min\_samples\_split=18, score=(train=0.879, test=0.833), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=18 ...............................  
[CV] max\_depth=9, min\_samples\_split=18, score=(train=0.902, test=0.852), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=19 ...............................  
[CV] max\_depth=9, min\_samples\_split=19, score=(train=0.898, test=0.879), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=19 ...............................  
[CV] max\_depth=9, min\_samples\_split=19, score=(train=0.898, test=0.855), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=19 ...............................  
[CV] max\_depth=9, min\_samples\_split=19, score=(train=0.889, test=0.861), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=19 ...............................  
[CV] max\_depth=9, min\_samples\_split=19, score=(train=0.879, test=0.833), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=19 ...............................  
[CV] max\_depth=9, min\_samples\_split=19, score=(train=0.902, test=0.852), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=20 ...............................  
[CV] max\_depth=9, min\_samples\_split=20, score=(train=0.898, test=0.879), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=20 ...............................  
[CV] max\_depth=9, min\_samples\_split=20, score=(train=0.898, test=0.856), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=20 ...............................  
[CV] max\_depth=9, min\_samples\_split=20, score=(train=0.888, test=0.862), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=20 ...............................  
[CV] max\_depth=9, min\_samples\_split=20, score=(train=0.879, test=0.835), total= 0.0s  
[CV] max\_depth=9, min\_samples\_split=20 ...............................  
[CV] max\_depth=9, min\_samples\_split=20, score=(train=0.901, test=0.854), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=2 ...............................  
[CV] max\_depth=10, min\_samples\_split=2, score=(train=0.928, test=0.880), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=2 ...............................  
[CV] max\_depth=10, min\_samples\_split=2, score=(train=0.929, test=0.860), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=2 ...............................  
[CV] max\_depth=10, min\_samples\_split=2, score=(train=0.920, test=0.871), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=2 ...............................  
[CV] max\_depth=10, min\_samples\_split=2, score=(train=0.912, test=0.846), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=2 ...............................  
[CV] max\_depth=10, min\_samples\_split=2, score=(train=0.927, test=0.871), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=3 ...............................  
[CV] max\_depth=10, min\_samples\_split=3, score=(train=0.928, test=0.879), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=3 ...............................  
[CV] max\_depth=10, min\_samples\_split=3, score=(train=0.929, test=0.858), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=3 ...............................  
[CV] max\_depth=10, min\_samples\_split=3, score=(train=0.920, test=0.871), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=3 ...............................  
[CV] max\_depth=10, min\_samples\_split=3, score=(train=0.912, test=0.852), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=3 ...............................  
[CV] max\_depth=10, min\_samples\_split=3, score=(train=0.927, test=0.867), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=4 ...............................  
[CV] max\_depth=10, min\_samples\_split=4, score=(train=0.927, test=0.878), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=4 ...............................  
[CV] max\_depth=10, min\_samples\_split=4, score=(train=0.928, test=0.859), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=4 ...............................  
[CV] max\_depth=10, min\_samples\_split=4, score=(train=0.919, test=0.873), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=4 ...............................  
[CV] max\_depth=10, min\_samples\_split=4, score=(train=0.911, test=0.848), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=4 ...............................  
[CV] max\_depth=10, min\_samples\_split=4, score=(train=0.926, test=0.872), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=5 ...............................  
[CV] max\_depth=10, min\_samples\_split=5, score=(train=0.927, test=0.880), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=5 ...............................  
[CV] max\_depth=10, min\_samples\_split=5, score=(train=0.928, test=0.859), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=5 ...............................  
[CV] max\_depth=10, min\_samples\_split=5, score=(train=0.919, test=0.871), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=5 ...............................  
[CV] max\_depth=10, min\_samples\_split=5, score=(train=0.911, test=0.849), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=5 ...............................  
[CV] max\_depth=10, min\_samples\_split=5, score=(train=0.926, test=0.871), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=6 ...............................  
[CV] max\_depth=10, min\_samples\_split=6, score=(train=0.926, test=0.881), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=6 ...............................  
[CV] max\_depth=10, min\_samples\_split=6, score=(train=0.928, test=0.859), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=6 ...............................  
[CV] max\_depth=10, min\_samples\_split=6, score=(train=0.918, test=0.872), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=6 ...............................  
[CV] max\_depth=10, min\_samples\_split=6, score=(train=0.911, test=0.852), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=6 ...............................  
[CV] max\_depth=10, min\_samples\_split=6, score=(train=0.926, test=0.872), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=7 ...............................  
[CV] max\_depth=10, min\_samples\_split=7, score=(train=0.925, test=0.882), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=7 ...............................  
[CV] max\_depth=10, min\_samples\_split=7, score=(train=0.928, test=0.861), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=7 ...............................  
[CV] max\_depth=10, min\_samples\_split=7, score=(train=0.918, test=0.871), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=7 ...............................  
[CV] max\_depth=10, min\_samples\_split=7, score=(train=0.910, test=0.853), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=7 ...............................  
[CV] max\_depth=10, min\_samples\_split=7, score=(train=0.925, test=0.868), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=8 ...............................  
[CV] max\_depth=10, min\_samples\_split=8, score=(train=0.924, test=0.884), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=8 ...............................  
[CV] max\_depth=10, min\_samples\_split=8, score=(train=0.927, test=0.861), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=8 ...............................  
[CV] max\_depth=10, min\_samples\_split=8, score=(train=0.917, test=0.873), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=8 ...............................  
[CV] max\_depth=10, min\_samples\_split=8, score=(train=0.910, test=0.851), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=8 ...............................  
[CV] max\_depth=10, min\_samples\_split=8, score=(train=0.924, test=0.872), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=9 ...............................  
[CV] max\_depth=10, min\_samples\_split=9, score=(train=0.923, test=0.884), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=9 ...............................  
[CV] max\_depth=10, min\_samples\_split=9, score=(train=0.926, test=0.859), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=9 ...............................  
[CV] max\_depth=10, min\_samples\_split=9, score=(train=0.917, test=0.871), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=9 ...............................  
[CV] max\_depth=10, min\_samples\_split=9, score=(train=0.909, test=0.850), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=9 ...............................  
[CV] max\_depth=10, min\_samples\_split=9, score=(train=0.924, test=0.870), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=10 ..............................  
[CV] max\_depth=10, min\_samples\_split=10, score=(train=0.922, test=0.886), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=10 ..............................  
[CV] max\_depth=10, min\_samples\_split=10, score=(train=0.925, test=0.859), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=10 ..............................  
[CV] max\_depth=10, min\_samples\_split=10, score=(train=0.917, test=0.872), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=10 ..............................  
[CV] max\_depth=10, min\_samples\_split=10, score=(train=0.908, test=0.855), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=10 ..............................  
[CV] max\_depth=10, min\_samples\_split=10, score=(train=0.923, test=0.873), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=11 ..............................  
[CV] max\_depth=10, min\_samples\_split=11, score=(train=0.921, test=0.886), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=11 ..............................  
[CV] max\_depth=10, min\_samples\_split=11, score=(train=0.925, test=0.862), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=11 ..............................  
[CV] max\_depth=10, min\_samples\_split=11, score=(train=0.915, test=0.871), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=11 ..............................  
[CV] max\_depth=10, min\_samples\_split=11, score=(train=0.908, test=0.854), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=11 ..............................  
[CV] max\_depth=10, min\_samples\_split=11, score=(train=0.923, test=0.871), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=12 ..............................  
[CV] max\_depth=10, min\_samples\_split=12, score=(train=0.920, test=0.886), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=12 ..............................  
[CV] max\_depth=10, min\_samples\_split=12, score=(train=0.925, test=0.861), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=12 ..............................  
[CV] max\_depth=10, min\_samples\_split=12, score=(train=0.914, test=0.873), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=12 ..............................  
[CV] max\_depth=10, min\_samples\_split=12, score=(train=0.906, test=0.854), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=12 ..............................  
[CV] max\_depth=10, min\_samples\_split=12, score=(train=0.921, test=0.871), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=13 ..............................  
[CV] max\_depth=10, min\_samples\_split=13, score=(train=0.920, test=0.885), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=13 ..............................  
[CV] max\_depth=10, min\_samples\_split=13, score=(train=0.924, test=0.860), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=13 ..............................  
[CV] max\_depth=10, min\_samples\_split=13, score=(train=0.914, test=0.872), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=13 ..............................  
[CV] max\_depth=10, min\_samples\_split=13, score=(train=0.906, test=0.857), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=13 ..............................  
[CV] max\_depth=10, min\_samples\_split=13, score=(train=0.920, test=0.868), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=14 ..............................  
[CV] max\_depth=10, min\_samples\_split=14, score=(train=0.919, test=0.886), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=14 ..............................  
[CV] max\_depth=10, min\_samples\_split=14, score=(train=0.924, test=0.860), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=14 ..............................  
[CV] max\_depth=10, min\_samples\_split=14, score=(train=0.913, test=0.871), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=14 ..............................  
[CV] max\_depth=10, min\_samples\_split=14, score=(train=0.906, test=0.858), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=14 ..............................  
[CV] max\_depth=10, min\_samples\_split=14, score=(train=0.920, test=0.871), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=15 ..............................  
[CV] max\_depth=10, min\_samples\_split=15, score=(train=0.919, test=0.887), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=15 ..............................  
[CV] max\_depth=10, min\_samples\_split=15, score=(train=0.923, test=0.861), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=15 ..............................  
[CV] max\_depth=10, min\_samples\_split=15, score=(train=0.911, test=0.871), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=15 ..............................  
[CV] max\_depth=10, min\_samples\_split=15, score=(train=0.905, test=0.857), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=15 ..............................  
[CV] max\_depth=10, min\_samples\_split=15, score=(train=0.920, test=0.871), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=16 ..............................  
[CV] max\_depth=10, min\_samples\_split=16, score=(train=0.918, test=0.887), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=16 ..............................  
[CV] max\_depth=10, min\_samples\_split=16, score=(train=0.923, test=0.860), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=16 ..............................  
[CV] max\_depth=10, min\_samples\_split=16, score=(train=0.911, test=0.872), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=16 ..............................  
[CV] max\_depth=10, min\_samples\_split=16, score=(train=0.905, test=0.857), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=16 ..............................  
[CV] max\_depth=10, min\_samples\_split=16, score=(train=0.919, test=0.868), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=17 ..............................  
[CV] max\_depth=10, min\_samples\_split=17, score=(train=0.918, test=0.886), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=17 ..............................  
[CV] max\_depth=10, min\_samples\_split=17, score=(train=0.921, test=0.861), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=17 ..............................  
[CV] max\_depth=10, min\_samples\_split=17, score=(train=0.911, test=0.872), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=17 ..............................  
[CV] max\_depth=10, min\_samples\_split=17, score=(train=0.905, test=0.856), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=17 ..............................  
[CV] max\_depth=10, min\_samples\_split=17, score=(train=0.919, test=0.871), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=18 ..............................  
[CV] max\_depth=10, min\_samples\_split=18, score=(train=0.916, test=0.886), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=18 ..............................  
[CV] max\_depth=10, min\_samples\_split=18, score=(train=0.921, test=0.861), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=18 ..............................  
[CV] max\_depth=10, min\_samples\_split=18, score=(train=0.911, test=0.873), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=18 ..............................  
[CV] max\_depth=10, min\_samples\_split=18, score=(train=0.903, test=0.856), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=18 ..............................  
[CV] max\_depth=10, min\_samples\_split=18, score=(train=0.918, test=0.871), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=19 ..............................  
[CV] max\_depth=10, min\_samples\_split=19, score=(train=0.916, test=0.887), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=19 ..............................  
[CV] max\_depth=10, min\_samples\_split=19, score=(train=0.921, test=0.860), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=19 ..............................  
[CV] max\_depth=10, min\_samples\_split=19, score=(train=0.910, test=0.872), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=19 ..............................  
[CV] max\_depth=10, min\_samples\_split=19, score=(train=0.903, test=0.856), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=19 ..............................  
[CV] max\_depth=10, min\_samples\_split=19, score=(train=0.918, test=0.871), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=20 ..............................  
[CV] max\_depth=10, min\_samples\_split=20, score=(train=0.915, test=0.887), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=20 ..............................  
[CV] max\_depth=10, min\_samples\_split=20, score=(train=0.920, test=0.861), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=20 ..............................  
[CV] max\_depth=10, min\_samples\_split=20, score=(train=0.909, test=0.873), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=20 ..............................  
[CV] max\_depth=10, min\_samples\_split=20, score=(train=0.902, test=0.857), total= 0.0s  
[CV] max\_depth=10, min\_samples\_split=20 ..............................  
[CV] max\_depth=10, min\_samples\_split=20, score=(train=0.918, test=0.869), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=2 ...............................  
[CV] max\_depth=11, min\_samples\_split=2, score=(train=0.945, test=0.882), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=2 ...............................  
[CV] max\_depth=11, min\_samples\_split=2, score=(train=0.946, test=0.866), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=2 ...............................  
[CV] max\_depth=11, min\_samples\_split=2, score=(train=0.939, test=0.878), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=2 ...............................  
[CV] max\_depth=11, min\_samples\_split=2, score=(train=0.937, test=0.860), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=2 ...............................  
[CV] max\_depth=11, min\_samples\_split=2, score=(train=0.943, test=0.874), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=3 ...............................  
[CV] max\_depth=11, min\_samples\_split=3, score=(train=0.945, test=0.880), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=3 ...............................  
[CV] max\_depth=11, min\_samples\_split=3, score=(train=0.945, test=0.871), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=3 ...............................  
[CV] max\_depth=11, min\_samples\_split=3, score=(train=0.939, test=0.878), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=3 ...............................  
[CV] max\_depth=11, min\_samples\_split=3, score=(train=0.936, test=0.863), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=3 ...............................  
[CV] max\_depth=11, min\_samples\_split=3, score=(train=0.943, test=0.875), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=4 ...............................  
[CV] max\_depth=11, min\_samples\_split=4, score=(train=0.944, test=0.884), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=4 ...............................  
[CV] max\_depth=11, min\_samples\_split=4, score=(train=0.945, test=0.867), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=4 ...............................  
[CV] max\_depth=11, min\_samples\_split=4, score=(train=0.938, test=0.880), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=4 ...............................  
[CV] max\_depth=11, min\_samples\_split=4, score=(train=0.935, test=0.862), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=4 ...............................  
[CV] max\_depth=11, min\_samples\_split=4, score=(train=0.942, test=0.874), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=5 ...............................  
[CV] max\_depth=11, min\_samples\_split=5, score=(train=0.943, test=0.881), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=5 ...............................  
[CV] max\_depth=11, min\_samples\_split=5, score=(train=0.944, test=0.868), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=5 ...............................  
[CV] max\_depth=11, min\_samples\_split=5, score=(train=0.937, test=0.879), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=5 ...............................  
[CV] max\_depth=11, min\_samples\_split=5, score=(train=0.935, test=0.868), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=5 ...............................  
[CV] max\_depth=11, min\_samples\_split=5, score=(train=0.941, test=0.877), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=6 ...............................  
[CV] max\_depth=11, min\_samples\_split=6, score=(train=0.942, test=0.884), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=6 ...............................  
[CV] max\_depth=11, min\_samples\_split=6, score=(train=0.943, test=0.870), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=6 ...............................  
[CV] max\_depth=11, min\_samples\_split=6, score=(train=0.936, test=0.876), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=6 ...............................  
[CV] max\_depth=11, min\_samples\_split=6, score=(train=0.934, test=0.868), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=6 ...............................  
[CV] max\_depth=11, min\_samples\_split=6, score=(train=0.940, test=0.875), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=7 ...............................  
[CV] max\_depth=11, min\_samples\_split=7, score=(train=0.940, test=0.886), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=7 ...............................  
[CV] max\_depth=11, min\_samples\_split=7, score=(train=0.942, test=0.872), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=7 ...............................  
[CV] max\_depth=11, min\_samples\_split=7, score=(train=0.935, test=0.879), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=7 ...............................  
[CV] max\_depth=11, min\_samples\_split=7, score=(train=0.933, test=0.867), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=7 ...............................  
[CV] max\_depth=11, min\_samples\_split=7, score=(train=0.939, test=0.875), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=8 ...............................  
[CV] max\_depth=11, min\_samples\_split=8, score=(train=0.939, test=0.887), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=8 ...............................  
[CV] max\_depth=11, min\_samples\_split=8, score=(train=0.941, test=0.870), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=8 ...............................  
[CV] max\_depth=11, min\_samples\_split=8, score=(train=0.934, test=0.879), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=8 ...............................  
[CV] max\_depth=11, min\_samples\_split=8, score=(train=0.932, test=0.864), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=8 ...............................  
[CV] max\_depth=11, min\_samples\_split=8, score=(train=0.938, test=0.877), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=9 ...............................  
[CV] max\_depth=11, min\_samples\_split=9, score=(train=0.938, test=0.888), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=9 ...............................  
[CV] max\_depth=11, min\_samples\_split=9, score=(train=0.940, test=0.868), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=9 ...............................  
[CV] max\_depth=11, min\_samples\_split=9, score=(train=0.934, test=0.879), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=9 ...............................  
[CV] max\_depth=11, min\_samples\_split=9, score=(train=0.931, test=0.869), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=9 ...............................  
[CV] max\_depth=11, min\_samples\_split=9, score=(train=0.937, test=0.878), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=10 ..............................  
[CV] max\_depth=11, min\_samples\_split=10, score=(train=0.935, test=0.888), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=10 ..............................  
[CV] max\_depth=11, min\_samples\_split=10, score=(train=0.939, test=0.870), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=10 ..............................  
[CV] max\_depth=11, min\_samples\_split=10, score=(train=0.933, test=0.880), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=10 ..............................  
[CV] max\_depth=11, min\_samples\_split=10, score=(train=0.930, test=0.869), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=10 ..............................  
[CV] max\_depth=11, min\_samples\_split=10, score=(train=0.937, test=0.880), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=11 ..............................  
[CV] max\_depth=11, min\_samples\_split=11, score=(train=0.935, test=0.889), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=11 ..............................  
[CV] max\_depth=11, min\_samples\_split=11, score=(train=0.938, test=0.871), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=11 ..............................  
[CV] max\_depth=11, min\_samples\_split=11, score=(train=0.931, test=0.878), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=11 ..............................  
[CV] max\_depth=11, min\_samples\_split=11, score=(train=0.929, test=0.872), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=11 ..............................  
[CV] max\_depth=11, min\_samples\_split=11, score=(train=0.936, test=0.879), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=12 ..............................  
[CV] max\_depth=11, min\_samples\_split=12, score=(train=0.933, test=0.890), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=12 ..............................  
[CV] max\_depth=11, min\_samples\_split=12, score=(train=0.937, test=0.871), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=12 ..............................  
[CV] max\_depth=11, min\_samples\_split=12, score=(train=0.930, test=0.880), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=12 ..............................  
[CV] max\_depth=11, min\_samples\_split=12, score=(train=0.927, test=0.867), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=12 ..............................  
[CV] max\_depth=11, min\_samples\_split=12, score=(train=0.934, test=0.879), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=13 ..............................  
[CV] max\_depth=11, min\_samples\_split=13, score=(train=0.933, test=0.889), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=13 ..............................  
[CV] max\_depth=11, min\_samples\_split=13, score=(train=0.937, test=0.872), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=13 ..............................  
[CV] max\_depth=11, min\_samples\_split=13, score=(train=0.929, test=0.877), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=13 ..............................  
[CV] max\_depth=11, min\_samples\_split=13, score=(train=0.926, test=0.870), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=13 ..............................  
[CV] max\_depth=11, min\_samples\_split=13, score=(train=0.933, test=0.877), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=14 ..............................  
[CV] max\_depth=11, min\_samples\_split=14, score=(train=0.932, test=0.890), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=14 ..............................  
[CV] max\_depth=11, min\_samples\_split=14, score=(train=0.936, test=0.873), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=14 ..............................  
[CV] max\_depth=11, min\_samples\_split=14, score=(train=0.928, test=0.878), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=14 ..............................  
[CV] max\_depth=11, min\_samples\_split=14, score=(train=0.925, test=0.869), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=14 ..............................  
[CV] max\_depth=11, min\_samples\_split=14, score=(train=0.932, test=0.877), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=15 ..............................  
[CV] max\_depth=11, min\_samples\_split=15, score=(train=0.931, test=0.890), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=15 ..............................  
[CV] max\_depth=11, min\_samples\_split=15, score=(train=0.935, test=0.873), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=15 ..............................  
[CV] max\_depth=11, min\_samples\_split=15, score=(train=0.926, test=0.877), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=15 ..............................  
[CV] max\_depth=11, min\_samples\_split=15, score=(train=0.925, test=0.867), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=15 ..............................  
[CV] max\_depth=11, min\_samples\_split=15, score=(train=0.931, test=0.877), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=16 ..............................  
[CV] max\_depth=11, min\_samples\_split=16, score=(train=0.930, test=0.889), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=16 ..............................  
[CV] max\_depth=11, min\_samples\_split=16, score=(train=0.934, test=0.871), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=16 ..............................  
[CV] max\_depth=11, min\_samples\_split=16, score=(train=0.925, test=0.878), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=16 ..............................  
[CV] max\_depth=11, min\_samples\_split=16, score=(train=0.924, test=0.868), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=16 ..............................  
[CV] max\_depth=11, min\_samples\_split=16, score=(train=0.931, test=0.879), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=17 ..............................  
[CV] max\_depth=11, min\_samples\_split=17, score=(train=0.930, test=0.889), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=17 ..............................  
[CV] max\_depth=11, min\_samples\_split=17, score=(train=0.932, test=0.873), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=17 ..............................  
[CV] max\_depth=11, min\_samples\_split=17, score=(train=0.925, test=0.876), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=17 ..............................  
[CV] max\_depth=11, min\_samples\_split=17, score=(train=0.924, test=0.868), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=17 ..............................  
[CV] max\_depth=11, min\_samples\_split=17, score=(train=0.930, test=0.880), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=18 ..............................  
[CV] max\_depth=11, min\_samples\_split=18, score=(train=0.928, test=0.889), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=18 ..............................  
[CV] max\_depth=11, min\_samples\_split=18, score=(train=0.932, test=0.873), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=18 ..............................  
[CV] max\_depth=11, min\_samples\_split=18, score=(train=0.925, test=0.877), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=18 ..............................  
[CV] max\_depth=11, min\_samples\_split=18, score=(train=0.922, test=0.872), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=18 ..............................  
[CV] max\_depth=11, min\_samples\_split=18, score=(train=0.929, test=0.878), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=19 ..............................  
[CV] max\_depth=11, min\_samples\_split=19, score=(train=0.927, test=0.889), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=19 ..............................  
[CV] max\_depth=11, min\_samples\_split=19, score=(train=0.931, test=0.872), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=19 ..............................  
[CV] max\_depth=11, min\_samples\_split=19, score=(train=0.924, test=0.877), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=19 ..............................  
[CV] max\_depth=11, min\_samples\_split=19, score=(train=0.921, test=0.868), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=19 ..............................  
[CV] max\_depth=11, min\_samples\_split=19, score=(train=0.929, test=0.880), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=20 ..............................  
[CV] max\_depth=11, min\_samples\_split=20, score=(train=0.926, test=0.886), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=20 ..............................  
[CV] max\_depth=11, min\_samples\_split=20, score=(train=0.931, test=0.871), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=20 ..............................  
[CV] max\_depth=11, min\_samples\_split=20, score=(train=0.923, test=0.878), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=20 ..............................  
[CV] max\_depth=11, min\_samples\_split=20, score=(train=0.921, test=0.870), total= 0.0s  
[CV] max\_depth=11, min\_samples\_split=20 ..............................  
[CV] max\_depth=11, min\_samples\_split=20, score=(train=0.928, test=0.877), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=2 ...............................  
[CV] max\_depth=12, min\_samples\_split=2, score=(train=0.959, test=0.878), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=2 ...............................  
[CV] max\_depth=12, min\_samples\_split=2, score=(train=0.959, test=0.866), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=2 ...............................  
[CV] max\_depth=12, min\_samples\_split=2, score=(train=0.953, test=0.876), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=2 ...............................  
[CV] max\_depth=12, min\_samples\_split=2, score=(train=0.953, test=0.859), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=2 ...............................  
[CV] max\_depth=12, min\_samples\_split=2, score=(train=0.956, test=0.868), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=3 ...............................  
[CV] max\_depth=12, min\_samples\_split=3, score=(train=0.959, test=0.877), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=3 ...............................  
[CV] max\_depth=12, min\_samples\_split=3, score=(train=0.958, test=0.870), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=3 ...............................  
[CV] max\_depth=12, min\_samples\_split=3, score=(train=0.952, test=0.877), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=3 ...............................  
[CV] max\_depth=12, min\_samples\_split=3, score=(train=0.952, test=0.861), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=3 ...............................  
[CV] max\_depth=12, min\_samples\_split=3, score=(train=0.956, test=0.860), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=4 ...............................  
[CV] max\_depth=12, min\_samples\_split=4, score=(train=0.958, test=0.880), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=4 ...............................  
[CV] max\_depth=12, min\_samples\_split=4, score=(train=0.957, test=0.871), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=4 ...............................  
[CV] max\_depth=12, min\_samples\_split=4, score=(train=0.951, test=0.879), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=4 ...............................  
[CV] max\_depth=12, min\_samples\_split=4, score=(train=0.951, test=0.865), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=4 ...............................  
[CV] max\_depth=12, min\_samples\_split=4, score=(train=0.955, test=0.872), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=5 ...............................  
[CV] max\_depth=12, min\_samples\_split=5, score=(train=0.956, test=0.881), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=5 ...............................  
[CV] max\_depth=12, min\_samples\_split=5, score=(train=0.956, test=0.870), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=5 ...............................  
[CV] max\_depth=12, min\_samples\_split=5, score=(train=0.949, test=0.878), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=5 ...............................  
[CV] max\_depth=12, min\_samples\_split=5, score=(train=0.950, test=0.863), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=5 ...............................  
[CV] max\_depth=12, min\_samples\_split=5, score=(train=0.954, test=0.871), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=6 ...............................  
[CV] max\_depth=12, min\_samples\_split=6, score=(train=0.954, test=0.886), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=6 ...............................  
[CV] max\_depth=12, min\_samples\_split=6, score=(train=0.955, test=0.872), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=6 ...............................  
[CV] max\_depth=12, min\_samples\_split=6, score=(train=0.948, test=0.878), total= 0.1s  
[CV] max\_depth=12, min\_samples\_split=6 ...............................  
[CV] max\_depth=12, min\_samples\_split=6, score=(train=0.949, test=0.864), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=6 ...............................  
[CV] max\_depth=12, min\_samples\_split=6, score=(train=0.952, test=0.871), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=7 ...............................  
[CV] max\_depth=12, min\_samples\_split=7, score=(train=0.952, test=0.886), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=7 ...............................  
[CV] max\_depth=12, min\_samples\_split=7, score=(train=0.953, test=0.873), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=7 ...............................  
[CV] max\_depth=12, min\_samples\_split=7, score=(train=0.947, test=0.878), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=7 ...............................  
[CV] max\_depth=12, min\_samples\_split=7, score=(train=0.947, test=0.864), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=7 ...............................  
[CV] max\_depth=12, min\_samples\_split=7, score=(train=0.950, test=0.870), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=8 ...............................  
[CV] max\_depth=12, min\_samples\_split=8, score=(train=0.950, test=0.888), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=8 ...............................  
[CV] max\_depth=12, min\_samples\_split=8, score=(train=0.952, test=0.873), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=8 ...............................  
[CV] max\_depth=12, min\_samples\_split=8, score=(train=0.946, test=0.879), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=8 ...............................  
[CV] max\_depth=12, min\_samples\_split=8, score=(train=0.946, test=0.861), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=8 ...............................  
[CV] max\_depth=12, min\_samples\_split=8, score=(train=0.949, test=0.875), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=9 ...............................  
[CV] max\_depth=12, min\_samples\_split=9, score=(train=0.948, test=0.888), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=9 ...............................  
[CV] max\_depth=12, min\_samples\_split=9, score=(train=0.951, test=0.874), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=9 ...............................  
[CV] max\_depth=12, min\_samples\_split=9, score=(train=0.945, test=0.880), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=9 ...............................  
[CV] max\_depth=12, min\_samples\_split=9, score=(train=0.945, test=0.864), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=9 ...............................  
[CV] max\_depth=12, min\_samples\_split=9, score=(train=0.947, test=0.872), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=10 ..............................  
[CV] max\_depth=12, min\_samples\_split=10, score=(train=0.945, test=0.887), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=10 ..............................  
[CV] max\_depth=12, min\_samples\_split=10, score=(train=0.950, test=0.874), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=10 ..............................  
[CV] max\_depth=12, min\_samples\_split=10, score=(train=0.943, test=0.877), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=10 ..............................  
[CV] max\_depth=12, min\_samples\_split=10, score=(train=0.943, test=0.867), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=10 ..............................  
[CV] max\_depth=12, min\_samples\_split=10, score=(train=0.947, test=0.875), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=11 ..............................  
[CV] max\_depth=12, min\_samples\_split=11, score=(train=0.944, test=0.892), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=11 ..............................  
[CV] max\_depth=12, min\_samples\_split=11, score=(train=0.948, test=0.873), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=11 ..............................  
[CV] max\_depth=12, min\_samples\_split=11, score=(train=0.941, test=0.877), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=11 ..............................  
[CV] max\_depth=12, min\_samples\_split=11, score=(train=0.942, test=0.871), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=11 ..............................  
[CV] max\_depth=12, min\_samples\_split=11, score=(train=0.945, test=0.873), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=12 ..............................  
[CV] max\_depth=12, min\_samples\_split=12, score=(train=0.942, test=0.891), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=12 ..............................  
[CV] max\_depth=12, min\_samples\_split=12, score=(train=0.947, test=0.876), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=12 ..............................  
[CV] max\_depth=12, min\_samples\_split=12, score=(train=0.939, test=0.880), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=12 ..............................  
[CV] max\_depth=12, min\_samples\_split=12, score=(train=0.939, test=0.869), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=12 ..............................  
[CV] max\_depth=12, min\_samples\_split=12, score=(train=0.944, test=0.877), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=13 ..............................  
[CV] max\_depth=12, min\_samples\_split=13, score=(train=0.942, test=0.892), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=13 ..............................  
[CV] max\_depth=12, min\_samples\_split=13, score=(train=0.946, test=0.874), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=13 ..............................  
[CV] max\_depth=12, min\_samples\_split=13, score=(train=0.938, test=0.879), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=13 ..............................  
[CV] max\_depth=12, min\_samples\_split=13, score=(train=0.938, test=0.871), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=13 ..............................  
[CV] max\_depth=12, min\_samples\_split=13, score=(train=0.942, test=0.874), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=14 ..............................  
[CV] max\_depth=12, min\_samples\_split=14, score=(train=0.940, test=0.893), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=14 ..............................  
[CV] max\_depth=12, min\_samples\_split=14, score=(train=0.945, test=0.876), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=14 ..............................  
[CV] max\_depth=12, min\_samples\_split=14, score=(train=0.937, test=0.878), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=14 ..............................  
[CV] max\_depth=12, min\_samples\_split=14, score=(train=0.938, test=0.870), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=14 ..............................  
[CV] max\_depth=12, min\_samples\_split=14, score=(train=0.941, test=0.877), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=15 ..............................  
[CV] max\_depth=12, min\_samples\_split=15, score=(train=0.939, test=0.892), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=15 ..............................  
[CV] max\_depth=12, min\_samples\_split=15, score=(train=0.943, test=0.878), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=15 ..............................  
[CV] max\_depth=12, min\_samples\_split=15, score=(train=0.935, test=0.875), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=15 ..............................  
[CV] max\_depth=12, min\_samples\_split=15, score=(train=0.936, test=0.873), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=15 ..............................  
[CV] max\_depth=12, min\_samples\_split=15, score=(train=0.940, test=0.875), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=16 ..............................  
[CV] max\_depth=12, min\_samples\_split=16, score=(train=0.938, test=0.894), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=16 ..............................  
[CV] max\_depth=12, min\_samples\_split=16, score=(train=0.942, test=0.878), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=16 ..............................  
[CV] max\_depth=12, min\_samples\_split=16, score=(train=0.934, test=0.876), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=16 ..............................  
[CV] max\_depth=12, min\_samples\_split=16, score=(train=0.935, test=0.874), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=16 ..............................  
[CV] max\_depth=12, min\_samples\_split=16, score=(train=0.939, test=0.874), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=17 ..............................  
[CV] max\_depth=12, min\_samples\_split=17, score=(train=0.938, test=0.892), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=17 ..............................  
[CV] max\_depth=12, min\_samples\_split=17, score=(train=0.940, test=0.880), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=17 ..............................  
[CV] max\_depth=12, min\_samples\_split=17, score=(train=0.934, test=0.875), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=17 ..............................  
[CV] max\_depth=12, min\_samples\_split=17, score=(train=0.935, test=0.875), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=17 ..............................  
[CV] max\_depth=12, min\_samples\_split=17, score=(train=0.938, test=0.877), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=18 ..............................  
[CV] max\_depth=12, min\_samples\_split=18, score=(train=0.936, test=0.890), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=18 ..............................  
[CV] max\_depth=12, min\_samples\_split=18, score=(train=0.939, test=0.877), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=18 ..............................  
[CV] max\_depth=12, min\_samples\_split=18, score=(train=0.933, test=0.876), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=18 ..............................  
[CV] max\_depth=12, min\_samples\_split=18, score=(train=0.932, test=0.876), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=18 ..............................  
[CV] max\_depth=12, min\_samples\_split=18, score=(train=0.938, test=0.877), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=19 ..............................  
[CV] max\_depth=12, min\_samples\_split=19, score=(train=0.935, test=0.891), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=19 ..............................  
[CV] max\_depth=12, min\_samples\_split=19, score=(train=0.939, test=0.878), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=19 ..............................  
[CV] max\_depth=12, min\_samples\_split=19, score=(train=0.932, test=0.875), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=19 ..............................  
[CV] max\_depth=12, min\_samples\_split=19, score=(train=0.932, test=0.875), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=19 ..............................  
[CV] max\_depth=12, min\_samples\_split=19, score=(train=0.937, test=0.878), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=20 ..............................  
[CV] max\_depth=12, min\_samples\_split=20, score=(train=0.933, test=0.887), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=20 ..............................  
[CV] max\_depth=12, min\_samples\_split=20, score=(train=0.938, test=0.878), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=20 ..............................  
[CV] max\_depth=12, min\_samples\_split=20, score=(train=0.931, test=0.878), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=20 ..............................  
[CV] max\_depth=12, min\_samples\_split=20, score=(train=0.931, test=0.873), total= 0.0s  
[CV] max\_depth=12, min\_samples\_split=20 ..............................  
[CV] max\_depth=12, min\_samples\_split=20, score=(train=0.936, test=0.878), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=2 ...............................  
[CV] max\_depth=13, min\_samples\_split=2, score=(train=0.971, test=0.876), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=2 ...............................  
[CV] max\_depth=13, min\_samples\_split=2, score=(train=0.971, test=0.872), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=2 ...............................  
[CV] max\_depth=13, min\_samples\_split=2, score=(train=0.966, test=0.886), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=2 ...............................  
[CV] max\_depth=13, min\_samples\_split=2, score=(train=0.968, test=0.847), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=2 ...............................  
[CV] max\_depth=13, min\_samples\_split=2, score=(train=0.967, test=0.866), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=3 ...............................  
[CV] max\_depth=13, min\_samples\_split=3, score=(train=0.970, test=0.878), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=3 ...............................  
[CV] max\_depth=13, min\_samples\_split=3, score=(train=0.969, test=0.874), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=3 ...............................  
[CV] max\_depth=13, min\_samples\_split=3, score=(train=0.965, test=0.885), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=3 ...............................  
[CV] max\_depth=13, min\_samples\_split=3, score=(train=0.966, test=0.861), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=3 ...............................  
[CV] max\_depth=13, min\_samples\_split=3, score=(train=0.966, test=0.861), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=4 ...............................  
[CV] max\_depth=13, min\_samples\_split=4, score=(train=0.968, test=0.880), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=4 ...............................  
[CV] max\_depth=13, min\_samples\_split=4, score=(train=0.968, test=0.874), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=4 ...............................  
[CV] max\_depth=13, min\_samples\_split=4, score=(train=0.963, test=0.887), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=4 ...............................  
[CV] max\_depth=13, min\_samples\_split=4, score=(train=0.965, test=0.859), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=4 ...............................  
[CV] max\_depth=13, min\_samples\_split=4, score=(train=0.964, test=0.864), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=5 ...............................  
[CV] max\_depth=13, min\_samples\_split=5, score=(train=0.967, test=0.883), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=5 ...............................  
[CV] max\_depth=13, min\_samples\_split=5, score=(train=0.966, test=0.878), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=5 ...............................  
[CV] max\_depth=13, min\_samples\_split=5, score=(train=0.961, test=0.883), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=5 ...............................  
[CV] max\_depth=13, min\_samples\_split=5, score=(train=0.963, test=0.865), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=5 ...............................  
[CV] max\_depth=13, min\_samples\_split=5, score=(train=0.963, test=0.870), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=6 ...............................  
[CV] max\_depth=13, min\_samples\_split=6, score=(train=0.964, test=0.884), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=6 ...............................  
[CV] max\_depth=13, min\_samples\_split=6, score=(train=0.964, test=0.877), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=6 ...............................  
[CV] max\_depth=13, min\_samples\_split=6, score=(train=0.960, test=0.888), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=6 ...............................  
[CV] max\_depth=13, min\_samples\_split=6, score=(train=0.961, test=0.864), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=6 ...............................  
[CV] max\_depth=13, min\_samples\_split=6, score=(train=0.961, test=0.872), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=7 ...............................  
[CV] max\_depth=13, min\_samples\_split=7, score=(train=0.962, test=0.888), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=7 ...............................  
[CV] max\_depth=13, min\_samples\_split=7, score=(train=0.963, test=0.876), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=7 ...............................  
[CV] max\_depth=13, min\_samples\_split=7, score=(train=0.958, test=0.887), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=7 ...............................  
[CV] max\_depth=13, min\_samples\_split=7, score=(train=0.959, test=0.867), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=7 ...............................  
[CV] max\_depth=13, min\_samples\_split=7, score=(train=0.958, test=0.869), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=8 ...............................  
[CV] max\_depth=13, min\_samples\_split=8, score=(train=0.959, test=0.889), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=8 ...............................  
[CV] max\_depth=13, min\_samples\_split=8, score=(train=0.961, test=0.878), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=8 ...............................  
[CV] max\_depth=13, min\_samples\_split=8, score=(train=0.956, test=0.885), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=8 ...............................  
[CV] max\_depth=13, min\_samples\_split=8, score=(train=0.957, test=0.863), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=8 ...............................  
[CV] max\_depth=13, min\_samples\_split=8, score=(train=0.956, test=0.874), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=9 ...............................  
[CV] max\_depth=13, min\_samples\_split=9, score=(train=0.956, test=0.890), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=9 ...............................  
[CV] max\_depth=13, min\_samples\_split=9, score=(train=0.960, test=0.879), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=9 ...............................  
[CV] max\_depth=13, min\_samples\_split=9, score=(train=0.955, test=0.890), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=9 ...............................  
[CV] max\_depth=13, min\_samples\_split=9, score=(train=0.956, test=0.867), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=9 ...............................  
[CV] max\_depth=13, min\_samples\_split=9, score=(train=0.955, test=0.876), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=10 ..............................  
[CV] max\_depth=13, min\_samples\_split=10, score=(train=0.953, test=0.890), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=10 ..............................  
[CV] max\_depth=13, min\_samples\_split=10, score=(train=0.958, test=0.880), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=10 ..............................  
[CV] max\_depth=13, min\_samples\_split=10, score=(train=0.953, test=0.886), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=10 ..............................  
[CV] max\_depth=13, min\_samples\_split=10, score=(train=0.954, test=0.869), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=10 ..............................  
[CV] max\_depth=13, min\_samples\_split=10, score=(train=0.954, test=0.875), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=11 ..............................  
[CV] max\_depth=13, min\_samples\_split=11, score=(train=0.952, test=0.892), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=11 ..............................  
[CV] max\_depth=13, min\_samples\_split=11, score=(train=0.956, test=0.880), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=11 ..............................  
[CV] max\_depth=13, min\_samples\_split=11, score=(train=0.951, test=0.888), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=11 ..............................  
[CV] max\_depth=13, min\_samples\_split=11, score=(train=0.952, test=0.873), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=11 ..............................  
[CV] max\_depth=13, min\_samples\_split=11, score=(train=0.952, test=0.873), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=12 ..............................  
[CV] max\_depth=13, min\_samples\_split=12, score=(train=0.949, test=0.894), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=12 ..............................  
[CV] max\_depth=13, min\_samples\_split=12, score=(train=0.955, test=0.880), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=12 ..............................  
[CV] max\_depth=13, min\_samples\_split=12, score=(train=0.949, test=0.889), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=12 ..............................  
[CV] max\_depth=13, min\_samples\_split=12, score=(train=0.949, test=0.871), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=12 ..............................  
[CV] max\_depth=13, min\_samples\_split=12, score=(train=0.950, test=0.876), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=13 ..............................  
[CV] max\_depth=13, min\_samples\_split=13, score=(train=0.948, test=0.891), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=13 ..............................  
[CV] max\_depth=13, min\_samples\_split=13, score=(train=0.954, test=0.880), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=13 ..............................  
[CV] max\_depth=13, min\_samples\_split=13, score=(train=0.948, test=0.887), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=13 ..............................  
[CV] max\_depth=13, min\_samples\_split=13, score=(train=0.948, test=0.873), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=13 ..............................  
[CV] max\_depth=13, min\_samples\_split=13, score=(train=0.948, test=0.875), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=14 ..............................  
[CV] max\_depth=13, min\_samples\_split=14, score=(train=0.947, test=0.894), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=14 ..............................  
[CV] max\_depth=13, min\_samples\_split=14, score=(train=0.952, test=0.883), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=14 ..............................  
[CV] max\_depth=13, min\_samples\_split=14, score=(train=0.946, test=0.887), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=14 ..............................  
[CV] max\_depth=13, min\_samples\_split=14, score=(train=0.947, test=0.875), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=14 ..............................  
[CV] max\_depth=13, min\_samples\_split=14, score=(train=0.947, test=0.878), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=15 ..............................  
[CV] max\_depth=13, min\_samples\_split=15, score=(train=0.946, test=0.893), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=15 ..............................  
[CV] max\_depth=13, min\_samples\_split=15, score=(train=0.950, test=0.884), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=15 ..............................  
[CV] max\_depth=13, min\_samples\_split=15, score=(train=0.944, test=0.889), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=15 ..............................  
[CV] max\_depth=13, min\_samples\_split=15, score=(train=0.946, test=0.878), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=15 ..............................  
[CV] max\_depth=13, min\_samples\_split=15, score=(train=0.946, test=0.878), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=16 ..............................  
[CV] max\_depth=13, min\_samples\_split=16, score=(train=0.945, test=0.896), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=16 ..............................  
[CV] max\_depth=13, min\_samples\_split=16, score=(train=0.949, test=0.885), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=16 ..............................  
[CV] max\_depth=13, min\_samples\_split=16, score=(train=0.943, test=0.889), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=16 ..............................  
[CV] max\_depth=13, min\_samples\_split=16, score=(train=0.944, test=0.873), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=16 ..............................  
[CV] max\_depth=13, min\_samples\_split=16, score=(train=0.945, test=0.879), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=17 ..............................  
[CV] max\_depth=13, min\_samples\_split=17, score=(train=0.944, test=0.896), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=17 ..............................  
[CV] max\_depth=13, min\_samples\_split=17, score=(train=0.947, test=0.885), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=17 ..............................  
[CV] max\_depth=13, min\_samples\_split=17, score=(train=0.942, test=0.886), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=17 ..............................  
[CV] max\_depth=13, min\_samples\_split=17, score=(train=0.943, test=0.878), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=17 ..............................  
[CV] max\_depth=13, min\_samples\_split=17, score=(train=0.944, test=0.879), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=18 ..............................  
[CV] max\_depth=13, min\_samples\_split=18, score=(train=0.941, test=0.893), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=18 ..............................  
[CV] max\_depth=13, min\_samples\_split=18, score=(train=0.946, test=0.884), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=18 ..............................  
[CV] max\_depth=13, min\_samples\_split=18, score=(train=0.941, test=0.882), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=18 ..............................  
[CV] max\_depth=13, min\_samples\_split=18, score=(train=0.940, test=0.879), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=18 ..............................  
[CV] max\_depth=13, min\_samples\_split=18, score=(train=0.943, test=0.878), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=19 ..............................  
[CV] max\_depth=13, min\_samples\_split=19, score=(train=0.940, test=0.895), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=19 ..............................  
[CV] max\_depth=13, min\_samples\_split=19, score=(train=0.945, test=0.885), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=19 ..............................  
[CV] max\_depth=13, min\_samples\_split=19, score=(train=0.940, test=0.886), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=19 ..............................  
[CV] max\_depth=13, min\_samples\_split=19, score=(train=0.940, test=0.875), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=19 ..............................  
[CV] max\_depth=13, min\_samples\_split=19, score=(train=0.942, test=0.876), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=20 ..............................  
[CV] max\_depth=13, min\_samples\_split=20, score=(train=0.938, test=0.889), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=20 ..............................  
[CV] max\_depth=13, min\_samples\_split=20, score=(train=0.944, test=0.884), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=20 ..............................  
[CV] max\_depth=13, min\_samples\_split=20, score=(train=0.939, test=0.886), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=20 ..............................  
[CV] max\_depth=13, min\_samples\_split=20, score=(train=0.939, test=0.878), total= 0.0s  
[CV] max\_depth=13, min\_samples\_split=20 ..............................  
[CV] max\_depth=13, min\_samples\_split=20, score=(train=0.941, test=0.878), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=2 ...............................  
[CV] max\_depth=14, min\_samples\_split=2, score=(train=0.980, test=0.877), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=2 ...............................  
[CV] max\_depth=14, min\_samples\_split=2, score=(train=0.979, test=0.870), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=2 ...............................  
[CV] max\_depth=14, min\_samples\_split=2, score=(train=0.977, test=0.884), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=2 ...............................  
[CV] max\_depth=14, min\_samples\_split=2, score=(train=0.977, test=0.847), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=2 ...............................  
[CV] max\_depth=14, min\_samples\_split=2, score=(train=0.976, test=0.864), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=3 ...............................  
[CV] max\_depth=14, min\_samples\_split=3, score=(train=0.978, test=0.874), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=3 ...............................  
[CV] max\_depth=14, min\_samples\_split=3, score=(train=0.977, test=0.875), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=3 ...............................  
[CV] max\_depth=14, min\_samples\_split=3, score=(train=0.975, test=0.884), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=3 ...............................  
[CV] max\_depth=14, min\_samples\_split=3, score=(train=0.976, test=0.855), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=3 ...............................  
[CV] max\_depth=14, min\_samples\_split=3, score=(train=0.975, test=0.861), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=4 ...............................  
[CV] max\_depth=14, min\_samples\_split=4, score=(train=0.975, test=0.878), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=4 ...............................  
[CV] max\_depth=14, min\_samples\_split=4, score=(train=0.974, test=0.876), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=4 ...............................  
[CV] max\_depth=14, min\_samples\_split=4, score=(train=0.973, test=0.889), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=4 ...............................  
[CV] max\_depth=14, min\_samples\_split=4, score=(train=0.974, test=0.858), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=4 ...............................  
[CV] max\_depth=14, min\_samples\_split=4, score=(train=0.973, test=0.870), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=5 ...............................  
[CV] max\_depth=14, min\_samples\_split=5, score=(train=0.973, test=0.876), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=5 ...............................  
[CV] max\_depth=14, min\_samples\_split=5, score=(train=0.972, test=0.876), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=5 ...............................  
[CV] max\_depth=14, min\_samples\_split=5, score=(train=0.971, test=0.892), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=5 ...............................  
[CV] max\_depth=14, min\_samples\_split=5, score=(train=0.971, test=0.861), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=5 ...............................  
[CV] max\_depth=14, min\_samples\_split=5, score=(train=0.971, test=0.867), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=6 ...............................  
[CV] max\_depth=14, min\_samples\_split=6, score=(train=0.971, test=0.884), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=6 ...............................  
[CV] max\_depth=14, min\_samples\_split=6, score=(train=0.970, test=0.876), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=6 ...............................  
[CV] max\_depth=14, min\_samples\_split=6, score=(train=0.969, test=0.891), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=6 ...............................  
[CV] max\_depth=14, min\_samples\_split=6, score=(train=0.969, test=0.861), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=6 ...............................  
[CV] max\_depth=14, min\_samples\_split=6, score=(train=0.968, test=0.874), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=7 ...............................  
[CV] max\_depth=14, min\_samples\_split=7, score=(train=0.968, test=0.886), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=7 ...............................  
[CV] max\_depth=14, min\_samples\_split=7, score=(train=0.968, test=0.877), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=7 ...............................  
[CV] max\_depth=14, min\_samples\_split=7, score=(train=0.967, test=0.893), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=7 ...............................  
[CV] max\_depth=14, min\_samples\_split=7, score=(train=0.966, test=0.864), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=7 ...............................  
[CV] max\_depth=14, min\_samples\_split=7, score=(train=0.965, test=0.874), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=8 ...............................  
[CV] max\_depth=14, min\_samples\_split=8, score=(train=0.965, test=0.890), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=8 ...............................  
[CV] max\_depth=14, min\_samples\_split=8, score=(train=0.966, test=0.880), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=8 ...............................  
[CV] max\_depth=14, min\_samples\_split=8, score=(train=0.965, test=0.890), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=8 ...............................  
[CV] max\_depth=14, min\_samples\_split=8, score=(train=0.964, test=0.865), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=8 ...............................  
[CV] max\_depth=14, min\_samples\_split=8, score=(train=0.963, test=0.875), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=9 ...............................  
[CV] max\_depth=14, min\_samples\_split=9, score=(train=0.962, test=0.889), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=9 ...............................  
[CV] max\_depth=14, min\_samples\_split=9, score=(train=0.965, test=0.879), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=9 ...............................  
[CV] max\_depth=14, min\_samples\_split=9, score=(train=0.963, test=0.892), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=9 ...............................  
[CV] max\_depth=14, min\_samples\_split=9, score=(train=0.962, test=0.866), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=9 ...............................  
[CV] max\_depth=14, min\_samples\_split=9, score=(train=0.961, test=0.877), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=10 ..............................  
[CV] max\_depth=14, min\_samples\_split=10, score=(train=0.959, test=0.889), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=10 ..............................  
[CV] max\_depth=14, min\_samples\_split=10, score=(train=0.963, test=0.883), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=10 ..............................  
[CV] max\_depth=14, min\_samples\_split=10, score=(train=0.961, test=0.891), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=10 ..............................  
[CV] max\_depth=14, min\_samples\_split=10, score=(train=0.960, test=0.865), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=10 ..............................  
[CV] max\_depth=14, min\_samples\_split=10, score=(train=0.960, test=0.879), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=11 ..............................  
[CV] max\_depth=14, min\_samples\_split=11, score=(train=0.957, test=0.890), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=11 ..............................  
[CV] max\_depth=14, min\_samples\_split=11, score=(train=0.961, test=0.881), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=11 ..............................  
[CV] max\_depth=14, min\_samples\_split=11, score=(train=0.959, test=0.891), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=11 ..............................  
[CV] max\_depth=14, min\_samples\_split=11, score=(train=0.958, test=0.873), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=11 ..............................  
[CV] max\_depth=14, min\_samples\_split=11, score=(train=0.958, test=0.878), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=12 ..............................  
[CV] max\_depth=14, min\_samples\_split=12, score=(train=0.954, test=0.895), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=12 ..............................  
[CV] max\_depth=14, min\_samples\_split=12, score=(train=0.960, test=0.880), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=12 ..............................  
[CV] max\_depth=14, min\_samples\_split=12, score=(train=0.956, test=0.892), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=12 ..............................  
[CV] max\_depth=14, min\_samples\_split=12, score=(train=0.954, test=0.873), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=12 ..............................  
[CV] max\_depth=14, min\_samples\_split=12, score=(train=0.955, test=0.883), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=13 ..............................  
[CV] max\_depth=14, min\_samples\_split=13, score=(train=0.953, test=0.896), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=13 ..............................  
[CV] max\_depth=14, min\_samples\_split=13, score=(train=0.958, test=0.882), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=13 ..............................  
[CV] max\_depth=14, min\_samples\_split=13, score=(train=0.955, test=0.891), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=13 ..............................  
[CV] max\_depth=14, min\_samples\_split=13, score=(train=0.953, test=0.874), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=13 ..............................  
[CV] max\_depth=14, min\_samples\_split=13, score=(train=0.953, test=0.879), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=14 ..............................  
[CV] max\_depth=14, min\_samples\_split=14, score=(train=0.951, test=0.897), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=14 ..............................  
[CV] max\_depth=14, min\_samples\_split=14, score=(train=0.956, test=0.886), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=14 ..............................  
[CV] max\_depth=14, min\_samples\_split=14, score=(train=0.952, test=0.892), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=14 ..............................  
[CV] max\_depth=14, min\_samples\_split=14, score=(train=0.952, test=0.874), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=14 ..............................  
[CV] max\_depth=14, min\_samples\_split=14, score=(train=0.952, test=0.881), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=15 ..............................  
[CV] max\_depth=14, min\_samples\_split=15, score=(train=0.950, test=0.896), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=15 ..............................  
[CV] max\_depth=14, min\_samples\_split=15, score=(train=0.954, test=0.886), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=15 ..............................  
[CV] max\_depth=14, min\_samples\_split=15, score=(train=0.950, test=0.888), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=15 ..............................  
[CV] max\_depth=14, min\_samples\_split=15, score=(train=0.951, test=0.875), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=15 ..............................  
[CV] max\_depth=14, min\_samples\_split=15, score=(train=0.951, test=0.881), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=16 ..............................  
[CV] max\_depth=14, min\_samples\_split=16, score=(train=0.948, test=0.895), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=16 ..............................  
[CV] max\_depth=14, min\_samples\_split=16, score=(train=0.952, test=0.887), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=16 ..............................  
[CV] max\_depth=14, min\_samples\_split=16, score=(train=0.949, test=0.891), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=16 ..............................  
[CV] max\_depth=14, min\_samples\_split=16, score=(train=0.949, test=0.875), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=16 ..............................  
[CV] max\_depth=14, min\_samples\_split=16, score=(train=0.950, test=0.883), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=17 ..............................  
[CV] max\_depth=14, min\_samples\_split=17, score=(train=0.947, test=0.897), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=17 ..............................  
[CV] max\_depth=14, min\_samples\_split=17, score=(train=0.950, test=0.888), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=17 ..............................  
[CV] max\_depth=14, min\_samples\_split=17, score=(train=0.947, test=0.889), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=17 ..............................  
[CV] max\_depth=14, min\_samples\_split=17, score=(train=0.948, test=0.876), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=17 ..............................  
[CV] max\_depth=14, min\_samples\_split=17, score=(train=0.948, test=0.884), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=18 ..............................  
[CV] max\_depth=14, min\_samples\_split=18, score=(train=0.944, test=0.898), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=18 ..............................  
[CV] max\_depth=14, min\_samples\_split=18, score=(train=0.949, test=0.887), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=18 ..............................  
[CV] max\_depth=14, min\_samples\_split=18, score=(train=0.947, test=0.889), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=18 ..............................  
[CV] max\_depth=14, min\_samples\_split=18, score=(train=0.945, test=0.876), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=18 ..............................  
[CV] max\_depth=14, min\_samples\_split=18, score=(train=0.948, test=0.883), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=19 ..............................  
[CV] max\_depth=14, min\_samples\_split=19, score=(train=0.943, test=0.896), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=19 ..............................  
[CV] max\_depth=14, min\_samples\_split=19, score=(train=0.949, test=0.888), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=19 ..............................  
[CV] max\_depth=14, min\_samples\_split=19, score=(train=0.946, test=0.889), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=19 ..............................  
[CV] max\_depth=14, min\_samples\_split=19, score=(train=0.944, test=0.877), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=19 ..............................  
[CV] max\_depth=14, min\_samples\_split=19, score=(train=0.947, test=0.884), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=20 ..............................  
[CV] max\_depth=14, min\_samples\_split=20, score=(train=0.941, test=0.893), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=20 ..............................  
[CV] max\_depth=14, min\_samples\_split=20, score=(train=0.947, test=0.886), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=20 ..............................  
[CV] max\_depth=14, min\_samples\_split=20, score=(train=0.945, test=0.890), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=20 ..............................  
[CV] max\_depth=14, min\_samples\_split=20, score=(train=0.943, test=0.881), total= 0.0s  
[CV] max\_depth=14, min\_samples\_split=20 ..............................  
[CV] max\_depth=14, min\_samples\_split=20, score=(train=0.946, test=0.885), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=2 ...............................  
[CV] max\_depth=15, min\_samples\_split=2, score=(train=0.986, test=0.872), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=2 ...............................  
[CV] max\_depth=15, min\_samples\_split=2, score=(train=0.984, test=0.866), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=2 ...............................  
[CV] max\_depth=15, min\_samples\_split=2, score=(train=0.983, test=0.889), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=2 ...............................  
[CV] max\_depth=15, min\_samples\_split=2, score=(train=0.985, test=0.840), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=2 ...............................  
[CV] max\_depth=15, min\_samples\_split=2, score=(train=0.983, test=0.861), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=3 ...............................  
[CV] max\_depth=15, min\_samples\_split=3, score=(train=0.984, test=0.875), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=3 ...............................  
[CV] max\_depth=15, min\_samples\_split=3, score=(train=0.982, test=0.869), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=3 ...............................  
[CV] max\_depth=15, min\_samples\_split=3, score=(train=0.982, test=0.887), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=3 ...............................  
[CV] max\_depth=15, min\_samples\_split=3, score=(train=0.983, test=0.850), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=3 ...............................  
[CV] max\_depth=15, min\_samples\_split=3, score=(train=0.981, test=0.855), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=4 ...............................  
[CV] max\_depth=15, min\_samples\_split=4, score=(train=0.981, test=0.875), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=4 ...............................  
[CV] max\_depth=15, min\_samples\_split=4, score=(train=0.980, test=0.871), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=4 ...............................  
[CV] max\_depth=15, min\_samples\_split=4, score=(train=0.979, test=0.889), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=4 ...............................  
[CV] max\_depth=15, min\_samples\_split=4, score=(train=0.980, test=0.859), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=4 ...............................  
[CV] max\_depth=15, min\_samples\_split=4, score=(train=0.979, test=0.861), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=5 ...............................  
[CV] max\_depth=15, min\_samples\_split=5, score=(train=0.979, test=0.881), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=5 ...............................  
[CV] max\_depth=15, min\_samples\_split=5, score=(train=0.977, test=0.877), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=5 ...............................  
[CV] max\_depth=15, min\_samples\_split=5, score=(train=0.977, test=0.890), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=5 ...............................  
[CV] max\_depth=15, min\_samples\_split=5, score=(train=0.978, test=0.863), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=5 ...............................  
[CV] max\_depth=15, min\_samples\_split=5, score=(train=0.977, test=0.865), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=6 ...............................  
[CV] max\_depth=15, min\_samples\_split=6, score=(train=0.976, test=0.884), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=6 ...............................  
[CV] max\_depth=15, min\_samples\_split=6, score=(train=0.974, test=0.875), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=6 ...............................  
[CV] max\_depth=15, min\_samples\_split=6, score=(train=0.974, test=0.892), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=6 ...............................  
[CV] max\_depth=15, min\_samples\_split=6, score=(train=0.975, test=0.863), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=6 ...............................  
[CV] max\_depth=15, min\_samples\_split=6, score=(train=0.974, test=0.871), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=7 ...............................  
[CV] max\_depth=15, min\_samples\_split=7, score=(train=0.973, test=0.886), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=7 ...............................  
[CV] max\_depth=15, min\_samples\_split=7, score=(train=0.972, test=0.879), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=7 ...............................  
[CV] max\_depth=15, min\_samples\_split=7, score=(train=0.972, test=0.893), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=7 ...............................  
[CV] max\_depth=15, min\_samples\_split=7, score=(train=0.972, test=0.862), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=7 ...............................  
[CV] max\_depth=15, min\_samples\_split=7, score=(train=0.971, test=0.872), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=8 ...............................  
[CV] max\_depth=15, min\_samples\_split=8, score=(train=0.970, test=0.888), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=8 ...............................  
[CV] max\_depth=15, min\_samples\_split=8, score=(train=0.970, test=0.881), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=8 ...............................  
[CV] max\_depth=15, min\_samples\_split=8, score=(train=0.969, test=0.888), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=8 ...............................  
[CV] max\_depth=15, min\_samples\_split=8, score=(train=0.969, test=0.867), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=8 ...............................  
[CV] max\_depth=15, min\_samples\_split=8, score=(train=0.968, test=0.875), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=9 ...............................  
[CV] max\_depth=15, min\_samples\_split=9, score=(train=0.966, test=0.889), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=9 ...............................  
[CV] max\_depth=15, min\_samples\_split=9, score=(train=0.968, test=0.879), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=9 ...............................  
[CV] max\_depth=15, min\_samples\_split=9, score=(train=0.967, test=0.890), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=9 ...............................  
[CV] max\_depth=15, min\_samples\_split=9, score=(train=0.967, test=0.865), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=9 ...............................  
[CV] max\_depth=15, min\_samples\_split=9, score=(train=0.966, test=0.876), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=10 ..............................  
[CV] max\_depth=15, min\_samples\_split=10, score=(train=0.962, test=0.889), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=10 ..............................  
[CV] max\_depth=15, min\_samples\_split=10, score=(train=0.966, test=0.881), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=10 ..............................  
[CV] max\_depth=15, min\_samples\_split=10, score=(train=0.965, test=0.891), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=10 ..............................  
[CV] max\_depth=15, min\_samples\_split=10, score=(train=0.965, test=0.866), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=10 ..............................  
[CV] max\_depth=15, min\_samples\_split=10, score=(train=0.964, test=0.879), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=11 ..............................  
[CV] max\_depth=15, min\_samples\_split=11, score=(train=0.960, test=0.891), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=11 ..............................  
[CV] max\_depth=15, min\_samples\_split=11, score=(train=0.964, test=0.880), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=11 ..............................  
[CV] max\_depth=15, min\_samples\_split=11, score=(train=0.962, test=0.891), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=11 ..............................  
[CV] max\_depth=15, min\_samples\_split=11, score=(train=0.962, test=0.876), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=11 ..............................  
[CV] max\_depth=15, min\_samples\_split=11, score=(train=0.962, test=0.879), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=12 ..............................  
[CV] max\_depth=15, min\_samples\_split=12, score=(train=0.957, test=0.898), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=12 ..............................  
[CV] max\_depth=15, min\_samples\_split=12, score=(train=0.962, test=0.883), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=12 ..............................  
[CV] max\_depth=15, min\_samples\_split=12, score=(train=0.960, test=0.891), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=12 ..............................  
[CV] max\_depth=15, min\_samples\_split=12, score=(train=0.959, test=0.872), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=12 ..............................  
[CV] max\_depth=15, min\_samples\_split=12, score=(train=0.960, test=0.884), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=13 ..............................  
[CV] max\_depth=15, min\_samples\_split=13, score=(train=0.956, test=0.897), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=13 ..............................  
[CV] max\_depth=15, min\_samples\_split=13, score=(train=0.960, test=0.884), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=13 ..............................  
[CV] max\_depth=15, min\_samples\_split=13, score=(train=0.958, test=0.891), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=13 ..............................  
[CV] max\_depth=15, min\_samples\_split=13, score=(train=0.957, test=0.874), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=13 ..............................  
[CV] max\_depth=15, min\_samples\_split=13, score=(train=0.957, test=0.882), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=14 ..............................  
[CV] max\_depth=15, min\_samples\_split=14, score=(train=0.954, test=0.898), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=14 ..............................  
[CV] max\_depth=15, min\_samples\_split=14, score=(train=0.958, test=0.886), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=14 ..............................  
[CV] max\_depth=15, min\_samples\_split=14, score=(train=0.956, test=0.891), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=14 ..............................  
[CV] max\_depth=15, min\_samples\_split=14, score=(train=0.956, test=0.873), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=14 ..............................  
[CV] max\_depth=15, min\_samples\_split=14, score=(train=0.956, test=0.881), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=15 ..............................  
[CV] max\_depth=15, min\_samples\_split=15, score=(train=0.952, test=0.898), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=15 ..............................  
[CV] max\_depth=15, min\_samples\_split=15, score=(train=0.956, test=0.887), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=15 ..............................  
[CV] max\_depth=15, min\_samples\_split=15, score=(train=0.954, test=0.892), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=15 ..............................  
[CV] max\_depth=15, min\_samples\_split=15, score=(train=0.954, test=0.877), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=15 ..............................  
[CV] max\_depth=15, min\_samples\_split=15, score=(train=0.954, test=0.882), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=16 ..............................  
[CV] max\_depth=15, min\_samples\_split=16, score=(train=0.951, test=0.896), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=16 ..............................  
[CV] max\_depth=15, min\_samples\_split=16, score=(train=0.955, test=0.889), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=16 ..............................  
[CV] max\_depth=15, min\_samples\_split=16, score=(train=0.952, test=0.892), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=16 ..............................  
[CV] max\_depth=15, min\_samples\_split=16, score=(train=0.952, test=0.877), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=16 ..............................  
[CV] max\_depth=15, min\_samples\_split=16, score=(train=0.953, test=0.881), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=17 ..............................  
[CV] max\_depth=15, min\_samples\_split=17, score=(train=0.949, test=0.898), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=17 ..............................  
[CV] max\_depth=15, min\_samples\_split=17, score=(train=0.953, test=0.888), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=17 ..............................  
[CV] max\_depth=15, min\_samples\_split=17, score=(train=0.951, test=0.889), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=17 ..............................  
[CV] max\_depth=15, min\_samples\_split=17, score=(train=0.950, test=0.879), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=17 ..............................  
[CV] max\_depth=15, min\_samples\_split=17, score=(train=0.951, test=0.880), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=18 ..............................  
[CV] max\_depth=15, min\_samples\_split=18, score=(train=0.947, test=0.895), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=18 ..............................  
[CV] max\_depth=15, min\_samples\_split=18, score=(train=0.951, test=0.887), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=18 ..............................  
[CV] max\_depth=15, min\_samples\_split=18, score=(train=0.950, test=0.891), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=18 ..............................  
[CV] max\_depth=15, min\_samples\_split=18, score=(train=0.947, test=0.881), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=18 ..............................  
[CV] max\_depth=15, min\_samples\_split=18, score=(train=0.950, test=0.881), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=19 ..............................  
[CV] max\_depth=15, min\_samples\_split=19, score=(train=0.946, test=0.896), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=19 ..............................  
[CV] max\_depth=15, min\_samples\_split=19, score=(train=0.950, test=0.887), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=19 ..............................  
[CV] max\_depth=15, min\_samples\_split=19, score=(train=0.949, test=0.891), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=19 ..............................  
[CV] max\_depth=15, min\_samples\_split=19, score=(train=0.946, test=0.879), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=19 ..............................  
[CV] max\_depth=15, min\_samples\_split=19, score=(train=0.949, test=0.881), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=20 ..............................  
[CV] max\_depth=15, min\_samples\_split=20, score=(train=0.944, test=0.891), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=20 ..............................  
[CV] max\_depth=15, min\_samples\_split=20, score=(train=0.949, test=0.886), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=20 ..............................  
[CV] max\_depth=15, min\_samples\_split=20, score=(train=0.948, test=0.891), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=20 ..............................  
[CV] max\_depth=15, min\_samples\_split=20, score=(train=0.945, test=0.881), total= 0.0s  
[CV] max\_depth=15, min\_samples\_split=20 ..............................  
[CV] max\_depth=15, min\_samples\_split=20, score=(train=0.948, test=0.885), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=2 ...............................  
[CV] max\_depth=16, min\_samples\_split=2, score=(train=0.990, test=0.867), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=2 ...............................  
[CV] max\_depth=16, min\_samples\_split=2, score=(train=0.989, test=0.878), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=2 ...............................  
[CV] max\_depth=16, min\_samples\_split=2, score=(train=0.989, test=0.886), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=2 ...............................  
[CV] max\_depth=16, min\_samples\_split=2, score=(train=0.990, test=0.854), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=2 ...............................  
[CV] max\_depth=16, min\_samples\_split=2, score=(train=0.989, test=0.857), total= 0.1s  
[CV] max\_depth=16, min\_samples\_split=3 ...............................  
[CV] max\_depth=16, min\_samples\_split=3, score=(train=0.988, test=0.873), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=3 ...............................  
[CV] max\_depth=16, min\_samples\_split=3, score=(train=0.987, test=0.876), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=3 ...............................  
[CV] max\_depth=16, min\_samples\_split=3, score=(train=0.987, test=0.878), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=3 ...............................  
[CV] max\_depth=16, min\_samples\_split=3, score=(train=0.988, test=0.848), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=3 ...............................  
[CV] max\_depth=16, min\_samples\_split=3, score=(train=0.987, test=0.858), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=4 ...............................  
[CV] max\_depth=16, min\_samples\_split=4, score=(train=0.985, test=0.872), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=4 ...............................  
[CV] max\_depth=16, min\_samples\_split=4, score=(train=0.984, test=0.877), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=4 ...............................  
[CV] max\_depth=16, min\_samples\_split=4, score=(train=0.984, test=0.886), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=4 ...............................  
[CV] max\_depth=16, min\_samples\_split=4, score=(train=0.985, test=0.853), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=4 ...............................  
[CV] max\_depth=16, min\_samples\_split=4, score=(train=0.985, test=0.862), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=5 ...............................  
[CV] max\_depth=16, min\_samples\_split=5, score=(train=0.982, test=0.876), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=5 ...............................  
[CV] max\_depth=16, min\_samples\_split=5, score=(train=0.981, test=0.880), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=5 ...............................  
[CV] max\_depth=16, min\_samples\_split=5, score=(train=0.981, test=0.886), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=5 ...............................  
[CV] max\_depth=16, min\_samples\_split=5, score=(train=0.982, test=0.858), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=5 ...............................  
[CV] max\_depth=16, min\_samples\_split=5, score=(train=0.982, test=0.864), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=6 ...............................  
[CV] max\_depth=16, min\_samples\_split=6, score=(train=0.979, test=0.884), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=6 ...............................  
[CV] max\_depth=16, min\_samples\_split=6, score=(train=0.978, test=0.877), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=6 ...............................  
[CV] max\_depth=16, min\_samples\_split=6, score=(train=0.979, test=0.885), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=6 ...............................  
[CV] max\_depth=16, min\_samples\_split=6, score=(train=0.979, test=0.860), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=6 ...............................  
[CV] max\_depth=16, min\_samples\_split=6, score=(train=0.979, test=0.868), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=7 ...............................  
[CV] max\_depth=16, min\_samples\_split=7, score=(train=0.976, test=0.883), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=7 ...............................  
[CV] max\_depth=16, min\_samples\_split=7, score=(train=0.976, test=0.881), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=7 ...............................  
[CV] max\_depth=16, min\_samples\_split=7, score=(train=0.976, test=0.885), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=7 ...............................  
[CV] max\_depth=16, min\_samples\_split=7, score=(train=0.975, test=0.866), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=7 ...............................  
[CV] max\_depth=16, min\_samples\_split=7, score=(train=0.975, test=0.866), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=8 ...............................  
[CV] max\_depth=16, min\_samples\_split=8, score=(train=0.972, test=0.889), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=8 ...............................  
[CV] max\_depth=16, min\_samples\_split=8, score=(train=0.973, test=0.882), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=8 ...............................  
[CV] max\_depth=16, min\_samples\_split=8, score=(train=0.973, test=0.880), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=8 ...............................  
[CV] max\_depth=16, min\_samples\_split=8, score=(train=0.972, test=0.864), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=8 ...............................  
[CV] max\_depth=16, min\_samples\_split=8, score=(train=0.972, test=0.875), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=9 ...............................  
[CV] max\_depth=16, min\_samples\_split=9, score=(train=0.968, test=0.887), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=9 ...............................  
[CV] max\_depth=16, min\_samples\_split=9, score=(train=0.972, test=0.882), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=9 ...............................  
[CV] max\_depth=16, min\_samples\_split=9, score=(train=0.971, test=0.884), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=9 ...............................  
[CV] max\_depth=16, min\_samples\_split=9, score=(train=0.970, test=0.867), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=9 ...............................  
[CV] max\_depth=16, min\_samples\_split=9, score=(train=0.969, test=0.874), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=10 ..............................  
[CV] max\_depth=16, min\_samples\_split=10, score=(train=0.965, test=0.888), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=10 ..............................  
[CV] max\_depth=16, min\_samples\_split=10, score=(train=0.969, test=0.884), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=10 ..............................  
[CV] max\_depth=16, min\_samples\_split=10, score=(train=0.969, test=0.886), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=10 ..............................  
[CV] max\_depth=16, min\_samples\_split=10, score=(train=0.967, test=0.871), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=10 ..............................  
[CV] max\_depth=16, min\_samples\_split=10, score=(train=0.967, test=0.878), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=11 ..............................  
[CV] max\_depth=16, min\_samples\_split=11, score=(train=0.962, test=0.891), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=11 ..............................  
[CV] max\_depth=16, min\_samples\_split=11, score=(train=0.967, test=0.885), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=11 ..............................  
[CV] max\_depth=16, min\_samples\_split=11, score=(train=0.966, test=0.888), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=11 ..............................  
[CV] max\_depth=16, min\_samples\_split=11, score=(train=0.964, test=0.875), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=11 ..............................  
[CV] max\_depth=16, min\_samples\_split=11, score=(train=0.965, test=0.878), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=12 ..............................  
[CV] max\_depth=16, min\_samples\_split=12, score=(train=0.959, test=0.896), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=12 ..............................  
[CV] max\_depth=16, min\_samples\_split=12, score=(train=0.965, test=0.886), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=12 ..............................  
[CV] max\_depth=16, min\_samples\_split=12, score=(train=0.963, test=0.886), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=12 ..............................  
[CV] max\_depth=16, min\_samples\_split=12, score=(train=0.961, test=0.874), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=12 ..............................  
[CV] max\_depth=16, min\_samples\_split=12, score=(train=0.962, test=0.880), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=13 ..............................  
[CV] max\_depth=16, min\_samples\_split=13, score=(train=0.958, test=0.895), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=13 ..............................  
[CV] max\_depth=16, min\_samples\_split=13, score=(train=0.963, test=0.886), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=13 ..............................  
[CV] max\_depth=16, min\_samples\_split=13, score=(train=0.962, test=0.890), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=13 ..............................  
[CV] max\_depth=16, min\_samples\_split=13, score=(train=0.959, test=0.872), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=13 ..............................  
[CV] max\_depth=16, min\_samples\_split=13, score=(train=0.960, test=0.879), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=14 ..............................  
[CV] max\_depth=16, min\_samples\_split=14, score=(train=0.956, test=0.896), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=14 ..............................  
[CV] max\_depth=16, min\_samples\_split=14, score=(train=0.961, test=0.891), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=14 ..............................  
[CV] max\_depth=16, min\_samples\_split=14, score=(train=0.959, test=0.889), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=14 ..............................  
[CV] max\_depth=16, min\_samples\_split=14, score=(train=0.958, test=0.875), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=14 ..............................  
[CV] max\_depth=16, min\_samples\_split=14, score=(train=0.958, test=0.878), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=15 ..............................  
[CV] max\_depth=16, min\_samples\_split=15, score=(train=0.954, test=0.897), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=15 ..............................  
[CV] max\_depth=16, min\_samples\_split=15, score=(train=0.959, test=0.891), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=15 ..............................  
[CV] max\_depth=16, min\_samples\_split=15, score=(train=0.957, test=0.887), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=15 ..............................  
[CV] max\_depth=16, min\_samples\_split=15, score=(train=0.956, test=0.879), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=15 ..............................  
[CV] max\_depth=16, min\_samples\_split=15, score=(train=0.956, test=0.881), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=16 ..............................  
[CV] max\_depth=16, min\_samples\_split=16, score=(train=0.952, test=0.898), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=16 ..............................  
[CV] max\_depth=16, min\_samples\_split=16, score=(train=0.957, test=0.892), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=16 ..............................  
[CV] max\_depth=16, min\_samples\_split=16, score=(train=0.955, test=0.887), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=16 ..............................  
[CV] max\_depth=16, min\_samples\_split=16, score=(train=0.954, test=0.878), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=16 ..............................  
[CV] max\_depth=16, min\_samples\_split=16, score=(train=0.955, test=0.881), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=17 ..............................  
[CV] max\_depth=16, min\_samples\_split=17, score=(train=0.951, test=0.897), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=17 ..............................  
[CV] max\_depth=16, min\_samples\_split=17, score=(train=0.955, test=0.892), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=17 ..............................  
[CV] max\_depth=16, min\_samples\_split=17, score=(train=0.953, test=0.887), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=17 ..............................  
[CV] max\_depth=16, min\_samples\_split=17, score=(train=0.952, test=0.878), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=17 ..............................  
[CV] max\_depth=16, min\_samples\_split=17, score=(train=0.953, test=0.882), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=18 ..............................  
[CV] max\_depth=16, min\_samples\_split=18, score=(train=0.948, test=0.898), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=18 ..............................  
[CV] max\_depth=16, min\_samples\_split=18, score=(train=0.953, test=0.892), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=18 ..............................  
[CV] max\_depth=16, min\_samples\_split=18, score=(train=0.952, test=0.889), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=18 ..............................  
[CV] max\_depth=16, min\_samples\_split=18, score=(train=0.949, test=0.880), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=18 ..............................  
[CV] max\_depth=16, min\_samples\_split=18, score=(train=0.952, test=0.882), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=19 ..............................  
[CV] max\_depth=16, min\_samples\_split=19, score=(train=0.947, test=0.896), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=19 ..............................  
[CV] max\_depth=16, min\_samples\_split=19, score=(train=0.953, test=0.891), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=19 ..............................  
[CV] max\_depth=16, min\_samples\_split=19, score=(train=0.950, test=0.890), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=19 ..............................  
[CV] max\_depth=16, min\_samples\_split=19, score=(train=0.948, test=0.880), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=19 ..............................  
[CV] max\_depth=16, min\_samples\_split=19, score=(train=0.951, test=0.883), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=20 ..............................  
[CV] max\_depth=16, min\_samples\_split=20, score=(train=0.945, test=0.892), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=20 ..............................  
[CV] max\_depth=16, min\_samples\_split=20, score=(train=0.950, test=0.886), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=20 ..............................  
[CV] max\_depth=16, min\_samples\_split=20, score=(train=0.949, test=0.892), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=20 ..............................  
[CV] max\_depth=16, min\_samples\_split=20, score=(train=0.947, test=0.882), total= 0.0s  
[CV] max\_depth=16, min\_samples\_split=20 ..............................  
[CV] max\_depth=16, min\_samples\_split=20, score=(train=0.950, test=0.885), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=2 ...............................  
[CV] max\_depth=17, min\_samples\_split=2, score=(train=0.994, test=0.868), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=2 ...............................  
[CV] max\_depth=17, min\_samples\_split=2, score=(train=0.993, test=0.873), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=2 ...............................  
[CV] max\_depth=17, min\_samples\_split=2, score=(train=0.992, test=0.882), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=2 ...............................  
[CV] max\_depth=17, min\_samples\_split=2, score=(train=0.995, test=0.838), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=2 ...............................  
[CV] max\_depth=17, min\_samples\_split=2, score=(train=0.994, test=0.859), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=3 ...............................  
[CV] max\_depth=17, min\_samples\_split=3, score=(train=0.992, test=0.870), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=3 ...............................  
[CV] max\_depth=17, min\_samples\_split=3, score=(train=0.990, test=0.872), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=3 ...............................  
[CV] max\_depth=17, min\_samples\_split=3, score=(train=0.990, test=0.882), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=3 ...............................  
[CV] max\_depth=17, min\_samples\_split=3, score=(train=0.992, test=0.846), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=3 ...............................  
[CV] max\_depth=17, min\_samples\_split=3, score=(train=0.992, test=0.857), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=4 ...............................  
[CV] max\_depth=17, min\_samples\_split=4, score=(train=0.989, test=0.877), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=4 ...............................  
[CV] max\_depth=17, min\_samples\_split=4, score=(train=0.987, test=0.874), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=4 ...............................  
[CV] max\_depth=17, min\_samples\_split=4, score=(train=0.987, test=0.886), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=4 ...............................  
[CV] max\_depth=17, min\_samples\_split=4, score=(train=0.988, test=0.854), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=4 ...............................  
[CV] max\_depth=17, min\_samples\_split=4, score=(train=0.988, test=0.865), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=5 ...............................  
[CV] max\_depth=17, min\_samples\_split=5, score=(train=0.986, test=0.875), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=5 ...............................  
[CV] max\_depth=17, min\_samples\_split=5, score=(train=0.983, test=0.878), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=5 ...............................  
[CV] max\_depth=17, min\_samples\_split=5, score=(train=0.984, test=0.888), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=5 ...............................  
[CV] max\_depth=17, min\_samples\_split=5, score=(train=0.985, test=0.859), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=5 ...............................  
[CV] max\_depth=17, min\_samples\_split=5, score=(train=0.986, test=0.866), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=6 ...............................  
[CV] max\_depth=17, min\_samples\_split=6, score=(train=0.982, test=0.882), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=6 ...............................  
[CV] max\_depth=17, min\_samples\_split=6, score=(train=0.980, test=0.876), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=6 ...............................  
[CV] max\_depth=17, min\_samples\_split=6, score=(train=0.981, test=0.884), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=6 ...............................  
[CV] max\_depth=17, min\_samples\_split=6, score=(train=0.981, test=0.861), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=6 ...............................  
[CV] max\_depth=17, min\_samples\_split=6, score=(train=0.981, test=0.870), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=7 ...............................  
[CV] max\_depth=17, min\_samples\_split=7, score=(train=0.977, test=0.884), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=7 ...............................  
[CV] max\_depth=17, min\_samples\_split=7, score=(train=0.978, test=0.878), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=7 ...............................  
[CV] max\_depth=17, min\_samples\_split=7, score=(train=0.979, test=0.888), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=7 ...............................  
[CV] max\_depth=17, min\_samples\_split=7, score=(train=0.977, test=0.865), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=7 ...............................  
[CV] max\_depth=17, min\_samples\_split=7, score=(train=0.978, test=0.867), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=8 ...............................  
[CV] max\_depth=17, min\_samples\_split=8, score=(train=0.974, test=0.890), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=8 ...............................  
[CV] max\_depth=17, min\_samples\_split=8, score=(train=0.975, test=0.885), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=8 ...............................  
[CV] max\_depth=17, min\_samples\_split=8, score=(train=0.976, test=0.884), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=8 ...............................  
[CV] max\_depth=17, min\_samples\_split=8, score=(train=0.974, test=0.865), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=8 ...............................  
[CV] max\_depth=17, min\_samples\_split=8, score=(train=0.974, test=0.872), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=9 ...............................  
[CV] max\_depth=17, min\_samples\_split=9, score=(train=0.970, test=0.890), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=9 ...............................  
[CV] max\_depth=17, min\_samples\_split=9, score=(train=0.973, test=0.881), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=9 ...............................  
[CV] max\_depth=17, min\_samples\_split=9, score=(train=0.973, test=0.887), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=9 ...............................  
[CV] max\_depth=17, min\_samples\_split=9, score=(train=0.971, test=0.861), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=9 ...............................  
[CV] max\_depth=17, min\_samples\_split=9, score=(train=0.971, test=0.877), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=10 ..............................  
[CV] max\_depth=17, min\_samples\_split=10, score=(train=0.966, test=0.888), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=10 ..............................  
[CV] max\_depth=17, min\_samples\_split=10, score=(train=0.971, test=0.884), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=10 ..............................  
[CV] max\_depth=17, min\_samples\_split=10, score=(train=0.971, test=0.888), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=10 ..............................  
[CV] max\_depth=17, min\_samples\_split=10, score=(train=0.969, test=0.865), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=10 ..............................  
[CV] max\_depth=17, min\_samples\_split=10, score=(train=0.969, test=0.877), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=11 ..............................  
[CV] max\_depth=17, min\_samples\_split=11, score=(train=0.963, test=0.892), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=11 ..............................  
[CV] max\_depth=17, min\_samples\_split=11, score=(train=0.969, test=0.884), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=11 ..............................  
[CV] max\_depth=17, min\_samples\_split=11, score=(train=0.968, test=0.885), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=11 ..............................  
[CV] max\_depth=17, min\_samples\_split=11, score=(train=0.966, test=0.875), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=11 ..............................  
[CV] max\_depth=17, min\_samples\_split=11, score=(train=0.966, test=0.876), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=12 ..............................  
[CV] max\_depth=17, min\_samples\_split=12, score=(train=0.960, test=0.896), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=12 ..............................  
[CV] max\_depth=17, min\_samples\_split=12, score=(train=0.967, test=0.885), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=12 ..............................  
[CV] max\_depth=17, min\_samples\_split=12, score=(train=0.965, test=0.885), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=12 ..............................  
[CV] max\_depth=17, min\_samples\_split=12, score=(train=0.962, test=0.871), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=12 ..............................  
[CV] max\_depth=17, min\_samples\_split=12, score=(train=0.963, test=0.882), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=13 ..............................  
[CV] max\_depth=17, min\_samples\_split=13, score=(train=0.959, test=0.897), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=13 ..............................  
[CV] max\_depth=17, min\_samples\_split=13, score=(train=0.965, test=0.885), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=13 ..............................  
[CV] max\_depth=17, min\_samples\_split=13, score=(train=0.963, test=0.888), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=13 ..............................  
[CV] max\_depth=17, min\_samples\_split=13, score=(train=0.960, test=0.869), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=13 ..............................  
[CV] max\_depth=17, min\_samples\_split=13, score=(train=0.961, test=0.882), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=14 ..............................  
[CV] max\_depth=17, min\_samples\_split=14, score=(train=0.957, test=0.896), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=14 ..............................  
[CV] max\_depth=17, min\_samples\_split=14, score=(train=0.962, test=0.889), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=14 ..............................  
[CV] max\_depth=17, min\_samples\_split=14, score=(train=0.961, test=0.889), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=14 ..............................  
[CV] max\_depth=17, min\_samples\_split=14, score=(train=0.959, test=0.871), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=14 ..............................  
[CV] max\_depth=17, min\_samples\_split=14, score=(train=0.959, test=0.878), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=15 ..............................  
[CV] max\_depth=17, min\_samples\_split=15, score=(train=0.955, test=0.897), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=15 ..............................  
[CV] max\_depth=17, min\_samples\_split=15, score=(train=0.960, test=0.890), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=15 ..............................  
[CV] max\_depth=17, min\_samples\_split=15, score=(train=0.958, test=0.887), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=15 ..............................  
[CV] max\_depth=17, min\_samples\_split=15, score=(train=0.957, test=0.876), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=15 ..............................  
[CV] max\_depth=17, min\_samples\_split=15, score=(train=0.957, test=0.881), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=16 ..............................  
[CV] max\_depth=17, min\_samples\_split=16, score=(train=0.953, test=0.898), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=16 ..............................  
[CV] max\_depth=17, min\_samples\_split=16, score=(train=0.958, test=0.890), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=16 ..............................  
[CV] max\_depth=17, min\_samples\_split=16, score=(train=0.957, test=0.887), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=16 ..............................  
[CV] max\_depth=17, min\_samples\_split=16, score=(train=0.954, test=0.876), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=16 ..............................  
[CV] max\_depth=17, min\_samples\_split=16, score=(train=0.956, test=0.881), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=17 ..............................  
[CV] max\_depth=17, min\_samples\_split=17, score=(train=0.952, test=0.898), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=17 ..............................  
[CV] max\_depth=17, min\_samples\_split=17, score=(train=0.956, test=0.891), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=17 ..............................  
[CV] max\_depth=17, min\_samples\_split=17, score=(train=0.955, test=0.887), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=17 ..............................  
[CV] max\_depth=17, min\_samples\_split=17, score=(train=0.953, test=0.877), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=17 ..............................  
[CV] max\_depth=17, min\_samples\_split=17, score=(train=0.954, test=0.881), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=18 ..............................  
[CV] max\_depth=17, min\_samples\_split=18, score=(train=0.949, test=0.898), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=18 ..............................  
[CV] max\_depth=17, min\_samples\_split=18, score=(train=0.954, test=0.891), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=18 ..............................  
[CV] max\_depth=17, min\_samples\_split=18, score=(train=0.953, test=0.892), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=18 ..............................  
[CV] max\_depth=17, min\_samples\_split=18, score=(train=0.950, test=0.881), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=18 ..............................  
[CV] max\_depth=17, min\_samples\_split=18, score=(train=0.953, test=0.884), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=19 ..............................  
[CV] max\_depth=17, min\_samples\_split=19, score=(train=0.948, test=0.897), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=19 ..............................  
[CV] max\_depth=17, min\_samples\_split=19, score=(train=0.953, test=0.890), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=19 ..............................  
[CV] max\_depth=17, min\_samples\_split=19, score=(train=0.952, test=0.891), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=19 ..............................  
[CV] max\_depth=17, min\_samples\_split=19, score=(train=0.948, test=0.880), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=19 ..............................  
[CV] max\_depth=17, min\_samples\_split=19, score=(train=0.952, test=0.884), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=20 ..............................  
[CV] max\_depth=17, min\_samples\_split=20, score=(train=0.946, test=0.892), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=20 ..............................  
[CV] max\_depth=17, min\_samples\_split=20, score=(train=0.951, test=0.886), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=20 ..............................  
[CV] max\_depth=17, min\_samples\_split=20, score=(train=0.950, test=0.894), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=20 ..............................  
[CV] max\_depth=17, min\_samples\_split=20, score=(train=0.947, test=0.882), total= 0.0s  
[CV] max\_depth=17, min\_samples\_split=20 ..............................  
[CV] max\_depth=17, min\_samples\_split=20, score=(train=0.950, test=0.885), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=2 ...............................  
[CV] max\_depth=18, min\_samples\_split=2, score=(train=0.996, test=0.871), total= 0.1s  
[CV] max\_depth=18, min\_samples\_split=2 ...............................  
[CV] max\_depth=18, min\_samples\_split=2, score=(train=0.996, test=0.864), total= 0.1s  
[CV] max\_depth=18, min\_samples\_split=2 ...............................  
[CV] max\_depth=18, min\_samples\_split=2, score=(train=0.995, test=0.876), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=2 ...............................  
[CV] max\_depth=18, min\_samples\_split=2, score=(train=0.997, test=0.831), total= 0.1s  
[CV] max\_depth=18, min\_samples\_split=2 ...............................  
[CV] max\_depth=18, min\_samples\_split=2, score=(train=0.996, test=0.853), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=3 ...............................  
[CV] max\_depth=18, min\_samples\_split=3, score=(train=0.994, test=0.875), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=3 ...............................  
[CV] max\_depth=18, min\_samples\_split=3, score=(train=0.992, test=0.872), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=3 ...............................  
[CV] max\_depth=18, min\_samples\_split=3, score=(train=0.992, test=0.875), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=3 ...............................  
[CV] max\_depth=18, min\_samples\_split=3, score=(train=0.994, test=0.840), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=3 ...............................  
[CV] max\_depth=18, min\_samples\_split=3, score=(train=0.994, test=0.857), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=4 ...............................  
[CV] max\_depth=18, min\_samples\_split=4, score=(train=0.990, test=0.876), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=4 ...............................  
[CV] max\_depth=18, min\_samples\_split=4, score=(train=0.989, test=0.876), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=4 ...............................  
[CV] max\_depth=18, min\_samples\_split=4, score=(train=0.989, test=0.884), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=4 ...............................  
[CV] max\_depth=18, min\_samples\_split=4, score=(train=0.990, test=0.848), total= 0.1s  
[CV] max\_depth=18, min\_samples\_split=4 ...............................  
[CV] max\_depth=18, min\_samples\_split=4, score=(train=0.990, test=0.861), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=5 ...............................  
[CV] max\_depth=18, min\_samples\_split=5, score=(train=0.987, test=0.878), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=5 ...............................  
[CV] max\_depth=18, min\_samples\_split=5, score=(train=0.985, test=0.878), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=5 ...............................  
[CV] max\_depth=18, min\_samples\_split=5, score=(train=0.986, test=0.887), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=5 ...............................  
[CV] max\_depth=18, min\_samples\_split=5, score=(train=0.986, test=0.862), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=5 ...............................  
[CV] max\_depth=18, min\_samples\_split=5, score=(train=0.987, test=0.865), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=6 ...............................  
[CV] max\_depth=18, min\_samples\_split=6, score=(train=0.984, test=0.877), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=6 ...............................  
[CV] max\_depth=18, min\_samples\_split=6, score=(train=0.982, test=0.876), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=6 ...............................  
[CV] max\_depth=18, min\_samples\_split=6, score=(train=0.983, test=0.887), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=6 ...............................  
[CV] max\_depth=18, min\_samples\_split=6, score=(train=0.983, test=0.854), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=6 ...............................  
[CV] max\_depth=18, min\_samples\_split=6, score=(train=0.983, test=0.862), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=7 ...............................  
[CV] max\_depth=18, min\_samples\_split=7, score=(train=0.978, test=0.887), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=7 ...............................  
[CV] max\_depth=18, min\_samples\_split=7, score=(train=0.979, test=0.881), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=7 ...............................  
[CV] max\_depth=18, min\_samples\_split=7, score=(train=0.980, test=0.888), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=7 ...............................  
[CV] max\_depth=18, min\_samples\_split=7, score=(train=0.978, test=0.861), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=7 ...............................  
[CV] max\_depth=18, min\_samples\_split=7, score=(train=0.979, test=0.864), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=8 ...............................  
[CV] max\_depth=18, min\_samples\_split=8, score=(train=0.975, test=0.889), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=8 ...............................  
[CV] max\_depth=18, min\_samples\_split=8, score=(train=0.976, test=0.883), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=8 ...............................  
[CV] max\_depth=18, min\_samples\_split=8, score=(train=0.977, test=0.886), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=8 ...............................  
[CV] max\_depth=18, min\_samples\_split=8, score=(train=0.975, test=0.865), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=8 ...............................  
[CV] max\_depth=18, min\_samples\_split=8, score=(train=0.975, test=0.868), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=9 ...............................  
[CV] max\_depth=18, min\_samples\_split=9, score=(train=0.971, test=0.888), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=9 ...............................  
[CV] max\_depth=18, min\_samples\_split=9, score=(train=0.975, test=0.883), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=9 ...............................  
[CV] max\_depth=18, min\_samples\_split=9, score=(train=0.975, test=0.887), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=9 ...............................  
[CV] max\_depth=18, min\_samples\_split=9, score=(train=0.972, test=0.862), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=9 ...............................  
[CV] max\_depth=18, min\_samples\_split=9, score=(train=0.971, test=0.869), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=10 ..............................  
[CV] max\_depth=18, min\_samples\_split=10, score=(train=0.967, test=0.888), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=10 ..............................  
[CV] max\_depth=18, min\_samples\_split=10, score=(train=0.972, test=0.885), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=10 ..............................  
[CV] max\_depth=18, min\_samples\_split=10, score=(train=0.972, test=0.889), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=10 ..............................  
[CV] max\_depth=18, min\_samples\_split=10, score=(train=0.970, test=0.867), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=10 ..............................  
[CV] max\_depth=18, min\_samples\_split=10, score=(train=0.970, test=0.873), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=11 ..............................  
[CV] max\_depth=18, min\_samples\_split=11, score=(train=0.964, test=0.891), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=11 ..............................  
[CV] max\_depth=18, min\_samples\_split=11, score=(train=0.970, test=0.882), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=11 ..............................  
[CV] max\_depth=18, min\_samples\_split=11, score=(train=0.969, test=0.890), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=11 ..............................  
[CV] max\_depth=18, min\_samples\_split=11, score=(train=0.966, test=0.873), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=11 ..............................  
[CV] max\_depth=18, min\_samples\_split=11, score=(train=0.967, test=0.876), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=12 ..............................  
[CV] max\_depth=18, min\_samples\_split=12, score=(train=0.961, test=0.896), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=12 ..............................  
[CV] max\_depth=18, min\_samples\_split=12, score=(train=0.967, test=0.884), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=12 ..............................  
[CV] max\_depth=18, min\_samples\_split=12, score=(train=0.967, test=0.890), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=12 ..............................  
[CV] max\_depth=18, min\_samples\_split=12, score=(train=0.963, test=0.874), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=12 ..............................  
[CV] max\_depth=18, min\_samples\_split=12, score=(train=0.964, test=0.882), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=13 ..............................  
[CV] max\_depth=18, min\_samples\_split=13, score=(train=0.960, test=0.898), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=13 ..............................  
[CV] max\_depth=18, min\_samples\_split=13, score=(train=0.965, test=0.886), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=13 ..............................  
[CV] max\_depth=18, min\_samples\_split=13, score=(train=0.965, test=0.891), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=13 ..............................  
[CV] max\_depth=18, min\_samples\_split=13, score=(train=0.961, test=0.869), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=13 ..............................  
[CV] max\_depth=18, min\_samples\_split=13, score=(train=0.962, test=0.879), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=14 ..............................  
[CV] max\_depth=18, min\_samples\_split=14, score=(train=0.957, test=0.896), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=14 ..............................  
[CV] max\_depth=18, min\_samples\_split=14, score=(train=0.963, test=0.889), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=14 ..............................  
[CV] max\_depth=18, min\_samples\_split=14, score=(train=0.962, test=0.892), total= 0.1s  
[CV] max\_depth=18, min\_samples\_split=14 ..............................  
[CV] max\_depth=18, min\_samples\_split=14, score=(train=0.959, test=0.869), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=14 ..............................  
[CV] max\_depth=18, min\_samples\_split=14, score=(train=0.960, test=0.880), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=15 ..............................  
[CV] max\_depth=18, min\_samples\_split=15, score=(train=0.956, test=0.897), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=15 ..............................  
[CV] max\_depth=18, min\_samples\_split=15, score=(train=0.961, test=0.889), total= 0.1s  
[CV] max\_depth=18, min\_samples\_split=15 ..............................  
[CV] max\_depth=18, min\_samples\_split=15, score=(train=0.959, test=0.888), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=15 ..............................  
[CV] max\_depth=18, min\_samples\_split=15, score=(train=0.957, test=0.873), total= 0.1s  
[CV] max\_depth=18, min\_samples\_split=15 ..............................  
[CV] max\_depth=18, min\_samples\_split=15, score=(train=0.958, test=0.881), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=16 ..............................  
[CV] max\_depth=18, min\_samples\_split=16, score=(train=0.954, test=0.898), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=16 ..............................  
[CV] max\_depth=18, min\_samples\_split=16, score=(train=0.959, test=0.891), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=16 ..............................  
[CV] max\_depth=18, min\_samples\_split=16, score=(train=0.958, test=0.890), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=16 ..............................  
[CV] max\_depth=18, min\_samples\_split=16, score=(train=0.955, test=0.874), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=16 ..............................  
[CV] max\_depth=18, min\_samples\_split=16, score=(train=0.957, test=0.882), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=17 ..............................  
[CV] max\_depth=18, min\_samples\_split=17, score=(train=0.952, test=0.898), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=17 ..............................  
[CV] max\_depth=18, min\_samples\_split=17, score=(train=0.956, test=0.893), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=17 ..............................  
[CV] max\_depth=18, min\_samples\_split=17, score=(train=0.956, test=0.887), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=17 ..............................  
[CV] max\_depth=18, min\_samples\_split=17, score=(train=0.953, test=0.879), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=17 ..............................  
[CV] max\_depth=18, min\_samples\_split=17, score=(train=0.955, test=0.880), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=18 ..............................  
[CV] max\_depth=18, min\_samples\_split=18, score=(train=0.950, test=0.896), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=18 ..............................  
[CV] max\_depth=18, min\_samples\_split=18, score=(train=0.955, test=0.893), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=18 ..............................  
[CV] max\_depth=18, min\_samples\_split=18, score=(train=0.954, test=0.892), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=18 ..............................  
[CV] max\_depth=18, min\_samples\_split=18, score=(train=0.950, test=0.878), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=18 ..............................  
[CV] max\_depth=18, min\_samples\_split=18, score=(train=0.954, test=0.881), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=19 ..............................  
[CV] max\_depth=18, min\_samples\_split=19, score=(train=0.948, test=0.897), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=19 ..............................  
[CV] max\_depth=18, min\_samples\_split=19, score=(train=0.954, test=0.892), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=19 ..............................  
[CV] max\_depth=18, min\_samples\_split=19, score=(train=0.953, test=0.891), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=19 ..............................  
[CV] max\_depth=18, min\_samples\_split=19, score=(train=0.949, test=0.878), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=19 ..............................  
[CV] max\_depth=18, min\_samples\_split=19, score=(train=0.952, test=0.884), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=20 ..............................  
[CV] max\_depth=18, min\_samples\_split=20, score=(train=0.946, test=0.894), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=20 ..............................  
[CV] max\_depth=18, min\_samples\_split=20, score=(train=0.951, test=0.886), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=20 ..............................  
[CV] max\_depth=18, min\_samples\_split=20, score=(train=0.951, test=0.896), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=20 ..............................  
[CV] max\_depth=18, min\_samples\_split=20, score=(train=0.947, test=0.879), total= 0.0s  
[CV] max\_depth=18, min\_samples\_split=20 ..............................  
[CV] max\_depth=18, min\_samples\_split=20, score=(train=0.951, test=0.885), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=2 ...............................  
[CV] max\_depth=19, min\_samples\_split=2, score=(train=0.997, test=0.874), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=2 ...............................  
[CV] max\_depth=19, min\_samples\_split=2, score=(train=0.997, test=0.876), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=2 ...............................  
[CV] max\_depth=19, min\_samples\_split=2, score=(train=0.997, test=0.886), total= 0.1s  
[CV] max\_depth=19, min\_samples\_split=2 ...............................  
[CV] max\_depth=19, min\_samples\_split=2, score=(train=0.998, test=0.843), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=2 ...............................  
[CV] max\_depth=19, min\_samples\_split=2, score=(train=0.998, test=0.853), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=3 ...............................  
[CV] max\_depth=19, min\_samples\_split=3, score=(train=0.995, test=0.875), total= 0.1s  
[CV] max\_depth=19, min\_samples\_split=3 ...............................  
[CV] max\_depth=19, min\_samples\_split=3, score=(train=0.993, test=0.874), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=3 ...............................  
[CV] max\_depth=19, min\_samples\_split=3, score=(train=0.994, test=0.877), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=3 ...............................  
[CV] max\_depth=19, min\_samples\_split=3, score=(train=0.995, test=0.845), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=3 ...............................  
[CV] max\_depth=19, min\_samples\_split=3, score=(train=0.996, test=0.852), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=4 ...............................  
[CV] max\_depth=19, min\_samples\_split=4, score=(train=0.991, test=0.874), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=4 ...............................  
[CV] max\_depth=19, min\_samples\_split=4, score=(train=0.990, test=0.871), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=4 ...............................  
[CV] max\_depth=19, min\_samples\_split=4, score=(train=0.991, test=0.888), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=4 ...............................  
[CV] max\_depth=19, min\_samples\_split=4, score=(train=0.991, test=0.854), total= 0.1s  
[CV] max\_depth=19, min\_samples\_split=4 ...............................  
[CV] max\_depth=19, min\_samples\_split=4, score=(train=0.992, test=0.856), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=5 ...............................  
[CV] max\_depth=19, min\_samples\_split=5, score=(train=0.988, test=0.878), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=5 ...............................  
[CV] max\_depth=19, min\_samples\_split=5, score=(train=0.986, test=0.879), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=5 ...............................  
[CV] max\_depth=19, min\_samples\_split=5, score=(train=0.988, test=0.884), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=5 ...............................  
[CV] max\_depth=19, min\_samples\_split=5, score=(train=0.987, test=0.853), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=5 ...............................  
[CV] max\_depth=19, min\_samples\_split=5, score=(train=0.988, test=0.865), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=6 ...............................  
[CV] max\_depth=19, min\_samples\_split=6, score=(train=0.984, test=0.881), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=6 ...............................  
[CV] max\_depth=19, min\_samples\_split=6, score=(train=0.983, test=0.881), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=6 ...............................  
[CV] max\_depth=19, min\_samples\_split=6, score=(train=0.985, test=0.886), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=6 ...............................  
[CV] max\_depth=19, min\_samples\_split=6, score=(train=0.983, test=0.862), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=6 ...............................  
[CV] max\_depth=19, min\_samples\_split=6, score=(train=0.983, test=0.865), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=7 ...............................  
[CV] max\_depth=19, min\_samples\_split=7, score=(train=0.979, test=0.885), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=7 ...............................  
[CV] max\_depth=19, min\_samples\_split=7, score=(train=0.980, test=0.877), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=7 ...............................  
[CV] max\_depth=19, min\_samples\_split=7, score=(train=0.982, test=0.888), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=7 ...............................  
[CV] max\_depth=19, min\_samples\_split=7, score=(train=0.979, test=0.861), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=7 ...............................  
[CV] max\_depth=19, min\_samples\_split=7, score=(train=0.979, test=0.865), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=8 ...............................  
[CV] max\_depth=19, min\_samples\_split=8, score=(train=0.976, test=0.888), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=8 ...............................  
[CV] max\_depth=19, min\_samples\_split=8, score=(train=0.977, test=0.883), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=8 ...............................  
[CV] max\_depth=19, min\_samples\_split=8, score=(train=0.979, test=0.888), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=8 ...............................  
[CV] max\_depth=19, min\_samples\_split=8, score=(train=0.976, test=0.863), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=8 ...............................  
[CV] max\_depth=19, min\_samples\_split=8, score=(train=0.976, test=0.868), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=9 ...............................  
[CV] max\_depth=19, min\_samples\_split=9, score=(train=0.972, test=0.888), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=9 ...............................  
[CV] max\_depth=19, min\_samples\_split=9, score=(train=0.975, test=0.882), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=9 ...............................  
[CV] max\_depth=19, min\_samples\_split=9, score=(train=0.976, test=0.891), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=9 ...............................  
[CV] max\_depth=19, min\_samples\_split=9, score=(train=0.973, test=0.861), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=9 ...............................  
[CV] max\_depth=19, min\_samples\_split=9, score=(train=0.972, test=0.875), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=10 ..............................  
[CV] max\_depth=19, min\_samples\_split=10, score=(train=0.967, test=0.890), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=10 ..............................  
[CV] max\_depth=19, min\_samples\_split=10, score=(train=0.973, test=0.883), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=10 ..............................  
[CV] max\_depth=19, min\_samples\_split=10, score=(train=0.973, test=0.893), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=10 ..............................  
[CV] max\_depth=19, min\_samples\_split=10, score=(train=0.970, test=0.869), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=10 ..............................  
[CV] max\_depth=19, min\_samples\_split=10, score=(train=0.970, test=0.877), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=11 ..............................  
[CV] max\_depth=19, min\_samples\_split=11, score=(train=0.965, test=0.894), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=11 ..............................  
[CV] max\_depth=19, min\_samples\_split=11, score=(train=0.970, test=0.882), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=11 ..............................  
[CV] max\_depth=19, min\_samples\_split=11, score=(train=0.970, test=0.889), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=11 ..............................  
[CV] max\_depth=19, min\_samples\_split=11, score=(train=0.967, test=0.869), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=11 ..............................  
[CV] max\_depth=19, min\_samples\_split=11, score=(train=0.968, test=0.878), total= 0.1s  
[CV] max\_depth=19, min\_samples\_split=12 ..............................  
[CV] max\_depth=19, min\_samples\_split=12, score=(train=0.961, test=0.897), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=12 ..............................  
[CV] max\_depth=19, min\_samples\_split=12, score=(train=0.968, test=0.883), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=12 ..............................  
[CV] max\_depth=19, min\_samples\_split=12, score=(train=0.968, test=0.892), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=12 ..............................  
[CV] max\_depth=19, min\_samples\_split=12, score=(train=0.963, test=0.873), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=12 ..............................  
[CV] max\_depth=19, min\_samples\_split=12, score=(train=0.964, test=0.880), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=13 ..............................  
[CV] max\_depth=19, min\_samples\_split=13, score=(train=0.960, test=0.897), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=13 ..............................  
[CV] max\_depth=19, min\_samples\_split=13, score=(train=0.966, test=0.885), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=13 ..............................  
[CV] max\_depth=19, min\_samples\_split=13, score=(train=0.965, test=0.889), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=13 ..............................  
[CV] max\_depth=19, min\_samples\_split=13, score=(train=0.961, test=0.870), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=13 ..............................  
[CV] max\_depth=19, min\_samples\_split=13, score=(train=0.962, test=0.878), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=14 ..............................  
[CV] max\_depth=19, min\_samples\_split=14, score=(train=0.958, test=0.896), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=14 ..............................  
[CV] max\_depth=19, min\_samples\_split=14, score=(train=0.963, test=0.888), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=14 ..............................  
[CV] max\_depth=19, min\_samples\_split=14, score=(train=0.962, test=0.891), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=14 ..............................  
[CV] max\_depth=19, min\_samples\_split=14, score=(train=0.960, test=0.872), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=14 ..............................  
[CV] max\_depth=19, min\_samples\_split=14, score=(train=0.960, test=0.877), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=15 ..............................  
[CV] max\_depth=19, min\_samples\_split=15, score=(train=0.956, test=0.898), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=15 ..............................  
[CV] max\_depth=19, min\_samples\_split=15, score=(train=0.961, test=0.891), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=15 ..............................  
[CV] max\_depth=19, min\_samples\_split=15, score=(train=0.960, test=0.890), total= 0.1s  
[CV] max\_depth=19, min\_samples\_split=15 ..............................  
[CV] max\_depth=19, min\_samples\_split=15, score=(train=0.958, test=0.874), total= 0.1s  
[CV] max\_depth=19, min\_samples\_split=15 ..............................  
[CV] max\_depth=19, min\_samples\_split=15, score=(train=0.958, test=0.882), total= 0.1s  
[CV] max\_depth=19, min\_samples\_split=16 ..............................  
[CV] max\_depth=19, min\_samples\_split=16, score=(train=0.954, test=0.899), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=16 ..............................  
[CV] max\_depth=19, min\_samples\_split=16, score=(train=0.959, test=0.893), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=16 ..............................  
[CV] max\_depth=19, min\_samples\_split=16, score=(train=0.958, test=0.889), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=16 ..............................  
[CV] max\_depth=19, min\_samples\_split=16, score=(train=0.955, test=0.872), total= 0.1s  
[CV] max\_depth=19, min\_samples\_split=16 ..............................  
[CV] max\_depth=19, min\_samples\_split=16, score=(train=0.957, test=0.881), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=17 ..............................  
[CV] max\_depth=19, min\_samples\_split=17, score=(train=0.952, test=0.900), total= 0.1s  
[CV] max\_depth=19, min\_samples\_split=17 ..............................  
[CV] max\_depth=19, min\_samples\_split=17, score=(train=0.957, test=0.892), total= 0.1s  
[CV] max\_depth=19, min\_samples\_split=17 ..............................  
[CV] max\_depth=19, min\_samples\_split=17, score=(train=0.956, test=0.889), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=17 ..............................  
[CV] max\_depth=19, min\_samples\_split=17, score=(train=0.954, test=0.881), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=17 ..............................  
[CV] max\_depth=19, min\_samples\_split=17, score=(train=0.955, test=0.882), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=18 ..............................  
[CV] max\_depth=19, min\_samples\_split=18, score=(train=0.950, test=0.896), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=18 ..............................  
[CV] max\_depth=19, min\_samples\_split=18, score=(train=0.955, test=0.892), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=18 ..............................  
[CV] max\_depth=19, min\_samples\_split=18, score=(train=0.954, test=0.892), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=18 ..............................  
[CV] max\_depth=19, min\_samples\_split=18, score=(train=0.950, test=0.879), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=18 ..............................  
[CV] max\_depth=19, min\_samples\_split=18, score=(train=0.954, test=0.881), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=19 ..............................  
[CV] max\_depth=19, min\_samples\_split=19, score=(train=0.949, test=0.896), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=19 ..............................  
[CV] max\_depth=19, min\_samples\_split=19, score=(train=0.954, test=0.891), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=19 ..............................  
[CV] max\_depth=19, min\_samples\_split=19, score=(train=0.953, test=0.895), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=19 ..............................  
[CV] max\_depth=19, min\_samples\_split=19, score=(train=0.949, test=0.878), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=19 ..............................  
[CV] max\_depth=19, min\_samples\_split=19, score=(train=0.953, test=0.885), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=20 ..............................  
[CV] max\_depth=19, min\_samples\_split=20, score=(train=0.946, test=0.894), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=20 ..............................  
[CV] max\_depth=19, min\_samples\_split=20, score=(train=0.951, test=0.887), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=20 ..............................  
[CV] max\_depth=19, min\_samples\_split=20, score=(train=0.951, test=0.893), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=20 ..............................  
[CV] max\_depth=19, min\_samples\_split=20, score=(train=0.948, test=0.880), total= 0.0s  
[CV] max\_depth=19, min\_samples\_split=20 ..............................  
[CV] max\_depth=19, min\_samples\_split=20, score=(train=0.951, test=0.884), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=2 ...............................  
[CV] max\_depth=20, min\_samples\_split=2, score=(train=0.998, test=0.865), total= 0.1s  
[CV] max\_depth=20, min\_samples\_split=2 ...............................  
[CV] max\_depth=20, min\_samples\_split=2, score=(train=0.999, test=0.875), total= 0.1s  
[CV] max\_depth=20, min\_samples\_split=2 ...............................  
[CV] max\_depth=20, min\_samples\_split=2, score=(train=0.998, test=0.887), total= 0.1s  
[CV] max\_depth=20, min\_samples\_split=2 ...............................  
[CV] max\_depth=20, min\_samples\_split=2, score=(train=0.999, test=0.844), total= 0.1s  
[CV] max\_depth=20, min\_samples\_split=2 ...............................  
[CV] max\_depth=20, min\_samples\_split=2, score=(train=0.999, test=0.852), total= 0.1s  
[CV] max\_depth=20, min\_samples\_split=3 ...............................  
[CV] max\_depth=20, min\_samples\_split=3, score=(train=0.995, test=0.869), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=3 ...............................  
[CV] max\_depth=20, min\_samples\_split=3, score=(train=0.994, test=0.873), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=3 ...............................  
[CV] max\_depth=20, min\_samples\_split=3, score=(train=0.996, test=0.870), total= 0.1s  
[CV] max\_depth=20, min\_samples\_split=3 ...............................  
[CV] max\_depth=20, min\_samples\_split=3, score=(train=0.996, test=0.856), total= 0.1s  
[CV] max\_depth=20, min\_samples\_split=3 ...............................  
[CV] max\_depth=20, min\_samples\_split=3, score=(train=0.996, test=0.849), total= 0.1s  
[CV] max\_depth=20, min\_samples\_split=4 ...............................  
[CV] max\_depth=20, min\_samples\_split=4, score=(train=0.992, test=0.873), total= 0.1s  
[CV] max\_depth=20, min\_samples\_split=4 ...............................  
[CV] max\_depth=20, min\_samples\_split=4, score=(train=0.991, test=0.874), total= 0.1s  
[CV] max\_depth=20, min\_samples\_split=4 ...............................  
[CV] max\_depth=20, min\_samples\_split=4, score=(train=0.992, test=0.886), total= 0.1s  
[CV] max\_depth=20, min\_samples\_split=4 ...............................  
[CV] max\_depth=20, min\_samples\_split=4, score=(train=0.991, test=0.849), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=4 ...............................  
[CV] max\_depth=20, min\_samples\_split=4, score=(train=0.992, test=0.858), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=5 ...............................  
[CV] max\_depth=20, min\_samples\_split=5, score=(train=0.989, test=0.874), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=5 ...............................  
[CV] max\_depth=20, min\_samples\_split=5, score=(train=0.987, test=0.877), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=5 ...............................  
[CV] max\_depth=20, min\_samples\_split=5, score=(train=0.988, test=0.885), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=5 ...............................  
[CV] max\_depth=20, min\_samples\_split=5, score=(train=0.987, test=0.854), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=5 ...............................  
[CV] max\_depth=20, min\_samples\_split=5, score=(train=0.989, test=0.862), total= 0.1s  
[CV] max\_depth=20, min\_samples\_split=6 ...............................  
[CV] max\_depth=20, min\_samples\_split=6, score=(train=0.985, test=0.883), total= 0.1s  
[CV] max\_depth=20, min\_samples\_split=6 ...............................  
[CV] max\_depth=20, min\_samples\_split=6, score=(train=0.983, test=0.878), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=6 ...............................  
[CV] max\_depth=20, min\_samples\_split=6, score=(train=0.985, test=0.887), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=6 ...............................  
[CV] max\_depth=20, min\_samples\_split=6, score=(train=0.984, test=0.856), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=6 ...............................  
[CV] max\_depth=20, min\_samples\_split=6, score=(train=0.984, test=0.864), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=7 ...............................  
[CV] max\_depth=20, min\_samples\_split=7, score=(train=0.980, test=0.884), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=7 ...............................  
[CV] max\_depth=20, min\_samples\_split=7, score=(train=0.981, test=0.880), total= 0.1s  
[CV] max\_depth=20, min\_samples\_split=7 ...............................  
[CV] max\_depth=20, min\_samples\_split=7, score=(train=0.982, test=0.890), total= 0.1s  
[CV] max\_depth=20, min\_samples\_split=7 ...............................  
[CV] max\_depth=20, min\_samples\_split=7, score=(train=0.979, test=0.858), total= 0.1s  
[CV] max\_depth=20, min\_samples\_split=7 ...............................  
[CV] max\_depth=20, min\_samples\_split=7, score=(train=0.980, test=0.866), total= 0.1s  
[CV] max\_depth=20, min\_samples\_split=8 ...............................  
[CV] max\_depth=20, min\_samples\_split=8, score=(train=0.976, test=0.886), total= 0.1s  
[CV] max\_depth=20, min\_samples\_split=8 ...............................  
[CV] max\_depth=20, min\_samples\_split=8, score=(train=0.978, test=0.883), total= 0.1s  
[CV] max\_depth=20, min\_samples\_split=8 ...............................  
[CV] max\_depth=20, min\_samples\_split=8, score=(train=0.979, test=0.889), total= 0.1s  
[CV] max\_depth=20, min\_samples\_split=8 ...............................  
[CV] max\_depth=20, min\_samples\_split=8, score=(train=0.976, test=0.862), total= 0.1s  
[CV] max\_depth=20, min\_samples\_split=8 ...............................  
[CV] max\_depth=20, min\_samples\_split=8, score=(train=0.976, test=0.869), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=9 ...............................  
[CV] max\_depth=20, min\_samples\_split=9, score=(train=0.972, test=0.888), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=9 ...............................  
[CV] max\_depth=20, min\_samples\_split=9, score=(train=0.976, test=0.885), total= 0.1s  
[CV] max\_depth=20, min\_samples\_split=9 ...............................  
[CV] max\_depth=20, min\_samples\_split=9, score=(train=0.977, test=0.891), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=9 ...............................  
[CV] max\_depth=20, min\_samples\_split=9, score=(train=0.973, test=0.863), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=9 ...............................  
[CV] max\_depth=20, min\_samples\_split=9, score=(train=0.972, test=0.870), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=10 ..............................  
[CV] max\_depth=20, min\_samples\_split=10, score=(train=0.968, test=0.889), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=10 ..............................  
[CV] max\_depth=20, min\_samples\_split=10, score=(train=0.973, test=0.884), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=10 ..............................  
[CV] max\_depth=20, min\_samples\_split=10, score=(train=0.974, test=0.890), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=10 ..............................  
[CV] max\_depth=20, min\_samples\_split=10, score=(train=0.971, test=0.865), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=10 ..............................  
[CV] max\_depth=20, min\_samples\_split=10, score=(train=0.971, test=0.875), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=11 ..............................  
[CV] max\_depth=20, min\_samples\_split=11, score=(train=0.965, test=0.893), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=11 ..............................  
[CV] max\_depth=20, min\_samples\_split=11, score=(train=0.971, test=0.883), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=11 ..............................  
[CV] max\_depth=20, min\_samples\_split=11, score=(train=0.971, test=0.891), total= 0.1s  
[CV] max\_depth=20, min\_samples\_split=11 ..............................  
[CV] max\_depth=20, min\_samples\_split=11, score=(train=0.967, test=0.868), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=11 ..............................  
[CV] max\_depth=20, min\_samples\_split=11, score=(train=0.968, test=0.875), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=12 ..............................  
[CV] max\_depth=20, min\_samples\_split=12, score=(train=0.962, test=0.899), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=12 ..............................  
[CV] max\_depth=20, min\_samples\_split=12, score=(train=0.968, test=0.884), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=12 ..............................  
[CV] max\_depth=20, min\_samples\_split=12, score=(train=0.968, test=0.893), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=12 ..............................  
[CV] max\_depth=20, min\_samples\_split=12, score=(train=0.963, test=0.868), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=12 ..............................  
[CV] max\_depth=20, min\_samples\_split=12, score=(train=0.965, test=0.880), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=13 ..............................  
[CV] max\_depth=20, min\_samples\_split=13, score=(train=0.960, test=0.898), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=13 ..............................  
[CV] max\_depth=20, min\_samples\_split=13, score=(train=0.966, test=0.886), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=13 ..............................  
[CV] max\_depth=20, min\_samples\_split=13, score=(train=0.965, test=0.892), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=13 ..............................  
[CV] max\_depth=20, min\_samples\_split=13, score=(train=0.961, test=0.869), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=13 ..............................  
[CV] max\_depth=20, min\_samples\_split=13, score=(train=0.962, test=0.878), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=14 ..............................  
[CV] max\_depth=20, min\_samples\_split=14, score=(train=0.958, test=0.896), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=14 ..............................  
[CV] max\_depth=20, min\_samples\_split=14, score=(train=0.963, test=0.889), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=14 ..............................  
[CV] max\_depth=20, min\_samples\_split=14, score=(train=0.963, test=0.889), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=14 ..............................  
[CV] max\_depth=20, min\_samples\_split=14, score=(train=0.960, test=0.869), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=14 ..............................  
[CV] max\_depth=20, min\_samples\_split=14, score=(train=0.960, test=0.877), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=15 ..............................  
[CV] max\_depth=20, min\_samples\_split=15, score=(train=0.956, test=0.897), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=15 ..............................  
[CV] max\_depth=20, min\_samples\_split=15, score=(train=0.961, test=0.890), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=15 ..............................  
[CV] max\_depth=20, min\_samples\_split=15, score=(train=0.960, test=0.889), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=15 ..............................  
[CV] max\_depth=20, min\_samples\_split=15, score=(train=0.958, test=0.873), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=15 ..............................  
[CV] max\_depth=20, min\_samples\_split=15, score=(train=0.958, test=0.882), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=16 ..............................  
[CV] max\_depth=20, min\_samples\_split=16, score=(train=0.954, test=0.898), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=16 ..............................  
[CV] max\_depth=20, min\_samples\_split=16, score=(train=0.959, test=0.892), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=16 ..............................  
[CV] max\_depth=20, min\_samples\_split=16, score=(train=0.958, test=0.888), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=16 ..............................  
[CV] max\_depth=20, min\_samples\_split=16, score=(train=0.955, test=0.872), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=16 ..............................  
[CV] max\_depth=20, min\_samples\_split=16, score=(train=0.957, test=0.881), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=17 ..............................  
[CV] max\_depth=20, min\_samples\_split=17, score=(train=0.953, test=0.898), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=17 ..............................  
[CV] max\_depth=20, min\_samples\_split=17, score=(train=0.957, test=0.892), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=17 ..............................  
[CV] max\_depth=20, min\_samples\_split=17, score=(train=0.956, test=0.888), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=17 ..............................  
[CV] max\_depth=20, min\_samples\_split=17, score=(train=0.954, test=0.877), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=17 ..............................  
[CV] max\_depth=20, min\_samples\_split=17, score=(train=0.955, test=0.879), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=18 ..............................  
[CV] max\_depth=20, min\_samples\_split=18, score=(train=0.950, test=0.896), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=18 ..............................  
[CV] max\_depth=20, min\_samples\_split=18, score=(train=0.955, test=0.893), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=18 ..............................  
[CV] max\_depth=20, min\_samples\_split=18, score=(train=0.954, test=0.892), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=18 ..............................  
[CV] max\_depth=20, min\_samples\_split=18, score=(train=0.950, test=0.881), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=18 ..............................  
[CV] max\_depth=20, min\_samples\_split=18, score=(train=0.954, test=0.882), total= 0.1s  
[CV] max\_depth=20, min\_samples\_split=19 ..............................  
[CV] max\_depth=20, min\_samples\_split=19, score=(train=0.949, test=0.898), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=19 ..............................  
[CV] max\_depth=20, min\_samples\_split=19, score=(train=0.954, test=0.891), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=19 ..............................  
[CV] max\_depth=20, min\_samples\_split=19, score=(train=0.953, test=0.894), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=19 ..............................  
[CV] max\_depth=20, min\_samples\_split=19, score=(train=0.949, test=0.878), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=19 ..............................  
[CV] max\_depth=20, min\_samples\_split=19, score=(train=0.953, test=0.884), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=20 ..............................  
[CV] max\_depth=20, min\_samples\_split=20, score=(train=0.947, test=0.892), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=20 ..............................  
[CV] max\_depth=20, min\_samples\_split=20, score=(train=0.952, test=0.887), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=20 ..............................  
[CV] max\_depth=20, min\_samples\_split=20, score=(train=0.951, test=0.893), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=20 ..............................  
[CV] max\_depth=20, min\_samples\_split=20, score=(train=0.948, test=0.882), total= 0.0s  
[CV] max\_depth=20, min\_samples\_split=20 ..............................  
[CV] max\_depth=20, min\_samples\_split=20, score=(train=0.951, test=0.883), total= 0.1s

[Parallel(n\_jobs=1)]: Done 1900 out of 1900 | elapsed: 1.1min finished

DecisionTreeRegressor(max\_depth=17, min\_samples\_split=18)

0.8891307789706275

Out[51]:

0.6290381732400058

In [56]:

model\_light = DecisionTreeRegressor(max\_depth=5, min\_samples\_split=20)  
model\_light.fit(data\_train, data\_cnt\_train)  
y\_pred1 = model\_light.predict(data\_test)  
r2\_score(data\_cnt\_test, y\_pred1)

Out[56]:

0.4122063143962935

In [57]:

estimator = model\_light  
  
*# The decision estimator has an attribute called tree\_ which stores the entire*  
*# tree structure and allows access to low level attributes. The binary tree*  
*# tree\_ is represented as a number of parallel arrays. The i-th element of each*  
*# array holds information about the node `i`. Node 0 is the tree's root. NOTE:*  
*# Some of the arrays only apply to either leaves or split nodes, resp. In this*  
*# case the values of nodes of the other type are arbitrary!*  
*#*  
*# Among those arrays, we have:*  
*# - left\_child, id of the left child of the node*  
*# - right\_child, id of the right child of the node*  
*# - feature, feature used for splitting the node*  
*# - threshold, threshold value at the node*  
*#*  
  
*# Using those arrays, we can parse the tree structure:*  
  
n\_nodes = estimator.tree\_.node\_count  
children\_left = estimator.tree\_.children\_left  
children\_right = estimator.tree\_.children\_right  
feature = estimator.tree\_.feature  
threshold = estimator.tree\_.threshold  
  
  
*# The tree structure can be traversed to compute various properties such*  
*# as the depth of each node and whether or not it is a leaf.*  
node\_depth = np.zeros(shape=n\_nodes, dtype=np.int64)  
is\_leaves = np.zeros(shape=n\_nodes, dtype=bool)  
stack = [(0, -1)] *# seed is the root node id and its parent depth*  
**while** len(stack) > 0:  
 node\_id, parent\_depth = stack.pop()  
 node\_depth[node\_id] = parent\_depth + 1  
  
 *# If we have a test node*  
 **if** (children\_left[node\_id] != children\_right[node\_id]):  
 stack.append((children\_left[node\_id], parent\_depth + 1))  
 stack.append((children\_right[node\_id], parent\_depth + 1))  
 **else**:  
 is\_leaves[node\_id] = **True**  
  
print("The binary tree structure has **%s** nodes and has "  
 "the following tree structure:"  
 % n\_nodes)  
**for** i **in** range(n\_nodes):  
 **if** is\_leaves[i]:  
 print("**%s**node=**%s** leaf node." % (node\_depth[i] \* "**\t**", i))  
 **else**:  
 print("**%s**node=**%s** test node: go to node **%s** if X[:, **%s**] <= **%s** else to "  
 "node **%s**."  
 % (node\_depth[i] \* "**\t**",  
 i,  
 children\_left[i],  
 feature[i],  
 threshold[i],  
 children\_right[i],  
 ))  
print()

The binary tree structure has 63 nodes and has the following tree structure:  
node=0 test node: go to node 1 if X[:, 0] <= 6.5 else to node 32.  
 node=1 test node: go to node 2 if X[:, 0] <= 5.5 else to node 17.  
 node=2 test node: go to node 3 if X[:, 0] <= 1.5 else to node 10.  
 node=3 test node: go to node 4 if X[:, 2] <= 0.5 else to node 7.  
 node=4 test node: go to node 5 if X[:, 4] <= 0.4469499886035919 else to node 6.  
 node=5 leaf node.  
 node=6 leaf node.  
 node=7 test node: go to node 8 if X[:, 0] <= 0.5 else to node 9.  
 node=8 leaf node.  
 node=9 leaf node.  
 node=10 test node: go to node 11 if X[:, 2] <= 0.5 else to node 14.  
 node=11 test node: go to node 12 if X[:, 0] <= 2.5 else to node 13.  
 node=12 leaf node.  
 node=13 leaf node.  
 node=14 test node: go to node 15 if X[:, 0] <= 4.5 else to node 16.  
 node=15 leaf node.  
 node=16 leaf node.  
 node=17 test node: go to node 18 if X[:, 2] <= 0.5 else to node 25.  
 node=18 test node: go to node 19 if X[:, 7] <= 0.5 else to node 22.  
 node=19 test node: go to node 20 if X[:, 28] <= 0.5 else to node 21.  
 node=20 leaf node.  
 node=21 leaf node.  
 node=22 test node: go to node 23 if X[:, 23] <= 0.5 else to node 24.  
 node=23 leaf node.  
 node=24 leaf node.  
 node=25 test node: go to node 26 if X[:, 7] <= 0.5 else to node 29.  
 node=26 test node: go to node 27 if X[:, 3] <= 0.5300000011920929 else to node 28.  
 node=27 leaf node.  
 node=28 leaf node.  
 node=29 test node: go to node 30 if X[:, 4] <= 0.36365000903606415 else to node 31.  
 node=30 leaf node.  
 node=31 leaf node.  
 node=32 test node: go to node 33 if X[:, 3] <= 0.4699999988079071 else to node 48.  
 node=33 test node: go to node 34 if X[:, 10] <= 0.5 else to node 41.  
 node=34 test node: go to node 35 if X[:, 0] <= 19.5 else to node 38.  
 node=35 test node: go to node 36 if X[:, 4] <= 0.3409000039100647 else to node 37.  
 node=36 leaf node.  
 node=37 leaf node.  
 node=38 test node: go to node 39 if X[:, 4] <= 0.4166499972343445 else to node 40.  
 node=39 leaf node.  
 node=40 leaf node.  
 node=41 test node: go to node 42 if X[:, 0] <= 19.5 else to node 45.  
 node=42 test node: go to node 43 if X[:, 32] <= 0.5 else to node 44.  
 node=43 leaf node.  
 node=44 leaf node.  
 node=45 test node: go to node 46 if X[:, 0] <= 21.5 else to node 47.  
 node=46 leaf node.  
 node=47 leaf node.  
 node=48 test node: go to node 49 if X[:, 0] <= 20.5 else to node 56.  
 node=49 test node: go to node 50 if X[:, 0] <= 15.5 else to node 53.  
 node=50 test node: go to node 51 if X[:, 2] <= 0.5 else to node 52.  
 node=51 leaf node.  
 node=52 leaf node.  
 node=53 test node: go to node 54 if X[:, 0] <= 18.5 else to node 55.  
 node=54 leaf node.  
 node=55 leaf node.  
 node=56 test node: go to node 57 if X[:, 0] <= 22.5 else to node 60.  
 node=57 test node: go to node 58 if X[:, 4] <= 0.5833500027656555 else to node 59.  
 node=58 leaf node.  
 node=59 leaf node.  
 node=60 test node: go to node 61 if X[:, 29] <= 0.5 else to node 62.  
 node=61 leaf node.  
 node=62 leaf node.

In [55]:

data\_train.columns

Out[55]:

Index(['hr', 'holiday', 'workingday', 'temp', 'atemp', 'hum', 'windspeed',  
 'season1', 'season2', 'season3', 'season4', 'mnth1', 'mnth2', 'mnth3',  
 'mnth4', 'mnth5', 'mnth6', 'mnth7', 'mnth8', 'mnth9', 'mnth10',  
 'mnth11', 'mnth12', 'weekday0', 'weekday1', 'weekday2', 'weekday3',  
 'weekday4', 'weekday5', 'weekday6', 'weathersit1', 'weathersit2',  
 'weathersit3', 'weathersit4'],  
 dtype='object')

Looking at the tree structure for light tree and for the best obtained (it is not shown because of its size), we can answer some questions:

1. What are the most influentual features? The feature 0 is used in a lot of split, so it is definitely one of the most influential. Other notable features are 2 and 4. Looking at the column names, these are hour of renting, working day flag and feeking temperature.
2. What is more important: current season or current hour? The seasons are used one time - 10th column, which is summer. It means, that current hour is much more influential.

**RandomForest + double target**[**¶**](#1t3h5sf)

In [45]:

parameters\_grid = {  
 'max\_depth': range(1, 21),  
 'n\_estimators': [1, 5, 10, 15, 20, 25, 50, 100]  
}  
model = RandomForestRegressor()  
model\_gs = find\_best\_regressor(model, parameters\_grid, data\_train, data\_cnt\_train)  
y\_pred1 = model\_gs.predict(data\_test)  
r2\_score(data\_cnt\_test, y\_pred1)

Fitting 5 folds for each of 160 candidates, totalling 800 fits  
[CV] max\_depth=1, n\_estimators=1 .....................................  
[CV] max\_depth=1, n\_estimators=1, score=(train=0.316, test=0.295), total= 0.0s  
[CV] max\_depth=1, n\_estimators=1 .....................................  
[CV] max\_depth=1, n\_estimators=1, score=(train=0.314, test=0.304), total= 0.0s  
[CV] max\_depth=1, n\_estimators=1 .....................................  
[CV] max\_depth=1, n\_estimators=1, score=(train=0.308, test=0.326), total= 0.0s  
[CV] max\_depth=1, n\_estimators=1 .....................................  
[CV] max\_depth=1, n\_estimators=1, score=(train=0.310, test=0.317), total= 0.0s  
[CV] max\_depth=1, n\_estimators=1 .....................................  
[CV] max\_depth=1, n\_estimators=1, score=(train=0.311, test=0.316), total= 0.0s  
[CV] max\_depth=1, n\_estimators=5 .....................................  
[CV] max\_depth=1, n\_estimators=5, score=(train=0.316, test=0.295), total= 0.0s  
[CV] max\_depth=1, n\_estimators=5 .....................................

[Parallel(n\_jobs=1)]: Using backend SequentialBackend with 1 concurrent workers.  
[Parallel(n\_jobs=1)]: Done 1 out of 1 | elapsed: 0.0s remaining: 0.0s  
[Parallel(n\_jobs=1)]: Done 2 out of 2 | elapsed: 0.1s remaining: 0.0s  
[Parallel(n\_jobs=1)]: Done 3 out of 3 | elapsed: 0.1s remaining: 0.0s

[CV] max\_depth=1, n\_estimators=5, score=(train=0.314, test=0.305), total= 0.0s  
[CV] max\_depth=1, n\_estimators=5 .....................................  
[CV] max\_depth=1, n\_estimators=5, score=(train=0.308, test=0.326), total= 0.0s  
[CV] max\_depth=1, n\_estimators=5 .....................................  
[CV] max\_depth=1, n\_estimators=5, score=(train=0.310, test=0.317), total= 0.0s  
[CV] max\_depth=1, n\_estimators=5 .....................................  
[CV] max\_depth=1, n\_estimators=5, score=(train=0.311, test=0.316), total= 0.0s  
[CV] max\_depth=1, n\_estimators=10 ....................................  
[CV] max\_depth=1, n\_estimators=10, score=(train=0.316, test=0.295), total= 0.0s  
[CV] max\_depth=1, n\_estimators=10 ....................................  
[CV] max\_depth=1, n\_estimators=10, score=(train=0.314, test=0.304), total= 0.1s  
[CV] max\_depth=1, n\_estimators=10 ....................................  
[CV] max\_depth=1, n\_estimators=10, score=(train=0.308, test=0.326), total= 0.1s  
[CV] max\_depth=1, n\_estimators=10 ....................................  
[CV] max\_depth=1, n\_estimators=10, score=(train=0.310, test=0.317), total= 0.0s  
[CV] max\_depth=1, n\_estimators=10 ....................................  
[CV] max\_depth=1, n\_estimators=10, score=(train=0.311, test=0.316), total= 0.0s  
[CV] max\_depth=1, n\_estimators=15 ....................................  
[CV] max\_depth=1, n\_estimators=15, score=(train=0.316, test=0.295), total= 0.1s  
[CV] max\_depth=1, n\_estimators=15 ....................................  
[CV] max\_depth=1, n\_estimators=15, score=(train=0.314, test=0.304), total= 0.1s  
[CV] max\_depth=1, n\_estimators=15 ....................................  
[CV] max\_depth=1, n\_estimators=15, score=(train=0.308, test=0.326), total= 0.1s  
[CV] max\_depth=1, n\_estimators=15 ....................................  
[CV] max\_depth=1, n\_estimators=15, score=(train=0.310, test=0.317), total= 0.1s  
[CV] max\_depth=1, n\_estimators=15 ....................................  
[CV] max\_depth=1, n\_estimators=15, score=(train=0.311, test=0.316), total= 0.1s  
[CV] max\_depth=1, n\_estimators=20 ....................................  
[CV] max\_depth=1, n\_estimators=20, score=(train=0.316, test=0.295), total= 0.1s  
[CV] max\_depth=1, n\_estimators=20 ....................................  
[CV] max\_depth=1, n\_estimators=20, score=(train=0.314, test=0.304), total= 0.1s  
[CV] max\_depth=1, n\_estimators=20 ....................................  
[CV] max\_depth=1, n\_estimators=20, score=(train=0.308, test=0.326), total= 0.1s  
[CV] max\_depth=1, n\_estimators=20 ....................................  
[CV] max\_depth=1, n\_estimators=20, score=(train=0.310, test=0.317), total= 0.1s  
[CV] max\_depth=1, n\_estimators=20 ....................................  
[CV] max\_depth=1, n\_estimators=20, score=(train=0.311, test=0.316), total= 0.1s  
[CV] max\_depth=1, n\_estimators=25 ....................................  
[CV] max\_depth=1, n\_estimators=25, score=(train=0.316, test=0.295), total= 0.1s  
[CV] max\_depth=1, n\_estimators=25 ....................................  
[CV] max\_depth=1, n\_estimators=25, score=(train=0.314, test=0.304), total= 0.1s  
[CV] max\_depth=1, n\_estimators=25 ....................................  
[CV] max\_depth=1, n\_estimators=25, score=(train=0.308, test=0.326), total= 0.1s  
[CV] max\_depth=1, n\_estimators=25 ....................................  
[CV] max\_depth=1, n\_estimators=25, score=(train=0.310, test=0.317), total= 0.1s  
[CV] max\_depth=1, n\_estimators=25 ....................................  
[CV] max\_depth=1, n\_estimators=25, score=(train=0.311, test=0.316), total= 0.1s  
[CV] max\_depth=1, n\_estimators=50 ....................................  
[CV] max\_depth=1, n\_estimators=50, score=(train=0.316, test=0.295), total= 0.2s  
[CV] max\_depth=1, n\_estimators=50 ....................................  
[CV] max\_depth=1, n\_estimators=50, score=(train=0.314, test=0.304), total= 0.2s  
[CV] max\_depth=1, n\_estimators=50 ....................................  
[CV] max\_depth=1, n\_estimators=50, score=(train=0.308, test=0.326), total= 0.2s  
[CV] max\_depth=1, n\_estimators=50 ....................................  
[CV] max\_depth=1, n\_estimators=50, score=(train=0.310, test=0.317), total= 0.2s  
[CV] max\_depth=1, n\_estimators=50 ....................................  
[CV] max\_depth=1, n\_estimators=50, score=(train=0.311, test=0.316), total= 0.2s  
[CV] max\_depth=1, n\_estimators=100 ...................................  
[CV] max\_depth=1, n\_estimators=100, score=(train=0.316, test=0.295), total= 0.4s  
[CV] max\_depth=1, n\_estimators=100 ...................................  
[CV] max\_depth=1, n\_estimators=100, score=(train=0.314, test=0.304), total= 0.5s  
[CV] max\_depth=1, n\_estimators=100 ...................................  
[CV] max\_depth=1, n\_estimators=100, score=(train=0.308, test=0.326), total= 0.5s  
[CV] max\_depth=1, n\_estimators=100 ...................................  
[CV] max\_depth=1, n\_estimators=100, score=(train=0.310, test=0.317), total= 0.4s  
[CV] max\_depth=1, n\_estimators=100 ...................................  
[CV] max\_depth=1, n\_estimators=100, score=(train=0.311, test=0.316), total= 0.4s  
[CV] max\_depth=2, n\_estimators=1 .....................................  
[CV] max\_depth=2, n\_estimators=1, score=(train=0.460, test=0.441), total= 0.0s  
[CV] max\_depth=2, n\_estimators=1 .....................................  
[CV] max\_depth=2, n\_estimators=1, score=(train=0.457, test=0.446), total= 0.0s  
[CV] max\_depth=2, n\_estimators=1 .....................................  
[CV] max\_depth=2, n\_estimators=1, score=(train=0.448, test=0.467), total= 0.0s  
[CV] max\_depth=2, n\_estimators=1 .....................................  
[CV] max\_depth=2, n\_estimators=1, score=(train=0.456, test=0.449), total= 0.0s  
[CV] max\_depth=2, n\_estimators=1 .....................................  
[CV] max\_depth=2, n\_estimators=1, score=(train=0.452, test=0.467), total= 0.0s  
[CV] max\_depth=2, n\_estimators=5 .....................................  
[CV] max\_depth=2, n\_estimators=5, score=(train=0.463, test=0.446), total= 0.0s  
[CV] max\_depth=2, n\_estimators=5 .....................................  
[CV] max\_depth=2, n\_estimators=5, score=(train=0.468, test=0.448), total= 0.0s  
[CV] max\_depth=2, n\_estimators=5 .....................................  
[CV] max\_depth=2, n\_estimators=5, score=(train=0.461, test=0.476), total= 0.0s  
[CV] max\_depth=2, n\_estimators=5 .....................................  
[CV] max\_depth=2, n\_estimators=5, score=(train=0.462, test=0.452), total= 0.0s  
[CV] max\_depth=2, n\_estimators=5 .....................................  
[CV] max\_depth=2, n\_estimators=5, score=(train=0.463, test=0.473), total= 0.0s  
[CV] max\_depth=2, n\_estimators=10 ....................................  
[CV] max\_depth=2, n\_estimators=10, score=(train=0.466, test=0.449), total= 0.1s  
[CV] max\_depth=2, n\_estimators=10 ....................................  
[CV] max\_depth=2, n\_estimators=10, score=(train=0.467, test=0.448), total= 0.1s  
[CV] max\_depth=2, n\_estimators=10 ....................................  
[CV] max\_depth=2, n\_estimators=10, score=(train=0.455, test=0.469), total= 0.1s  
[CV] max\_depth=2, n\_estimators=10 ....................................  
[CV] max\_depth=2, n\_estimators=10, score=(train=0.464, test=0.460), total= 0.1s  
[CV] max\_depth=2, n\_estimators=10 ....................................  
[CV] max\_depth=2, n\_estimators=10, score=(train=0.468, test=0.479), total= 0.1s  
[CV] max\_depth=2, n\_estimators=15 ....................................  
[CV] max\_depth=2, n\_estimators=15, score=(train=0.464, test=0.446), total= 0.1s  
[CV] max\_depth=2, n\_estimators=15 ....................................  
[CV] max\_depth=2, n\_estimators=15, score=(train=0.468, test=0.452), total= 0.1s  
[CV] max\_depth=2, n\_estimators=15 ....................................  
[CV] max\_depth=2, n\_estimators=15, score=(train=0.462, test=0.477), total= 0.1s  
[CV] max\_depth=2, n\_estimators=15 ....................................  
[CV] max\_depth=2, n\_estimators=15, score=(train=0.465, test=0.460), total= 0.1s  
[CV] max\_depth=2, n\_estimators=15 ....................................  
[CV] max\_depth=2, n\_estimators=15, score=(train=0.461, test=0.477), total= 0.1s  
[CV] max\_depth=2, n\_estimators=20 ....................................  
[CV] max\_depth=2, n\_estimators=20, score=(train=0.465, test=0.447), total= 0.1s  
[CV] max\_depth=2, n\_estimators=20 ....................................  
[CV] max\_depth=2, n\_estimators=20, score=(train=0.470, test=0.450), total= 0.1s  
[CV] max\_depth=2, n\_estimators=20 ....................................  
[CV] max\_depth=2, n\_estimators=20, score=(train=0.458, test=0.473), total= 0.1s  
[CV] max\_depth=2, n\_estimators=20 ....................................  
[CV] max\_depth=2, n\_estimators=20, score=(train=0.465, test=0.460), total= 0.1s  
[CV] max\_depth=2, n\_estimators=20 ....................................  
[CV] max\_depth=2, n\_estimators=20, score=(train=0.464, test=0.477), total= 0.1s  
[CV] max\_depth=2, n\_estimators=25 ....................................  
[CV] max\_depth=2, n\_estimators=25, score=(train=0.463, test=0.445), total= 0.2s  
[CV] max\_depth=2, n\_estimators=25 ....................................  
[CV] max\_depth=2, n\_estimators=25, score=(train=0.466, test=0.447), total= 0.2s  
[CV] max\_depth=2, n\_estimators=25 ....................................  
[CV] max\_depth=2, n\_estimators=25, score=(train=0.459, test=0.474), total= 0.2s  
[CV] max\_depth=2, n\_estimators=25 ....................................  
[CV] max\_depth=2, n\_estimators=25, score=(train=0.462, test=0.454), total= 0.1s  
[CV] max\_depth=2, n\_estimators=25 ....................................  
[CV] max\_depth=2, n\_estimators=25, score=(train=0.464, test=0.478), total= 0.2s  
[CV] max\_depth=2, n\_estimators=50 ....................................  
[CV] max\_depth=2, n\_estimators=50, score=(train=0.465, test=0.446), total= 0.5s  
[CV] max\_depth=2, n\_estimators=50 ....................................  
[CV] max\_depth=2, n\_estimators=50, score=(train=0.468, test=0.446), total= 0.3s  
[CV] max\_depth=2, n\_estimators=50 ....................................  
[CV] max\_depth=2, n\_estimators=50, score=(train=0.458, test=0.473), total= 0.3s  
[CV] max\_depth=2, n\_estimators=50 ....................................  
[CV] max\_depth=2, n\_estimators=50, score=(train=0.465, test=0.459), total= 0.3s  
[CV] max\_depth=2, n\_estimators=50 ....................................  
[CV] max\_depth=2, n\_estimators=50, score=(train=0.463, test=0.477), total= 0.3s  
[CV] max\_depth=2, n\_estimators=100 ...................................  
[CV] max\_depth=2, n\_estimators=100, score=(train=0.464, test=0.446), total= 0.7s  
[CV] max\_depth=2, n\_estimators=100 ...................................  
[CV] max\_depth=2, n\_estimators=100, score=(train=0.466, test=0.446), total= 0.8s  
[CV] max\_depth=2, n\_estimators=100 ...................................  
[CV] max\_depth=2, n\_estimators=100, score=(train=0.459, test=0.474), total= 0.7s  
[CV] max\_depth=2, n\_estimators=100 ...................................  
[CV] max\_depth=2, n\_estimators=100, score=(train=0.463, test=0.458), total= 0.7s  
[CV] max\_depth=2, n\_estimators=100 ...................................  
[CV] max\_depth=2, n\_estimators=100, score=(train=0.464, test=0.478), total= 0.7s  
[CV] max\_depth=3, n\_estimators=1 .....................................  
[CV] max\_depth=3, n\_estimators=1, score=(train=0.530, test=0.524), total= 0.0s  
[CV] max\_depth=3, n\_estimators=1 .....................................  
[CV] max\_depth=3, n\_estimators=1, score=(train=0.532, test=0.519), total= 0.0s  
[CV] max\_depth=3, n\_estimators=1 .....................................  
[CV] max\_depth=3, n\_estimators=1, score=(train=0.526, test=0.542), total= 0.0s  
[CV] max\_depth=3, n\_estimators=1 .....................................  
[CV] max\_depth=3, n\_estimators=1, score=(train=0.533, test=0.519), total= 0.0s  
[CV] max\_depth=3, n\_estimators=1 .....................................  
[CV] max\_depth=3, n\_estimators=1, score=(train=0.528, test=0.537), total= 0.0s  
[CV] max\_depth=3, n\_estimators=5 .....................................  
[CV] max\_depth=3, n\_estimators=5, score=(train=0.535, test=0.530), total= 0.1s  
[CV] max\_depth=3, n\_estimators=5 .....................................  
[CV] max\_depth=3, n\_estimators=5, score=(train=0.538, test=0.522), total= 0.1s  
[CV] max\_depth=3, n\_estimators=5 .....................................  
[CV] max\_depth=3, n\_estimators=5, score=(train=0.528, test=0.543), total= 0.1s  
[CV] max\_depth=3, n\_estimators=5 .....................................  
[CV] max\_depth=3, n\_estimators=5, score=(train=0.536, test=0.522), total= 0.1s  
[CV] max\_depth=3, n\_estimators=5 .....................................  
[CV] max\_depth=3, n\_estimators=5, score=(train=0.535, test=0.544), total= 0.1s  
[CV] max\_depth=3, n\_estimators=10 ....................................  
[CV] max\_depth=3, n\_estimators=10, score=(train=0.535, test=0.530), total= 0.1s  
[CV] max\_depth=3, n\_estimators=10 ....................................  
[CV] max\_depth=3, n\_estimators=10, score=(train=0.538, test=0.527), total= 0.1s  
[CV] max\_depth=3, n\_estimators=10 ....................................  
[CV] max\_depth=3, n\_estimators=10, score=(train=0.532, test=0.547), total= 0.1s  
[CV] max\_depth=3, n\_estimators=10 ....................................  
[CV] max\_depth=3, n\_estimators=10, score=(train=0.540, test=0.527), total= 0.1s  
[CV] max\_depth=3, n\_estimators=10 ....................................  
[CV] max\_depth=3, n\_estimators=10, score=(train=0.536, test=0.545), total= 0.1s  
[CV] max\_depth=3, n\_estimators=15 ....................................  
[CV] max\_depth=3, n\_estimators=15, score=(train=0.533, test=0.529), total= 0.1s  
[CV] max\_depth=3, n\_estimators=15 ....................................  
[CV] max\_depth=3, n\_estimators=15, score=(train=0.544, test=0.531), total= 0.1s  
[CV] max\_depth=3, n\_estimators=15 ....................................  
[CV] max\_depth=3, n\_estimators=15, score=(train=0.534, test=0.547), total= 0.1s  
[CV] max\_depth=3, n\_estimators=15 ....................................  
[CV] max\_depth=3, n\_estimators=15, score=(train=0.539, test=0.526), total= 0.1s  
[CV] max\_depth=3, n\_estimators=15 ....................................  
[CV] max\_depth=3, n\_estimators=15, score=(train=0.537, test=0.545), total= 0.1s  
[CV] max\_depth=3, n\_estimators=20 ....................................  
[CV] max\_depth=3, n\_estimators=20, score=(train=0.535, test=0.531), total= 0.2s  
[CV] max\_depth=3, n\_estimators=20 ....................................  
[CV] max\_depth=3, n\_estimators=20, score=(train=0.541, test=0.527), total= 0.2s  
[CV] max\_depth=3, n\_estimators=20 ....................................  
[CV] max\_depth=3, n\_estimators=20, score=(train=0.533, test=0.547), total= 0.2s  
[CV] max\_depth=3, n\_estimators=20 ....................................  
[CV] max\_depth=3, n\_estimators=20, score=(train=0.540, test=0.526), total= 0.2s  
[CV] max\_depth=3, n\_estimators=20 ....................................  
[CV] max\_depth=3, n\_estimators=20, score=(train=0.539, test=0.546), total= 0.2s  
[CV] max\_depth=3, n\_estimators=25 ....................................  
[CV] max\_depth=3, n\_estimators=25, score=(train=0.540, test=0.533), total= 0.2s  
[CV] max\_depth=3, n\_estimators=25 ....................................  
[CV] max\_depth=3, n\_estimators=25, score=(train=0.540, test=0.526), total= 0.2s  
[CV] max\_depth=3, n\_estimators=25 ....................................  
[CV] max\_depth=3, n\_estimators=25, score=(train=0.535, test=0.548), total= 0.2s  
[CV] max\_depth=3, n\_estimators=25 ....................................  
[CV] max\_depth=3, n\_estimators=25, score=(train=0.541, test=0.527), total= 0.2s  
[CV] max\_depth=3, n\_estimators=25 ....................................  
[CV] max\_depth=3, n\_estimators=25, score=(train=0.540, test=0.546), total= 0.2s  
[CV] max\_depth=3, n\_estimators=50 ....................................  
[CV] max\_depth=3, n\_estimators=50, score=(train=0.536, test=0.531), total= 0.4s  
[CV] max\_depth=3, n\_estimators=50 ....................................  
[CV] max\_depth=3, n\_estimators=50, score=(train=0.543, test=0.529), total= 0.4s  
[CV] max\_depth=3, n\_estimators=50 ....................................  
[CV] max\_depth=3, n\_estimators=50, score=(train=0.536, test=0.549), total= 0.5s  
[CV] max\_depth=3, n\_estimators=50 ....................................  
[CV] max\_depth=3, n\_estimators=50, score=(train=0.540, test=0.526), total= 0.4s  
[CV] max\_depth=3, n\_estimators=50 ....................................  
[CV] max\_depth=3, n\_estimators=50, score=(train=0.539, test=0.547), total= 0.5s  
[CV] max\_depth=3, n\_estimators=100 ...................................  
[CV] max\_depth=3, n\_estimators=100, score=(train=0.537, test=0.532), total= 1.2s  
[CV] max\_depth=3, n\_estimators=100 ...................................  
[CV] max\_depth=3, n\_estimators=100, score=(train=0.541, test=0.526), total= 1.1s  
[CV] max\_depth=3, n\_estimators=100 ...................................  
[CV] max\_depth=3, n\_estimators=100, score=(train=0.536, test=0.550), total= 1.1s  
[CV] max\_depth=3, n\_estimators=100 ...................................  
[CV] max\_depth=3, n\_estimators=100, score=(train=0.541, test=0.527), total= 0.9s  
[CV] max\_depth=3, n\_estimators=100 ...................................  
[CV] max\_depth=3, n\_estimators=100, score=(train=0.540, test=0.547), total= 1.0s  
[CV] max\_depth=4, n\_estimators=1 .....................................  
[CV] max\_depth=4, n\_estimators=1, score=(train=0.612, test=0.624), total= 0.0s  
[CV] max\_depth=4, n\_estimators=1 .....................................  
[CV] max\_depth=4, n\_estimators=1, score=(train=0.624, test=0.590), total= 0.0s  
[CV] max\_depth=4, n\_estimators=1 .....................................  
[CV] max\_depth=4, n\_estimators=1, score=(train=0.616, test=0.617), total= 0.0s  
[CV] max\_depth=4, n\_estimators=1 .....................................  
[CV] max\_depth=4, n\_estimators=1, score=(train=0.617, test=0.617), total= 0.0s  
[CV] max\_depth=4, n\_estimators=1 .....................................  
[CV] max\_depth=4, n\_estimators=1, score=(train=0.614, test=0.617), total= 0.0s  
[CV] max\_depth=4, n\_estimators=5 .....................................  
[CV] max\_depth=4, n\_estimators=5, score=(train=0.624, test=0.632), total= 0.1s  
[CV] max\_depth=4, n\_estimators=5 .....................................  
[CV] max\_depth=4, n\_estimators=5, score=(train=0.636, test=0.611), total= 0.1s  
[CV] max\_depth=4, n\_estimators=5 .....................................  
[CV] max\_depth=4, n\_estimators=5, score=(train=0.628, test=0.628), total= 0.1s  
[CV] max\_depth=4, n\_estimators=5 .....................................  
[CV] max\_depth=4, n\_estimators=5, score=(train=0.625, test=0.622), total= 0.1s  
[CV] max\_depth=4, n\_estimators=5 .....................................  
[CV] max\_depth=4, n\_estimators=5, score=(train=0.631, test=0.631), total= 0.1s  
[CV] max\_depth=4, n\_estimators=10 ....................................  
[CV] max\_depth=4, n\_estimators=10, score=(train=0.625, test=0.634), total= 0.1s  
[CV] max\_depth=4, n\_estimators=10 ....................................  
[CV] max\_depth=4, n\_estimators=10, score=(train=0.637, test=0.615), total= 0.1s  
[CV] max\_depth=4, n\_estimators=10 ....................................  
[CV] max\_depth=4, n\_estimators=10, score=(train=0.632, test=0.632), total= 0.1s  
[CV] max\_depth=4, n\_estimators=10 ....................................  
[CV] max\_depth=4, n\_estimators=10, score=(train=0.632, test=0.628), total= 0.1s  
[CV] max\_depth=4, n\_estimators=10 ....................................  
[CV] max\_depth=4, n\_estimators=10, score=(train=0.632, test=0.633), total= 0.2s  
[CV] max\_depth=4, n\_estimators=15 ....................................  
[CV] max\_depth=4, n\_estimators=15, score=(train=0.625, test=0.636), total= 0.2s  
[CV] max\_depth=4, n\_estimators=15 ....................................  
[CV] max\_depth=4, n\_estimators=15, score=(train=0.640, test=0.615), total= 0.2s  
[CV] max\_depth=4, n\_estimators=15 ....................................  
[CV] max\_depth=4, n\_estimators=15, score=(train=0.630, test=0.629), total= 0.2s  
[CV] max\_depth=4, n\_estimators=15 ....................................  
[CV] max\_depth=4, n\_estimators=15, score=(train=0.631, test=0.627), total= 0.2s  
[CV] max\_depth=4, n\_estimators=15 ....................................  
[CV] max\_depth=4, n\_estimators=15, score=(train=0.635, test=0.633), total= 0.2s  
[CV] max\_depth=4, n\_estimators=20 ....................................  
[CV] max\_depth=4, n\_estimators=20, score=(train=0.623, test=0.631), total= 0.3s  
[CV] max\_depth=4, n\_estimators=20 ....................................  
[CV] max\_depth=4, n\_estimators=20, score=(train=0.638, test=0.616), total= 0.3s  
[CV] max\_depth=4, n\_estimators=20 ....................................  
[CV] max\_depth=4, n\_estimators=20, score=(train=0.629, test=0.630), total= 0.3s  
[CV] max\_depth=4, n\_estimators=20 ....................................  
[CV] max\_depth=4, n\_estimators=20, score=(train=0.634, test=0.630), total= 0.2s  
[CV] max\_depth=4, n\_estimators=20 ....................................  
[CV] max\_depth=4, n\_estimators=20, score=(train=0.632, test=0.631), total= 0.2s  
[CV] max\_depth=4, n\_estimators=25 ....................................  
[CV] max\_depth=4, n\_estimators=25, score=(train=0.628, test=0.637), total= 0.3s  
[CV] max\_depth=4, n\_estimators=25 ....................................  
[CV] max\_depth=4, n\_estimators=25, score=(train=0.635, test=0.611), total= 0.3s  
[CV] max\_depth=4, n\_estimators=25 ....................................  
[CV] max\_depth=4, n\_estimators=25, score=(train=0.631, test=0.631), total= 0.3s  
[CV] max\_depth=4, n\_estimators=25 ....................................  
[CV] max\_depth=4, n\_estimators=25, score=(train=0.632, test=0.630), total= 0.3s  
[CV] max\_depth=4, n\_estimators=25 ....................................  
[CV] max\_depth=4, n\_estimators=25, score=(train=0.636, test=0.635), total= 0.3s  
[CV] max\_depth=4, n\_estimators=50 ....................................  
[CV] max\_depth=4, n\_estimators=50, score=(train=0.627, test=0.636), total= 0.6s  
[CV] max\_depth=4, n\_estimators=50 ....................................  
[CV] max\_depth=4, n\_estimators=50, score=(train=0.637, test=0.614), total= 0.6s  
[CV] max\_depth=4, n\_estimators=50 ....................................  
[CV] max\_depth=4, n\_estimators=50, score=(train=0.631, test=0.631), total= 0.6s  
[CV] max\_depth=4, n\_estimators=50 ....................................  
[CV] max\_depth=4, n\_estimators=50, score=(train=0.631, test=0.628), total= 0.6s  
[CV] max\_depth=4, n\_estimators=50 ....................................  
[CV] max\_depth=4, n\_estimators=50, score=(train=0.635, test=0.635), total= 0.6s  
[CV] max\_depth=4, n\_estimators=100 ...................................  
[CV] max\_depth=4, n\_estimators=100, score=(train=0.626, test=0.634), total= 1.1s  
[CV] max\_depth=4, n\_estimators=100 ...................................  
[CV] max\_depth=4, n\_estimators=100, score=(train=0.637, test=0.612), total= 1.1s  
[CV] max\_depth=4, n\_estimators=100 ...................................  
[CV] max\_depth=4, n\_estimators=100, score=(train=0.632, test=0.632), total= 1.2s  
[CV] max\_depth=4, n\_estimators=100 ...................................  
[CV] max\_depth=4, n\_estimators=100, score=(train=0.632, test=0.628), total= 1.2s  
[CV] max\_depth=4, n\_estimators=100 ...................................  
[CV] max\_depth=4, n\_estimators=100, score=(train=0.636, test=0.636), total= 1.2s  
[CV] max\_depth=5, n\_estimators=1 .....................................  
[CV] max\_depth=5, n\_estimators=1, score=(train=0.675, test=0.688), total= 0.0s  
[CV] max\_depth=5, n\_estimators=1 .....................................  
[CV] max\_depth=5, n\_estimators=1, score=(train=0.677, test=0.640), total= 0.0s  
[CV] max\_depth=5, n\_estimators=1 .....................................  
[CV] max\_depth=5, n\_estimators=1, score=(train=0.646, test=0.659), total= 0.0s  
[CV] max\_depth=5, n\_estimators=1 .....................................  
[CV] max\_depth=5, n\_estimators=1, score=(train=0.668, test=0.666), total= 0.0s  
[CV] max\_depth=5, n\_estimators=1 .....................................  
[CV] max\_depth=5, n\_estimators=1, score=(train=0.650, test=0.626), total= 0.0s  
[CV] max\_depth=5, n\_estimators=5 .....................................  
[CV] max\_depth=5, n\_estimators=5, score=(train=0.677, test=0.684), total= 0.1s  
[CV] max\_depth=5, n\_estimators=5 .....................................  
[CV] max\_depth=5, n\_estimators=5, score=(train=0.688, test=0.659), total= 0.1s  
[CV] max\_depth=5, n\_estimators=5 .....................................  
[CV] max\_depth=5, n\_estimators=5, score=(train=0.693, test=0.694), total= 0.1s  
[CV] max\_depth=5, n\_estimators=5 .....................................  
[CV] max\_depth=5, n\_estimators=5, score=(train=0.694, test=0.687), total= 0.1s  
[CV] max\_depth=5, n\_estimators=5 .....................................  
[CV] max\_depth=5, n\_estimators=5, score=(train=0.706, test=0.692), total= 0.1s  
[CV] max\_depth=5, n\_estimators=10 ....................................  
[CV] max\_depth=5, n\_estimators=10, score=(train=0.682, test=0.685), total= 0.2s  
[CV] max\_depth=5, n\_estimators=10 ....................................  
[CV] max\_depth=5, n\_estimators=10, score=(train=0.688, test=0.662), total= 0.1s  
[CV] max\_depth=5, n\_estimators=10 ....................................  
[CV] max\_depth=5, n\_estimators=10, score=(train=0.693, test=0.699), total= 0.2s  
[CV] max\_depth=5, n\_estimators=10 ....................................  
[CV] max\_depth=5, n\_estimators=10, score=(train=0.699, test=0.697), total= 0.1s  
[CV] max\_depth=5, n\_estimators=10 ....................................  
[CV] max\_depth=5, n\_estimators=10, score=(train=0.694, test=0.684), total= 0.1s  
[CV] max\_depth=5, n\_estimators=15 ....................................  
[CV] max\_depth=5, n\_estimators=15, score=(train=0.687, test=0.691), total= 0.2s  
[CV] max\_depth=5, n\_estimators=15 ....................................  
[CV] max\_depth=5, n\_estimators=15, score=(train=0.694, test=0.665), total= 0.2s  
[CV] max\_depth=5, n\_estimators=15 ....................................  
[CV] max\_depth=5, n\_estimators=15, score=(train=0.687, test=0.690), total= 0.2s  
[CV] max\_depth=5, n\_estimators=15 ....................................  
[CV] max\_depth=5, n\_estimators=15, score=(train=0.698, test=0.691), total= 0.2s  
[CV] max\_depth=5, n\_estimators=15 ....................................  
[CV] max\_depth=5, n\_estimators=15, score=(train=0.703, test=0.692), total= 0.2s  
[CV] max\_depth=5, n\_estimators=20 ....................................  
[CV] max\_depth=5, n\_estimators=20, score=(train=0.691, test=0.697), total= 0.3s  
[CV] max\_depth=5, n\_estimators=20 ....................................  
[CV] max\_depth=5, n\_estimators=20, score=(train=0.694, test=0.668), total= 0.3s  
[CV] max\_depth=5, n\_estimators=20 ....................................  
[CV] max\_depth=5, n\_estimators=20, score=(train=0.692, test=0.697), total= 0.3s  
[CV] max\_depth=5, n\_estimators=20 ....................................  
[CV] max\_depth=5, n\_estimators=20, score=(train=0.700, test=0.697), total= 0.3s  
[CV] max\_depth=5, n\_estimators=20 ....................................  
[CV] max\_depth=5, n\_estimators=20, score=(train=0.704, test=0.694), total= 0.3s  
[CV] max\_depth=5, n\_estimators=25 ....................................  
[CV] max\_depth=5, n\_estimators=25, score=(train=0.683, test=0.688), total= 0.3s  
[CV] max\_depth=5, n\_estimators=25 ....................................  
[CV] max\_depth=5, n\_estimators=25, score=(train=0.691, test=0.665), total= 0.4s  
[CV] max\_depth=5, n\_estimators=25 ....................................  
[CV] max\_depth=5, n\_estimators=25, score=(train=0.695, test=0.701), total= 0.3s  
[CV] max\_depth=5, n\_estimators=25 ....................................  
[CV] max\_depth=5, n\_estimators=25, score=(train=0.691, test=0.690), total= 0.4s  
[CV] max\_depth=5, n\_estimators=25 ....................................  
[CV] max\_depth=5, n\_estimators=25, score=(train=0.701, test=0.688), total= 0.3s  
[CV] max\_depth=5, n\_estimators=50 ....................................  
[CV] max\_depth=5, n\_estimators=50, score=(train=0.687, test=0.692), total= 0.6s  
[CV] max\_depth=5, n\_estimators=50 ....................................  
[CV] max\_depth=5, n\_estimators=50, score=(train=0.693, test=0.666), total= 0.6s  
[CV] max\_depth=5, n\_estimators=50 ....................................  
[CV] max\_depth=5, n\_estimators=50, score=(train=0.695, test=0.699), total= 0.7s  
[CV] max\_depth=5, n\_estimators=50 ....................................  
[CV] max\_depth=5, n\_estimators=50, score=(train=0.698, test=0.695), total= 0.7s  
[CV] max\_depth=5, n\_estimators=50 ....................................  
[CV] max\_depth=5, n\_estimators=50, score=(train=0.704, test=0.694), total= 0.7s  
[CV] max\_depth=5, n\_estimators=100 ...................................  
[CV] max\_depth=5, n\_estimators=100, score=(train=0.689, test=0.694), total= 1.4s  
[CV] max\_depth=5, n\_estimators=100 ...................................  
[CV] max\_depth=5, n\_estimators=100, score=(train=0.694, test=0.668), total= 1.3s  
[CV] max\_depth=5, n\_estimators=100 ...................................  
[CV] max\_depth=5, n\_estimators=100, score=(train=0.695, test=0.700), total= 1.3s  
[CV] max\_depth=5, n\_estimators=100 ...................................  
[CV] max\_depth=5, n\_estimators=100, score=(train=0.700, test=0.697), total= 1.3s  
[CV] max\_depth=5, n\_estimators=100 ...................................  
[CV] max\_depth=5, n\_estimators=100, score=(train=0.704, test=0.693), total= 1.4s  
[CV] max\_depth=6, n\_estimators=1 .....................................  
[CV] max\_depth=6, n\_estimators=1, score=(train=0.763, test=0.736), total= 0.0s  
[CV] max\_depth=6, n\_estimators=1 .....................................  
[CV] max\_depth=6, n\_estimators=1, score=(train=0.762, test=0.743), total= 0.0s  
[CV] max\_depth=6, n\_estimators=1 .....................................  
[CV] max\_depth=6, n\_estimators=1, score=(train=0.763, test=0.761), total= 0.0s  
[CV] max\_depth=6, n\_estimators=1 .....................................  
[CV] max\_depth=6, n\_estimators=1, score=(train=0.777, test=0.758), total= 0.0s  
[CV] max\_depth=6, n\_estimators=1 .....................................  
[CV] max\_depth=6, n\_estimators=1, score=(train=0.769, test=0.770), total= 0.0s  
[CV] max\_depth=6, n\_estimators=5 .....................................  
[CV] max\_depth=6, n\_estimators=5, score=(train=0.805, test=0.790), total= 0.1s  
[CV] max\_depth=6, n\_estimators=5 .....................................  
[CV] max\_depth=6, n\_estimators=5, score=(train=0.789, test=0.782), total= 0.1s  
[CV] max\_depth=6, n\_estimators=5 .....................................  
[CV] max\_depth=6, n\_estimators=5, score=(train=0.793, test=0.786), total= 0.1s  
[CV] max\_depth=6, n\_estimators=5 .....................................  
[CV] max\_depth=6, n\_estimators=5, score=(train=0.796, test=0.787), total= 0.1s  
[CV] max\_depth=6, n\_estimators=5 .....................................  
[CV] max\_depth=6, n\_estimators=5, score=(train=0.806, test=0.805), total= 0.1s  
[CV] max\_depth=6, n\_estimators=10 ....................................  
[CV] max\_depth=6, n\_estimators=10, score=(train=0.795, test=0.780), total= 0.2s  
[CV] max\_depth=6, n\_estimators=10 ....................................  
[CV] max\_depth=6, n\_estimators=10, score=(train=0.801, test=0.795), total= 0.2s  
[CV] max\_depth=6, n\_estimators=10 ....................................  
[CV] max\_depth=6, n\_estimators=10, score=(train=0.797, test=0.789), total= 0.2s  
[CV] max\_depth=6, n\_estimators=10 ....................................  
[CV] max\_depth=6, n\_estimators=10, score=(train=0.809, test=0.800), total= 0.2s  
[CV] max\_depth=6, n\_estimators=10 ....................................  
[CV] max\_depth=6, n\_estimators=10, score=(train=0.805, test=0.804), total= 0.2s  
[CV] max\_depth=6, n\_estimators=15 ....................................  
[CV] max\_depth=6, n\_estimators=15, score=(train=0.795, test=0.775), total= 0.3s  
[CV] max\_depth=6, n\_estimators=15 ....................................  
[CV] max\_depth=6, n\_estimators=15, score=(train=0.801, test=0.792), total= 0.2s  
[CV] max\_depth=6, n\_estimators=15 ....................................  
[CV] max\_depth=6, n\_estimators=15, score=(train=0.798, test=0.792), total= 0.3s  
[CV] max\_depth=6, n\_estimators=15 ....................................  
[CV] max\_depth=6, n\_estimators=15, score=(train=0.806, test=0.795), total= 0.3s  
[CV] max\_depth=6, n\_estimators=15 ....................................  
[CV] max\_depth=6, n\_estimators=15, score=(train=0.809, test=0.809), total= 0.3s  
[CV] max\_depth=6, n\_estimators=20 ....................................  
[CV] max\_depth=6, n\_estimators=20, score=(train=0.798, test=0.782), total= 0.4s  
[CV] max\_depth=6, n\_estimators=20 ....................................  
[CV] max\_depth=6, n\_estimators=20, score=(train=0.802, test=0.794), total= 0.4s  
[CV] max\_depth=6, n\_estimators=20 ....................................  
[CV] max\_depth=6, n\_estimators=20, score=(train=0.798, test=0.791), total= 0.4s  
[CV] max\_depth=6, n\_estimators=20 ....................................  
[CV] max\_depth=6, n\_estimators=20, score=(train=0.805, test=0.797), total= 0.4s  
[CV] max\_depth=6, n\_estimators=20 ....................................  
[CV] max\_depth=6, n\_estimators=20, score=(train=0.800, test=0.800), total= 0.4s  
[CV] max\_depth=6, n\_estimators=25 ....................................  
[CV] max\_depth=6, n\_estimators=25, score=(train=0.801, test=0.784), total= 0.5s  
[CV] max\_depth=6, n\_estimators=25 ....................................  
[CV] max\_depth=6, n\_estimators=25, score=(train=0.800, test=0.791), total= 0.4s  
[CV] max\_depth=6, n\_estimators=25 ....................................  
[CV] max\_depth=6, n\_estimators=25, score=(train=0.800, test=0.794), total= 0.5s  
[CV] max\_depth=6, n\_estimators=25 ....................................  
[CV] max\_depth=6, n\_estimators=25, score=(train=0.812, test=0.802), total= 0.4s  
[CV] max\_depth=6, n\_estimators=25 ....................................  
[CV] max\_depth=6, n\_estimators=25, score=(train=0.809, test=0.810), total= 0.4s  
[CV] max\_depth=6, n\_estimators=50 ....................................  
[CV] max\_depth=6, n\_estimators=50, score=(train=0.800, test=0.784), total= 0.8s  
[CV] max\_depth=6, n\_estimators=50 ....................................  
[CV] max\_depth=6, n\_estimators=50, score=(train=0.797, test=0.789), total= 0.8s  
[CV] max\_depth=6, n\_estimators=50 ....................................  
[CV] max\_depth=6, n\_estimators=50, score=(train=0.804, test=0.797), total= 0.7s  
[CV] max\_depth=6, n\_estimators=50 ....................................  
[CV] max\_depth=6, n\_estimators=50, score=(train=0.809, test=0.802), total= 0.7s  
[CV] max\_depth=6, n\_estimators=50 ....................................  
[CV] max\_depth=6, n\_estimators=50, score=(train=0.809, test=0.809), total= 0.7s  
[CV] max\_depth=6, n\_estimators=100 ...................................  
[CV] max\_depth=6, n\_estimators=100, score=(train=0.802, test=0.786), total= 1.4s  
[CV] max\_depth=6, n\_estimators=100 ...................................  
[CV] max\_depth=6, n\_estimators=100, score=(train=0.801, test=0.792), total= 1.4s  
[CV] max\_depth=6, n\_estimators=100 ...................................  
[CV] max\_depth=6, n\_estimators=100, score=(train=0.801, test=0.795), total= 1.3s  
[CV] max\_depth=6, n\_estimators=100 ...................................  
[CV] max\_depth=6, n\_estimators=100, score=(train=0.810, test=0.802), total= 1.4s  
[CV] max\_depth=6, n\_estimators=100 ...................................  
[CV] max\_depth=6, n\_estimators=100, score=(train=0.811, test=0.812), total= 1.6s  
[CV] max\_depth=7, n\_estimators=1 .....................................  
[CV] max\_depth=7, n\_estimators=1, score=(train=0.818, test=0.803), total= 0.0s  
[CV] max\_depth=7, n\_estimators=1 .....................................  
[CV] max\_depth=7, n\_estimators=1, score=(train=0.816, test=0.801), total= 0.0s  
[CV] max\_depth=7, n\_estimators=1 .....................................  
[CV] max\_depth=7, n\_estimators=1, score=(train=0.806, test=0.782), total= 0.0s  
[CV] max\_depth=7, n\_estimators=1 .....................................  
[CV] max\_depth=7, n\_estimators=1, score=(train=0.819, test=0.797), total= 0.0s  
[CV] max\_depth=7, n\_estimators=1 .....................................  
[CV] max\_depth=7, n\_estimators=1, score=(train=0.795, test=0.780), total= 0.0s  
[CV] max\_depth=7, n\_estimators=5 .....................................  
[CV] max\_depth=7, n\_estimators=5, score=(train=0.842, test=0.817), total= 0.1s  
[CV] max\_depth=7, n\_estimators=5 .....................................  
[CV] max\_depth=7, n\_estimators=5, score=(train=0.843, test=0.828), total= 0.1s  
[CV] max\_depth=7, n\_estimators=5 .....................................  
[CV] max\_depth=7, n\_estimators=5, score=(train=0.847, test=0.831), total= 0.1s  
[CV] max\_depth=7, n\_estimators=5 .....................................  
[CV] max\_depth=7, n\_estimators=5, score=(train=0.847, test=0.831), total= 0.1s  
[CV] max\_depth=7, n\_estimators=5 .....................................  
[CV] max\_depth=7, n\_estimators=5, score=(train=0.849, test=0.842), total= 0.1s  
[CV] max\_depth=7, n\_estimators=10 ....................................  
[CV] max\_depth=7, n\_estimators=10, score=(train=0.844, test=0.820), total= 0.2s  
[CV] max\_depth=7, n\_estimators=10 ....................................  
[CV] max\_depth=7, n\_estimators=10, score=(train=0.847, test=0.837), total= 0.2s  
[CV] max\_depth=7, n\_estimators=10 ....................................  
[CV] max\_depth=7, n\_estimators=10, score=(train=0.848, test=0.836), total= 0.2s  
[CV] max\_depth=7, n\_estimators=10 ....................................  
[CV] max\_depth=7, n\_estimators=10, score=(train=0.861, test=0.850), total= 0.2s  
[CV] max\_depth=7, n\_estimators=10 ....................................  
[CV] max\_depth=7, n\_estimators=10, score=(train=0.853, test=0.844), total= 0.2s  
[CV] max\_depth=7, n\_estimators=15 ....................................  
[CV] max\_depth=7, n\_estimators=15, score=(train=0.851, test=0.831), total= 0.2s  
[CV] max\_depth=7, n\_estimators=15 ....................................  
[CV] max\_depth=7, n\_estimators=15, score=(train=0.850, test=0.841), total= 0.2s  
[CV] max\_depth=7, n\_estimators=15 ....................................  
[CV] max\_depth=7, n\_estimators=15, score=(train=0.856, test=0.843), total= 0.2s  
[CV] max\_depth=7, n\_estimators=15 ....................................  
[CV] max\_depth=7, n\_estimators=15, score=(train=0.858, test=0.845), total= 0.2s  
[CV] max\_depth=7, n\_estimators=15 ....................................  
[CV] max\_depth=7, n\_estimators=15, score=(train=0.853, test=0.848), total= 0.3s  
[CV] max\_depth=7, n\_estimators=20 ....................................  
[CV] max\_depth=7, n\_estimators=20, score=(train=0.851, test=0.831), total= 0.3s  
[CV] max\_depth=7, n\_estimators=20 ....................................  
[CV] max\_depth=7, n\_estimators=20, score=(train=0.849, test=0.840), total= 0.3s  
[CV] max\_depth=7, n\_estimators=20 ....................................  
[CV] max\_depth=7, n\_estimators=20, score=(train=0.854, test=0.840), total= 0.5s  
[CV] max\_depth=7, n\_estimators=20 ....................................  
[CV] max\_depth=7, n\_estimators=20, score=(train=0.864, test=0.848), total= 0.4s  
[CV] max\_depth=7, n\_estimators=20 ....................................  
[CV] max\_depth=7, n\_estimators=20, score=(train=0.861, test=0.849), total= 0.4s  
[CV] max\_depth=7, n\_estimators=25 ....................................  
[CV] max\_depth=7, n\_estimators=25, score=(train=0.850, test=0.830), total= 0.5s  
[CV] max\_depth=7, n\_estimators=25 ....................................  
[CV] max\_depth=7, n\_estimators=25, score=(train=0.849, test=0.841), total= 0.6s  
[CV] max\_depth=7, n\_estimators=25 ....................................  
[CV] max\_depth=7, n\_estimators=25, score=(train=0.853, test=0.837), total= 0.5s  
[CV] max\_depth=7, n\_estimators=25 ....................................  
[CV] max\_depth=7, n\_estimators=25, score=(train=0.854, test=0.839), total= 0.5s  
[CV] max\_depth=7, n\_estimators=25 ....................................  
[CV] max\_depth=7, n\_estimators=25, score=(train=0.856, test=0.848), total= 0.6s  
[CV] max\_depth=7, n\_estimators=50 ....................................  
[CV] max\_depth=7, n\_estimators=50, score=(train=0.853, test=0.834), total= 1.1s  
[CV] max\_depth=7, n\_estimators=50 ....................................  
[CV] max\_depth=7, n\_estimators=50, score=(train=0.850, test=0.842), total= 1.0s  
[CV] max\_depth=7, n\_estimators=50 ....................................  
[CV] max\_depth=7, n\_estimators=50, score=(train=0.855, test=0.841), total= 0.9s  
[CV] max\_depth=7, n\_estimators=50 ....................................  
[CV] max\_depth=7, n\_estimators=50, score=(train=0.858, test=0.842), total= 0.8s  
[CV] max\_depth=7, n\_estimators=50 ....................................  
[CV] max\_depth=7, n\_estimators=50, score=(train=0.858, test=0.848), total= 0.8s  
[CV] max\_depth=7, n\_estimators=100 ...................................  
[CV] max\_depth=7, n\_estimators=100, score=(train=0.854, test=0.834), total= 1.6s  
[CV] max\_depth=7, n\_estimators=100 ...................................  
[CV] max\_depth=7, n\_estimators=100, score=(train=0.850, test=0.842), total= 1.6s  
[CV] max\_depth=7, n\_estimators=100 ...................................  
[CV] max\_depth=7, n\_estimators=100, score=(train=0.855, test=0.840), total= 1.4s  
[CV] max\_depth=7, n\_estimators=100 ...................................  
[CV] max\_depth=7, n\_estimators=100, score=(train=0.858, test=0.844), total= 1.6s  
[CV] max\_depth=7, n\_estimators=100 ...................................  
[CV] max\_depth=7, n\_estimators=100, score=(train=0.861, test=0.852), total= 1.6s  
[CV] max\_depth=8, n\_estimators=1 .....................................  
[CV] max\_depth=8, n\_estimators=1, score=(train=0.845, test=0.812), total= 0.0s  
[CV] max\_depth=8, n\_estimators=1 .....................................  
[CV] max\_depth=8, n\_estimators=1, score=(train=0.867, test=0.857), total= 0.0s  
[CV] max\_depth=8, n\_estimators=1 .....................................  
[CV] max\_depth=8, n\_estimators=1, score=(train=0.846, test=0.833), total= 0.0s  
[CV] max\_depth=8, n\_estimators=1 .....................................  
[CV] max\_depth=8, n\_estimators=1, score=(train=0.852, test=0.821), total= 0.0s  
[CV] max\_depth=8, n\_estimators=1 .....................................  
[CV] max\_depth=8, n\_estimators=1, score=(train=0.857, test=0.815), total= 0.0s  
[CV] max\_depth=8, n\_estimators=5 .....................................  
[CV] max\_depth=8, n\_estimators=5, score=(train=0.882, test=0.857), total= 0.1s  
[CV] max\_depth=8, n\_estimators=5 .....................................  
[CV] max\_depth=8, n\_estimators=5, score=(train=0.885, test=0.867), total= 0.1s  
[CV] max\_depth=8, n\_estimators=5 .....................................  
[CV] max\_depth=8, n\_estimators=5, score=(train=0.892, test=0.872), total= 0.1s  
[CV] max\_depth=8, n\_estimators=5 .....................................  
[CV] max\_depth=8, n\_estimators=5, score=(train=0.893, test=0.868), total= 0.1s  
[CV] max\_depth=8, n\_estimators=5 .....................................  
[CV] max\_depth=8, n\_estimators=5, score=(train=0.882, test=0.872), total= 0.1s  
[CV] max\_depth=8, n\_estimators=10 ....................................  
[CV] max\_depth=8, n\_estimators=10, score=(train=0.890, test=0.866), total= 0.2s  
[CV] max\_depth=8, n\_estimators=10 ....................................  
[CV] max\_depth=8, n\_estimators=10, score=(train=0.884, test=0.868), total= 0.2s  
[CV] max\_depth=8, n\_estimators=10 ....................................  
[CV] max\_depth=8, n\_estimators=10, score=(train=0.893, test=0.876), total= 0.2s  
[CV] max\_depth=8, n\_estimators=10 ....................................  
[CV] max\_depth=8, n\_estimators=10, score=(train=0.898, test=0.872), total= 0.2s  
[CV] max\_depth=8, n\_estimators=10 ....................................  
[CV] max\_depth=8, n\_estimators=10, score=(train=0.893, test=0.876), total= 0.2s  
[CV] max\_depth=8, n\_estimators=15 ....................................  
[CV] max\_depth=8, n\_estimators=15, score=(train=0.887, test=0.862), total= 0.3s  
[CV] max\_depth=8, n\_estimators=15 ....................................  
[CV] max\_depth=8, n\_estimators=15, score=(train=0.885, test=0.873), total= 0.3s  
[CV] max\_depth=8, n\_estimators=15 ....................................  
[CV] max\_depth=8, n\_estimators=15, score=(train=0.887, test=0.870), total= 0.3s  
[CV] max\_depth=8, n\_estimators=15 ....................................  
[CV] max\_depth=8, n\_estimators=15, score=(train=0.897, test=0.869), total= 0.3s  
[CV] max\_depth=8, n\_estimators=15 ....................................  
[CV] max\_depth=8, n\_estimators=15, score=(train=0.893, test=0.878), total= 0.3s  
[CV] max\_depth=8, n\_estimators=20 ....................................  
[CV] max\_depth=8, n\_estimators=20, score=(train=0.889, test=0.865), total= 0.4s  
[CV] max\_depth=8, n\_estimators=20 ....................................  
[CV] max\_depth=8, n\_estimators=20, score=(train=0.889, test=0.876), total= 0.4s  
[CV] max\_depth=8, n\_estimators=20 ....................................  
[CV] max\_depth=8, n\_estimators=20, score=(train=0.894, test=0.879), total= 0.4s  
[CV] max\_depth=8, n\_estimators=20 ....................................  
[CV] max\_depth=8, n\_estimators=20, score=(train=0.894, test=0.867), total= 0.4s  
[CV] max\_depth=8, n\_estimators=20 ....................................  
[CV] max\_depth=8, n\_estimators=20, score=(train=0.899, test=0.877), total= 0.4s  
[CV] max\_depth=8, n\_estimators=25 ....................................  
[CV] max\_depth=8, n\_estimators=25, score=(train=0.889, test=0.863), total= 0.5s  
[CV] max\_depth=8, n\_estimators=25 ....................................  
[CV] max\_depth=8, n\_estimators=25, score=(train=0.893, test=0.881), total= 0.5s  
[CV] max\_depth=8, n\_estimators=25 ....................................  
[CV] max\_depth=8, n\_estimators=25, score=(train=0.895, test=0.878), total= 0.5s  
[CV] max\_depth=8, n\_estimators=25 ....................................  
[CV] max\_depth=8, n\_estimators=25, score=(train=0.894, test=0.871), total= 0.5s  
[CV] max\_depth=8, n\_estimators=25 ....................................  
[CV] max\_depth=8, n\_estimators=25, score=(train=0.895, test=0.876), total= 0.5s  
[CV] max\_depth=8, n\_estimators=50 ....................................  
[CV] max\_depth=8, n\_estimators=50, score=(train=0.890, test=0.864), total= 1.1s  
[CV] max\_depth=8, n\_estimators=50 ....................................  
[CV] max\_depth=8, n\_estimators=50, score=(train=0.890, test=0.875), total= 1.1s  
[CV] max\_depth=8, n\_estimators=50 ....................................  
[CV] max\_depth=8, n\_estimators=50, score=(train=0.896, test=0.879), total= 0.9s  
[CV] max\_depth=8, n\_estimators=50 ....................................  
[CV] max\_depth=8, n\_estimators=50, score=(train=0.898, test=0.876), total= 0.9s  
[CV] max\_depth=8, n\_estimators=50 ....................................  
[CV] max\_depth=8, n\_estimators=50, score=(train=0.896, test=0.877), total= 1.0s  
[CV] max\_depth=8, n\_estimators=100 ...................................  
[CV] max\_depth=8, n\_estimators=100, score=(train=0.890, test=0.865), total= 1.7s  
[CV] max\_depth=8, n\_estimators=100 ...................................  
[CV] max\_depth=8, n\_estimators=100, score=(train=0.890, test=0.876), total= 1.8s  
[CV] max\_depth=8, n\_estimators=100 ...................................  
[CV] max\_depth=8, n\_estimators=100, score=(train=0.895, test=0.878), total= 1.6s  
[CV] max\_depth=8, n\_estimators=100 ...................................  
[CV] max\_depth=8, n\_estimators=100, score=(train=0.897, test=0.872), total= 1.7s  
[CV] max\_depth=8, n\_estimators=100 ...................................  
[CV] max\_depth=8, n\_estimators=100, score=(train=0.895, test=0.876), total= 1.6s  
[CV] max\_depth=9, n\_estimators=1 .....................................  
[CV] max\_depth=9, n\_estimators=1, score=(train=0.874, test=0.828), total= 0.0s  
[CV] max\_depth=9, n\_estimators=1 .....................................  
[CV] max\_depth=9, n\_estimators=1, score=(train=0.892, test=0.871), total= 0.0s  
[CV] max\_depth=9, n\_estimators=1 .....................................  
[CV] max\_depth=9, n\_estimators=1, score=(train=0.874, test=0.835), total= 0.0s  
[CV] max\_depth=9, n\_estimators=1 .....................................  
[CV] max\_depth=9, n\_estimators=1, score=(train=0.873, test=0.820), total= 0.0s  
[CV] max\_depth=9, n\_estimators=1 .....................................  
[CV] max\_depth=9, n\_estimators=1, score=(train=0.863, test=0.814), total= 0.0s  
[CV] max\_depth=9, n\_estimators=5 .....................................  
[CV] max\_depth=9, n\_estimators=5, score=(train=0.907, test=0.870), total= 0.1s  
[CV] max\_depth=9, n\_estimators=5 .....................................  
[CV] max\_depth=9, n\_estimators=5, score=(train=0.911, test=0.891), total= 0.1s  
[CV] max\_depth=9, n\_estimators=5 .....................................  
[CV] max\_depth=9, n\_estimators=5, score=(train=0.917, test=0.891), total= 0.1s  
[CV] max\_depth=9, n\_estimators=5 .....................................  
[CV] max\_depth=9, n\_estimators=5, score=(train=0.916, test=0.886), total= 0.1s  
[CV] max\_depth=9, n\_estimators=5 .....................................  
[CV] max\_depth=9, n\_estimators=5, score=(train=0.917, test=0.885), total= 0.1s  
[CV] max\_depth=9, n\_estimators=10 ....................................  
[CV] max\_depth=9, n\_estimators=10, score=(train=0.912, test=0.885), total= 0.2s  
[CV] max\_depth=9, n\_estimators=10 ....................................  
[CV] max\_depth=9, n\_estimators=10, score=(train=0.908, test=0.881), total= 0.2s  
[CV] max\_depth=9, n\_estimators=10 ....................................  
[CV] max\_depth=9, n\_estimators=10, score=(train=0.920, test=0.897), total= 0.2s  
[CV] max\_depth=9, n\_estimators=10 ....................................  
[CV] max\_depth=9, n\_estimators=10, score=(train=0.920, test=0.883), total= 0.2s  
[CV] max\_depth=9, n\_estimators=10 ....................................  
[CV] max\_depth=9, n\_estimators=10, score=(train=0.919, test=0.890), total= 0.2s  
[CV] max\_depth=9, n\_estimators=15 ....................................  
[CV] max\_depth=9, n\_estimators=15, score=(train=0.915, test=0.879), total= 0.3s  
[CV] max\_depth=9, n\_estimators=15 ....................................  
[CV] max\_depth=9, n\_estimators=15, score=(train=0.919, test=0.898), total= 0.4s  
[CV] max\_depth=9, n\_estimators=15 ....................................  
[CV] max\_depth=9, n\_estimators=15, score=(train=0.920, test=0.899), total= 0.4s  
[CV] max\_depth=9, n\_estimators=15 ....................................  
[CV] max\_depth=9, n\_estimators=15, score=(train=0.922, test=0.890), total= 0.3s  
[CV] max\_depth=9, n\_estimators=15 ....................................  
[CV] max\_depth=9, n\_estimators=15, score=(train=0.921, test=0.889), total= 0.3s  
[CV] max\_depth=9, n\_estimators=20 ....................................  
[CV] max\_depth=9, n\_estimators=20, score=(train=0.918, test=0.886), total= 0.5s  
[CV] max\_depth=9, n\_estimators=20 ....................................  
[CV] max\_depth=9, n\_estimators=20, score=(train=0.921, test=0.903), total= 0.5s  
[CV] max\_depth=9, n\_estimators=20 ....................................  
[CV] max\_depth=9, n\_estimators=20, score=(train=0.920, test=0.901), total= 0.4s  
[CV] max\_depth=9, n\_estimators=20 ....................................  
[CV] max\_depth=9, n\_estimators=20, score=(train=0.923, test=0.888), total= 0.4s  
[CV] max\_depth=9, n\_estimators=20 ....................................  
[CV] max\_depth=9, n\_estimators=20, score=(train=0.920, test=0.888), total= 0.4s  
[CV] max\_depth=9, n\_estimators=25 ....................................  
[CV] max\_depth=9, n\_estimators=25, score=(train=0.914, test=0.879), total= 0.5s  
[CV] max\_depth=9, n\_estimators=25 ....................................  
[CV] max\_depth=9, n\_estimators=25, score=(train=0.917, test=0.898), total= 0.6s  
[CV] max\_depth=9, n\_estimators=25 ....................................  
[CV] max\_depth=9, n\_estimators=25, score=(train=0.920, test=0.900), total= 0.6s  
[CV] max\_depth=9, n\_estimators=25 ....................................  
[CV] max\_depth=9, n\_estimators=25, score=(train=0.923, test=0.890), total= 0.5s  
[CV] max\_depth=9, n\_estimators=25 ....................................  
[CV] max\_depth=9, n\_estimators=25, score=(train=0.921, test=0.893), total= 0.5s  
[CV] max\_depth=9, n\_estimators=50 ....................................  
[CV] max\_depth=9, n\_estimators=50, score=(train=0.917, test=0.884), total= 1.0s  
[CV] max\_depth=9, n\_estimators=50 ....................................  
[CV] max\_depth=9, n\_estimators=50, score=(train=0.918, test=0.899), total= 1.2s  
[CV] max\_depth=9, n\_estimators=50 ....................................  
[CV] max\_depth=9, n\_estimators=50, score=(train=0.923, test=0.903), total= 1.0s  
[CV] max\_depth=9, n\_estimators=50 ....................................  
[CV] max\_depth=9, n\_estimators=50, score=(train=0.923, test=0.890), total= 1.1s  
[CV] max\_depth=9, n\_estimators=50 ....................................  
[CV] max\_depth=9, n\_estimators=50, score=(train=0.923, test=0.892), total= 0.9s  
[CV] max\_depth=9, n\_estimators=100 ...................................  
[CV] max\_depth=9, n\_estimators=100, score=(train=0.918, test=0.887), total= 1.8s  
[CV] max\_depth=9, n\_estimators=100 ...................................  
[CV] max\_depth=9, n\_estimators=100, score=(train=0.918, test=0.899), total= 1.8s  
[CV] max\_depth=9, n\_estimators=100 ...................................  
[CV] max\_depth=9, n\_estimators=100, score=(train=0.922, test=0.900), total= 1.8s  
[CV] max\_depth=9, n\_estimators=100 ...................................  
[CV] max\_depth=9, n\_estimators=100, score=(train=0.925, test=0.891), total= 1.9s  
[CV] max\_depth=9, n\_estimators=100 ...................................  
[CV] max\_depth=9, n\_estimators=100, score=(train=0.923, test=0.892), total= 2.3s  
[CV] max\_depth=10, n\_estimators=1 ....................................  
[CV] max\_depth=10, n\_estimators=1, score=(train=0.904, test=0.847), total= 0.0s  
[CV] max\_depth=10, n\_estimators=1 ....................................  
[CV] max\_depth=10, n\_estimators=1, score=(train=0.890, test=0.838), total= 0.0s  
[CV] max\_depth=10, n\_estimators=1 ....................................  
[CV] max\_depth=10, n\_estimators=1, score=(train=0.904, test=0.870), total= 0.0s  
[CV] max\_depth=10, n\_estimators=1 ....................................  
[CV] max\_depth=10, n\_estimators=1, score=(train=0.907, test=0.842), total= 0.0s  
[CV] max\_depth=10, n\_estimators=1 ....................................  
[CV] max\_depth=10, n\_estimators=1, score=(train=0.906, test=0.857), total= 0.0s  
[CV] max\_depth=10, n\_estimators=5 ....................................  
[CV] max\_depth=10, n\_estimators=5, score=(train=0.928, test=0.888), total= 0.1s  
[CV] max\_depth=10, n\_estimators=5 ....................................  
[CV] max\_depth=10, n\_estimators=5, score=(train=0.932, test=0.899), total= 0.1s  
[CV] max\_depth=10, n\_estimators=5 ....................................  
[CV] max\_depth=10, n\_estimators=5, score=(train=0.928, test=0.898), total= 0.1s  
[CV] max\_depth=10, n\_estimators=5 ....................................  
[CV] max\_depth=10, n\_estimators=5, score=(train=0.934, test=0.890), total= 0.1s  
[CV] max\_depth=10, n\_estimators=5 ....................................  
[CV] max\_depth=10, n\_estimators=5, score=(train=0.932, test=0.885), total= 0.1s  
[CV] max\_depth=10, n\_estimators=10 ...................................  
[CV] max\_depth=10, n\_estimators=10, score=(train=0.933, test=0.892), total= 0.2s  
[CV] max\_depth=10, n\_estimators=10 ...................................  
[CV] max\_depth=10, n\_estimators=10, score=(train=0.936, test=0.911), total= 0.2s  
[CV] max\_depth=10, n\_estimators=10 ...................................  
[CV] max\_depth=10, n\_estimators=10, score=(train=0.936, test=0.909), total= 0.2s  
[CV] max\_depth=10, n\_estimators=10 ...................................  
[CV] max\_depth=10, n\_estimators=10, score=(train=0.940, test=0.896), total= 0.2s  
[CV] max\_depth=10, n\_estimators=10 ...................................  
[CV] max\_depth=10, n\_estimators=10, score=(train=0.941, test=0.897), total= 0.2s  
[CV] max\_depth=10, n\_estimators=15 ...................................  
[CV] max\_depth=10, n\_estimators=15, score=(train=0.939, test=0.901), total= 0.3s  
[CV] max\_depth=10, n\_estimators=15 ...................................  
[CV] max\_depth=10, n\_estimators=15, score=(train=0.936, test=0.910), total= 0.3s  
[CV] max\_depth=10, n\_estimators=15 ...................................  
[CV] max\_depth=10, n\_estimators=15, score=(train=0.939, test=0.913), total= 0.3s  
[CV] max\_depth=10, n\_estimators=15 ...................................  
[CV] max\_depth=10, n\_estimators=15, score=(train=0.941, test=0.904), total= 0.3s  
[CV] max\_depth=10, n\_estimators=15 ...................................  
[CV] max\_depth=10, n\_estimators=15, score=(train=0.940, test=0.900), total= 0.3s  
[CV] max\_depth=10, n\_estimators=20 ...................................  
[CV] max\_depth=10, n\_estimators=20, score=(train=0.936, test=0.896), total= 0.4s  
[CV] max\_depth=10, n\_estimators=20 ...................................  
[CV] max\_depth=10, n\_estimators=20, score=(train=0.939, test=0.910), total= 0.4s  
[CV] max\_depth=10, n\_estimators=20 ...................................  
[CV] max\_depth=10, n\_estimators=20, score=(train=0.940, test=0.914), total= 0.4s  
[CV] max\_depth=10, n\_estimators=20 ...................................  
[CV] max\_depth=10, n\_estimators=20, score=(train=0.941, test=0.902), total= 0.4s  
[CV] max\_depth=10, n\_estimators=20 ...................................  
[CV] max\_depth=10, n\_estimators=20, score=(train=0.941, test=0.901), total= 0.5s  
[CV] max\_depth=10, n\_estimators=25 ...................................  
[CV] max\_depth=10, n\_estimators=25, score=(train=0.936, test=0.898), total= 0.7s  
[CV] max\_depth=10, n\_estimators=25 ...................................  
[CV] max\_depth=10, n\_estimators=25, score=(train=0.939, test=0.916), total= 0.5s  
[CV] max\_depth=10, n\_estimators=25 ...................................  
[CV] max\_depth=10, n\_estimators=25, score=(train=0.940, test=0.913), total= 0.5s  
[CV] max\_depth=10, n\_estimators=25 ...................................  
[CV] max\_depth=10, n\_estimators=25, score=(train=0.942, test=0.903), total= 0.5s  
[CV] max\_depth=10, n\_estimators=25 ...................................  
[CV] max\_depth=10, n\_estimators=25, score=(train=0.942, test=0.902), total= 0.5s  
[CV] max\_depth=10, n\_estimators=50 ...................................  
[CV] max\_depth=10, n\_estimators=50, score=(train=0.936, test=0.898), total= 1.1s  
[CV] max\_depth=10, n\_estimators=50 ...................................  
[CV] max\_depth=10, n\_estimators=50, score=(train=0.940, test=0.915), total= 1.3s  
[CV] max\_depth=10, n\_estimators=50 ...................................  
[CV] max\_depth=10, n\_estimators=50, score=(train=0.940, test=0.913), total= 1.2s  
[CV] max\_depth=10, n\_estimators=50 ...................................  
[CV] max\_depth=10, n\_estimators=50, score=(train=0.944, test=0.905), total= 1.2s  
[CV] max\_depth=10, n\_estimators=50 ...................................  
[CV] max\_depth=10, n\_estimators=50, score=(train=0.942, test=0.905), total= 1.4s  
[CV] max\_depth=10, n\_estimators=100 ..................................  
[CV] max\_depth=10, n\_estimators=100, score=(train=0.938, test=0.901), total= 2.7s  
[CV] max\_depth=10, n\_estimators=100 ..................................  
[CV] max\_depth=10, n\_estimators=100, score=(train=0.939, test=0.914), total= 2.5s  
[CV] max\_depth=10, n\_estimators=100 ..................................  
[CV] max\_depth=10, n\_estimators=100, score=(train=0.942, test=0.916), total= 2.4s  
[CV] max\_depth=10, n\_estimators=100 ..................................  
[CV] max\_depth=10, n\_estimators=100, score=(train=0.943, test=0.904), total= 2.3s  
[CV] max\_depth=10, n\_estimators=100 ..................................  
[CV] max\_depth=10, n\_estimators=100, score=(train=0.944, test=0.905), total= 2.1s  
[CV] max\_depth=11, n\_estimators=1 ....................................  
[CV] max\_depth=11, n\_estimators=1, score=(train=0.920, test=0.868), total= 0.0s  
[CV] max\_depth=11, n\_estimators=1 ....................................  
[CV] max\_depth=11, n\_estimators=1, score=(train=0.904, test=0.841), total= 0.0s  
[CV] max\_depth=11, n\_estimators=1 ....................................  
[CV] max\_depth=11, n\_estimators=1, score=(train=0.917, test=0.868), total= 0.0s  
[CV] max\_depth=11, n\_estimators=1 ....................................  
[CV] max\_depth=11, n\_estimators=1, score=(train=0.900, test=0.843), total= 0.0s  
[CV] max\_depth=11, n\_estimators=1 ....................................  
[CV] max\_depth=11, n\_estimators=1, score=(train=0.909, test=0.830), total= 0.0s  
[CV] max\_depth=11, n\_estimators=5 ....................................  
[CV] max\_depth=11, n\_estimators=5, score=(train=0.945, test=0.903), total= 0.1s  
[CV] max\_depth=11, n\_estimators=5 ....................................  
[CV] max\_depth=11, n\_estimators=5, score=(train=0.948, test=0.912), total= 0.1s  
[CV] max\_depth=11, n\_estimators=5 ....................................  
[CV] max\_depth=11, n\_estimators=5, score=(train=0.944, test=0.903), total= 0.1s  
[CV] max\_depth=11, n\_estimators=5 ....................................  
[CV] max\_depth=11, n\_estimators=5, score=(train=0.945, test=0.901), total= 0.1s  
[CV] max\_depth=11, n\_estimators=5 ....................................  
[CV] max\_depth=11, n\_estimators=5, score=(train=0.950, test=0.906), total= 0.1s  
[CV] max\_depth=11, n\_estimators=10 ...................................  
[CV] max\_depth=11, n\_estimators=10, score=(train=0.949, test=0.906), total= 0.2s  
[CV] max\_depth=11, n\_estimators=10 ...................................  
[CV] max\_depth=11, n\_estimators=10, score=(train=0.952, test=0.916), total= 0.2s  
[CV] max\_depth=11, n\_estimators=10 ...................................  
[CV] max\_depth=11, n\_estimators=10, score=(train=0.952, test=0.918), total= 0.2s  
[CV] max\_depth=11, n\_estimators=10 ...................................  
[CV] max\_depth=11, n\_estimators=10, score=(train=0.953, test=0.911), total= 0.2s  
[CV] max\_depth=11, n\_estimators=10 ...................................  
[CV] max\_depth=11, n\_estimators=10, score=(train=0.951, test=0.901), total= 0.2s  
[CV] max\_depth=11, n\_estimators=15 ...................................  
[CV] max\_depth=11, n\_estimators=15, score=(train=0.950, test=0.906), total= 0.3s  
[CV] max\_depth=11, n\_estimators=15 ...................................  
[CV] max\_depth=11, n\_estimators=15, score=(train=0.954, test=0.920), total= 0.3s  
[CV] max\_depth=11, n\_estimators=15 ...................................  
[CV] max\_depth=11, n\_estimators=15, score=(train=0.953, test=0.919), total= 0.3s  
[CV] max\_depth=11, n\_estimators=15 ...................................  
[CV] max\_depth=11, n\_estimators=15, score=(train=0.956, test=0.914), total= 0.3s  
[CV] max\_depth=11, n\_estimators=15 ...................................  
[CV] max\_depth=11, n\_estimators=15, score=(train=0.955, test=0.911), total= 0.3s  
[CV] max\_depth=11, n\_estimators=20 ...................................  
[CV] max\_depth=11, n\_estimators=20, score=(train=0.951, test=0.908), total= 0.5s  
[CV] max\_depth=11, n\_estimators=20 ...................................  
[CV] max\_depth=11, n\_estimators=20, score=(train=0.953, test=0.919), total= 0.5s  
[CV] max\_depth=11, n\_estimators=20 ...................................  
[CV] max\_depth=11, n\_estimators=20, score=(train=0.955, test=0.920), total= 0.5s  
[CV] max\_depth=11, n\_estimators=20 ...................................  
[CV] max\_depth=11, n\_estimators=20, score=(train=0.954, test=0.910), total= 0.4s  
[CV] max\_depth=11, n\_estimators=20 ...................................  
[CV] max\_depth=11, n\_estimators=20, score=(train=0.957, test=0.912), total= 0.5s  
[CV] max\_depth=11, n\_estimators=25 ...................................  
[CV] max\_depth=11, n\_estimators=25, score=(train=0.952, test=0.910), total= 0.6s  
[CV] max\_depth=11, n\_estimators=25 ...................................  
[CV] max\_depth=11, n\_estimators=25, score=(train=0.953, test=0.918), total= 0.6s  
[CV] max\_depth=11, n\_estimators=25 ...................................  
[CV] max\_depth=11, n\_estimators=25, score=(train=0.955, test=0.922), total= 0.6s  
[CV] max\_depth=11, n\_estimators=25 ...................................  
[CV] max\_depth=11, n\_estimators=25, score=(train=0.955, test=0.912), total= 0.6s  
[CV] max\_depth=11, n\_estimators=25 ...................................  
[CV] max\_depth=11, n\_estimators=25, score=(train=0.955, test=0.909), total= 0.5s  
[CV] max\_depth=11, n\_estimators=50 ...................................  
[CV] max\_depth=11, n\_estimators=50, score=(train=0.952, test=0.908), total= 1.1s  
[CV] max\_depth=11, n\_estimators=50 ...................................  
[CV] max\_depth=11, n\_estimators=50, score=(train=0.954, test=0.920), total= 1.1s  
[CV] max\_depth=11, n\_estimators=50 ...................................  
[CV] max\_depth=11, n\_estimators=50, score=(train=0.956, test=0.924), total= 1.1s  
[CV] max\_depth=11, n\_estimators=50 ...................................  
[CV] max\_depth=11, n\_estimators=50, score=(train=0.956, test=0.913), total= 1.1s  
[CV] max\_depth=11, n\_estimators=50 ...................................  
[CV] max\_depth=11, n\_estimators=50, score=(train=0.958, test=0.912), total= 1.1s  
[CV] max\_depth=11, n\_estimators=100 ..................................  
[CV] max\_depth=11, n\_estimators=100, score=(train=0.953, test=0.910), total= 2.3s  
[CV] max\_depth=11, n\_estimators=100 ..................................  
[CV] max\_depth=11, n\_estimators=100, score=(train=0.955, test=0.922), total= 2.2s  
[CV] max\_depth=11, n\_estimators=100 ..................................  
[CV] max\_depth=11, n\_estimators=100, score=(train=0.956, test=0.923), total= 2.3s  
[CV] max\_depth=11, n\_estimators=100 ..................................  
[CV] max\_depth=11, n\_estimators=100, score=(train=0.956, test=0.914), total= 2.2s  
[CV] max\_depth=11, n\_estimators=100 ..................................  
[CV] max\_depth=11, n\_estimators=100, score=(train=0.958, test=0.913), total= 2.2s  
[CV] max\_depth=12, n\_estimators=1 ....................................  
[CV] max\_depth=12, n\_estimators=1, score=(train=0.921, test=0.865), total= 0.0s  
[CV] max\_depth=12, n\_estimators=1 ....................................  
[CV] max\_depth=12, n\_estimators=1, score=(train=0.928, test=0.872), total= 0.0s  
[CV] max\_depth=12, n\_estimators=1 ....................................  
[CV] max\_depth=12, n\_estimators=1, score=(train=0.922, test=0.862), total= 0.0s  
[CV] max\_depth=12, n\_estimators=1 ....................................  
[CV] max\_depth=12, n\_estimators=1, score=(train=0.923, test=0.833), total= 0.0s  
[CV] max\_depth=12, n\_estimators=1 ....................................  
[CV] max\_depth=12, n\_estimators=1, score=(train=0.920, test=0.847), total= 0.0s  
[CV] max\_depth=12, n\_estimators=5 ....................................  
[CV] max\_depth=12, n\_estimators=5, score=(train=0.955, test=0.901), total= 0.1s  
[CV] max\_depth=12, n\_estimators=5 ....................................  
[CV] max\_depth=12, n\_estimators=5, score=(train=0.955, test=0.912), total= 0.1s  
[CV] max\_depth=12, n\_estimators=5 ....................................  
[CV] max\_depth=12, n\_estimators=5, score=(train=0.956, test=0.917), total= 0.1s  
[CV] max\_depth=12, n\_estimators=5 ....................................  
[CV] max\_depth=12, n\_estimators=5, score=(train=0.959, test=0.907), total= 0.1s  
[CV] max\_depth=12, n\_estimators=5 ....................................  
[CV] max\_depth=12, n\_estimators=5, score=(train=0.960, test=0.903), total= 0.1s  
[CV] max\_depth=12, n\_estimators=10 ...................................  
[CV] max\_depth=12, n\_estimators=10, score=(train=0.960, test=0.913), total= 0.2s  
[CV] max\_depth=12, n\_estimators=10 ...................................  
[CV] max\_depth=12, n\_estimators=10, score=(train=0.962, test=0.921), total= 0.2s  
[CV] max\_depth=12, n\_estimators=10 ...................................  
[CV] max\_depth=12, n\_estimators=10, score=(train=0.962, test=0.923), total= 0.3s  
[CV] max\_depth=12, n\_estimators=10 ...................................  
[CV] max\_depth=12, n\_estimators=10, score=(train=0.964, test=0.916), total= 0.2s  
[CV] max\_depth=12, n\_estimators=10 ...................................  
[CV] max\_depth=12, n\_estimators=10, score=(train=0.965, test=0.911), total= 0.3s  
[CV] max\_depth=12, n\_estimators=15 ...................................  
[CV] max\_depth=12, n\_estimators=15, score=(train=0.961, test=0.912), total= 0.4s  
[CV] max\_depth=12, n\_estimators=15 ...................................  
[CV] max\_depth=12, n\_estimators=15, score=(train=0.963, test=0.925), total= 0.4s  
[CV] max\_depth=12, n\_estimators=15 ...................................  
[CV] max\_depth=12, n\_estimators=15, score=(train=0.963, test=0.928), total= 0.4s  
[CV] max\_depth=12, n\_estimators=15 ...................................  
[CV] max\_depth=12, n\_estimators=15, score=(train=0.964, test=0.914), total= 0.4s  
[CV] max\_depth=12, n\_estimators=15 ...................................  
[CV] max\_depth=12, n\_estimators=15, score=(train=0.966, test=0.916), total= 0.4s  
[CV] max\_depth=12, n\_estimators=20 ...................................  
[CV] max\_depth=12, n\_estimators=20, score=(train=0.964, test=0.915), total= 0.5s  
[CV] max\_depth=12, n\_estimators=20 ...................................  
[CV] max\_depth=12, n\_estimators=20, score=(train=0.964, test=0.925), total= 0.5s  
[CV] max\_depth=12, n\_estimators=20 ...................................  
[CV] max\_depth=12, n\_estimators=20, score=(train=0.963, test=0.928), total= 0.5s  
[CV] max\_depth=12, n\_estimators=20 ...................................  
[CV] max\_depth=12, n\_estimators=20, score=(train=0.965, test=0.917), total= 0.5s  
[CV] max\_depth=12, n\_estimators=20 ...................................  
[CV] max\_depth=12, n\_estimators=20, score=(train=0.967, test=0.916), total= 0.5s  
[CV] max\_depth=12, n\_estimators=25 ...................................  
[CV] max\_depth=12, n\_estimators=25, score=(train=0.962, test=0.916), total= 0.6s  
[CV] max\_depth=12, n\_estimators=25 ...................................  
[CV] max\_depth=12, n\_estimators=25, score=(train=0.964, test=0.923), total= 0.7s  
[CV] max\_depth=12, n\_estimators=25 ...................................  
[CV] max\_depth=12, n\_estimators=25, score=(train=0.965, test=0.924), total= 0.7s  
[CV] max\_depth=12, n\_estimators=25 ...................................  
[CV] max\_depth=12, n\_estimators=25, score=(train=0.966, test=0.916), total= 0.6s  
[CV] max\_depth=12, n\_estimators=25 ...................................  
[CV] max\_depth=12, n\_estimators=25, score=(train=0.966, test=0.916), total= 0.6s  
[CV] max\_depth=12, n\_estimators=50 ...................................  
[CV] max\_depth=12, n\_estimators=50, score=(train=0.963, test=0.917), total= 1.3s  
[CV] max\_depth=12, n\_estimators=50 ...................................  
[CV] max\_depth=12, n\_estimators=50, score=(train=0.965, test=0.927), total= 1.2s  
[CV] max\_depth=12, n\_estimators=50 ...................................  
[CV] max\_depth=12, n\_estimators=50, score=(train=0.966, test=0.927), total= 1.2s  
[CV] max\_depth=12, n\_estimators=50 ...................................  
[CV] max\_depth=12, n\_estimators=50, score=(train=0.966, test=0.918), total= 1.3s  
[CV] max\_depth=12, n\_estimators=50 ...................................  
[CV] max\_depth=12, n\_estimators=50, score=(train=0.967, test=0.915), total= 1.3s  
[CV] max\_depth=12, n\_estimators=100 ..................................  
[CV] max\_depth=12, n\_estimators=100, score=(train=0.965, test=0.918), total= 2.5s  
[CV] max\_depth=12, n\_estimators=100 ..................................  
[CV] max\_depth=12, n\_estimators=100, score=(train=0.966, test=0.926), total= 2.5s  
[CV] max\_depth=12, n\_estimators=100 ..................................  
[CV] max\_depth=12, n\_estimators=100, score=(train=0.966, test=0.929), total= 2.5s  
[CV] max\_depth=12, n\_estimators=100 ..................................  
[CV] max\_depth=12, n\_estimators=100, score=(train=0.967, test=0.918), total= 2.6s  
[CV] max\_depth=12, n\_estimators=100 ..................................  
[CV] max\_depth=12, n\_estimators=100, score=(train=0.968, test=0.917), total= 2.5s  
[CV] max\_depth=13, n\_estimators=1 ....................................  
[CV] max\_depth=13, n\_estimators=1, score=(train=0.926, test=0.858), total= 0.0s  
[CV] max\_depth=13, n\_estimators=1 ....................................  
[CV] max\_depth=13, n\_estimators=1, score=(train=0.916, test=0.837), total= 0.0s  
[CV] max\_depth=13, n\_estimators=1 ....................................  
[CV] max\_depth=13, n\_estimators=1, score=(train=0.919, test=0.856), total= 0.0s  
[CV] max\_depth=13, n\_estimators=1 ....................................  
[CV] max\_depth=13, n\_estimators=1, score=(train=0.931, test=0.844), total= 0.0s  
[CV] max\_depth=13, n\_estimators=1 ....................................  
[CV] max\_depth=13, n\_estimators=1, score=(train=0.931, test=0.833), total= 0.0s  
[CV] max\_depth=13, n\_estimators=5 ....................................  
[CV] max\_depth=13, n\_estimators=5, score=(train=0.964, test=0.903), total= 0.1s  
[CV] max\_depth=13, n\_estimators=5 ....................................  
[CV] max\_depth=13, n\_estimators=5, score=(train=0.964, test=0.921), total= 0.1s  
[CV] max\_depth=13, n\_estimators=5 ....................................  
[CV] max\_depth=13, n\_estimators=5, score=(train=0.964, test=0.923), total= 0.1s  
[CV] max\_depth=13, n\_estimators=5 ....................................  
[CV] max\_depth=13, n\_estimators=5, score=(train=0.965, test=0.914), total= 0.1s  
[CV] max\_depth=13, n\_estimators=5 ....................................  
[CV] max\_depth=13, n\_estimators=5, score=(train=0.967, test=0.910), total= 0.1s  
[CV] max\_depth=13, n\_estimators=10 ...................................  
[CV] max\_depth=13, n\_estimators=10, score=(train=0.969, test=0.917), total= 0.3s  
[CV] max\_depth=13, n\_estimators=10 ...................................  
[CV] max\_depth=13, n\_estimators=10, score=(train=0.968, test=0.921), total= 0.3s  
[CV] max\_depth=13, n\_estimators=10 ...................................  
[CV] max\_depth=13, n\_estimators=10, score=(train=0.969, test=0.926), total= 0.3s  
[CV] max\_depth=13, n\_estimators=10 ...................................  
[CV] max\_depth=13, n\_estimators=10, score=(train=0.969, test=0.913), total= 0.3s  
[CV] max\_depth=13, n\_estimators=10 ...................................  
[CV] max\_depth=13, n\_estimators=10, score=(train=0.972, test=0.914), total= 0.3s  
[CV] max\_depth=13, n\_estimators=15 ...................................  
[CV] max\_depth=13, n\_estimators=15, score=(train=0.970, test=0.914), total= 0.4s  
[CV] max\_depth=13, n\_estimators=15 ...................................  
[CV] max\_depth=13, n\_estimators=15, score=(train=0.972, test=0.927), total= 0.4s  
[CV] max\_depth=13, n\_estimators=15 ...................................  
[CV] max\_depth=13, n\_estimators=15, score=(train=0.972, test=0.925), total= 0.4s  
[CV] max\_depth=13, n\_estimators=15 ...................................  
[CV] max\_depth=13, n\_estimators=15, score=(train=0.970, test=0.916), total= 0.4s  
[CV] max\_depth=13, n\_estimators=15 ...................................  
[CV] max\_depth=13, n\_estimators=15, score=(train=0.973, test=0.920), total= 0.4s  
[CV] max\_depth=13, n\_estimators=20 ...................................  
[CV] max\_depth=13, n\_estimators=20, score=(train=0.971, test=0.921), total= 0.5s  
[CV] max\_depth=13, n\_estimators=20 ...................................  
[CV] max\_depth=13, n\_estimators=20, score=(train=0.972, test=0.931), total= 0.5s  
[CV] max\_depth=13, n\_estimators=20 ...................................  
[CV] max\_depth=13, n\_estimators=20, score=(train=0.973, test=0.932), total= 0.5s  
[CV] max\_depth=13, n\_estimators=20 ...................................  
[CV] max\_depth=13, n\_estimators=20, score=(train=0.972, test=0.919), total= 0.5s  
[CV] max\_depth=13, n\_estimators=20 ...................................  
[CV] max\_depth=13, n\_estimators=20, score=(train=0.974, test=0.917), total= 0.6s  
[CV] max\_depth=13, n\_estimators=25 ...................................  
[CV] max\_depth=13, n\_estimators=25, score=(train=0.971, test=0.916), total= 0.7s  
[CV] max\_depth=13, n\_estimators=25 ...................................  
[CV] max\_depth=13, n\_estimators=25, score=(train=0.971, test=0.929), total= 0.7s  
[CV] max\_depth=13, n\_estimators=25 ...................................  
[CV] max\_depth=13, n\_estimators=25, score=(train=0.973, test=0.928), total= 0.7s  
[CV] max\_depth=13, n\_estimators=25 ...................................  
[CV] max\_depth=13, n\_estimators=25, score=(train=0.973, test=0.920), total= 0.7s  
[CV] max\_depth=13, n\_estimators=25 ...................................  
[CV] max\_depth=13, n\_estimators=25, score=(train=0.973, test=0.918), total= 0.7s  
[CV] max\_depth=13, n\_estimators=50 ...................................  
[CV] max\_depth=13, n\_estimators=50, score=(train=0.973, test=0.921), total= 1.4s  
[CV] max\_depth=13, n\_estimators=50 ...................................  
[CV] max\_depth=13, n\_estimators=50, score=(train=0.973, test=0.931), total= 1.4s  
[CV] max\_depth=13, n\_estimators=50 ...................................  
[CV] max\_depth=13, n\_estimators=50, score=(train=0.972, test=0.931), total= 1.4s  
[CV] max\_depth=13, n\_estimators=50 ...................................  
[CV] max\_depth=13, n\_estimators=50, score=(train=0.974, test=0.920), total= 1.4s  
[CV] max\_depth=13, n\_estimators=50 ...................................  
[CV] max\_depth=13, n\_estimators=50, score=(train=0.975, test=0.921), total= 1.4s  
[CV] max\_depth=13, n\_estimators=100 ..................................  
[CV] max\_depth=13, n\_estimators=100, score=(train=0.973, test=0.922), total= 2.7s  
[CV] max\_depth=13, n\_estimators=100 ..................................  
[CV] max\_depth=13, n\_estimators=100, score=(train=0.974, test=0.930), total= 2.7s  
[CV] max\_depth=13, n\_estimators=100 ..................................  
[CV] max\_depth=13, n\_estimators=100, score=(train=0.974, test=0.931), total= 2.8s  
[CV] max\_depth=13, n\_estimators=100 ..................................  
[CV] max\_depth=13, n\_estimators=100, score=(train=0.974, test=0.921), total= 2.7s  
[CV] max\_depth=13, n\_estimators=100 ..................................  
[CV] max\_depth=13, n\_estimators=100, score=(train=0.975, test=0.921), total= 2.8s  
[CV] max\_depth=14, n\_estimators=1 ....................................  
[CV] max\_depth=14, n\_estimators=1, score=(train=0.936, test=0.872), total= 0.0s  
[CV] max\_depth=14, n\_estimators=1 ....................................  
[CV] max\_depth=14, n\_estimators=1, score=(train=0.928, test=0.852), total= 0.0s  
[CV] max\_depth=14, n\_estimators=1 ....................................  
[CV] max\_depth=14, n\_estimators=1, score=(train=0.930, test=0.851), total= 0.0s  
[CV] max\_depth=14, n\_estimators=1 ....................................  
[CV] max\_depth=14, n\_estimators=1, score=(train=0.932, test=0.857), total= 0.0s  
[CV] max\_depth=14, n\_estimators=1 ....................................  
[CV] max\_depth=14, n\_estimators=1, score=(train=0.939, test=0.851), total= 0.0s  
[CV] max\_depth=14, n\_estimators=5 ....................................  
[CV] max\_depth=14, n\_estimators=5, score=(train=0.970, test=0.902), total= 0.1s  
[CV] max\_depth=14, n\_estimators=5 ....................................  
[CV] max\_depth=14, n\_estimators=5, score=(train=0.970, test=0.912), total= 0.2s  
[CV] max\_depth=14, n\_estimators=5 ....................................  
[CV] max\_depth=14, n\_estimators=5, score=(train=0.971, test=0.921), total= 0.1s  
[CV] max\_depth=14, n\_estimators=5 ....................................  
[CV] max\_depth=14, n\_estimators=5, score=(train=0.972, test=0.910), total= 0.1s  
[CV] max\_depth=14, n\_estimators=5 ....................................  
[CV] max\_depth=14, n\_estimators=5, score=(train=0.972, test=0.904), total= 0.1s  
[CV] max\_depth=14, n\_estimators=10 ...................................  
[CV] max\_depth=14, n\_estimators=10, score=(train=0.975, test=0.924), total= 0.3s  
[CV] max\_depth=14, n\_estimators=10 ...................................  
[CV] max\_depth=14, n\_estimators=10, score=(train=0.974, test=0.923), total= 0.3s  
[CV] max\_depth=14, n\_estimators=10 ...................................  
[CV] max\_depth=14, n\_estimators=10, score=(train=0.975, test=0.924), total= 0.3s  
[CV] max\_depth=14, n\_estimators=10 ...................................  
[CV] max\_depth=14, n\_estimators=10, score=(train=0.976, test=0.919), total= 0.3s  
[CV] max\_depth=14, n\_estimators=10 ...................................  
[CV] max\_depth=14, n\_estimators=10, score=(train=0.976, test=0.918), total= 0.3s  
[CV] max\_depth=14, n\_estimators=15 ...................................  
[CV] max\_depth=14, n\_estimators=15, score=(train=0.975, test=0.918), total= 0.4s  
[CV] max\_depth=14, n\_estimators=15 ...................................  
[CV] max\_depth=14, n\_estimators=15, score=(train=0.976, test=0.929), total= 0.4s  
[CV] max\_depth=14, n\_estimators=15 ...................................  
[CV] max\_depth=14, n\_estimators=15, score=(train=0.977, test=0.930), total= 0.5s  
[CV] max\_depth=14, n\_estimators=15 ...................................  
[CV] max\_depth=14, n\_estimators=15, score=(train=0.976, test=0.919), total= 0.4s  
[CV] max\_depth=14, n\_estimators=15 ...................................  
[CV] max\_depth=14, n\_estimators=15, score=(train=0.978, test=0.919), total= 0.4s  
[CV] max\_depth=14, n\_estimators=20 ...................................  
[CV] max\_depth=14, n\_estimators=20, score=(train=0.977, test=0.918), total= 0.6s  
[CV] max\_depth=14, n\_estimators=20 ...................................  
[CV] max\_depth=14, n\_estimators=20, score=(train=0.977, test=0.928), total= 0.6s  
[CV] max\_depth=14, n\_estimators=20 ...................................  
[CV] max\_depth=14, n\_estimators=20, score=(train=0.977, test=0.931), total= 0.6s  
[CV] max\_depth=14, n\_estimators=20 ...................................  
[CV] max\_depth=14, n\_estimators=20, score=(train=0.978, test=0.921), total= 0.6s  
[CV] max\_depth=14, n\_estimators=20 ...................................  
[CV] max\_depth=14, n\_estimators=20, score=(train=0.978, test=0.916), total= 0.6s  
[CV] max\_depth=14, n\_estimators=25 ...................................  
[CV] max\_depth=14, n\_estimators=25, score=(train=0.976, test=0.917), total= 0.7s  
[CV] max\_depth=14, n\_estimators=25 ...................................  
[CV] max\_depth=14, n\_estimators=25, score=(train=0.978, test=0.930), total= 0.8s  
[CV] max\_depth=14, n\_estimators=25 ...................................  
[CV] max\_depth=14, n\_estimators=25, score=(train=0.977, test=0.928), total= 0.7s  
[CV] max\_depth=14, n\_estimators=25 ...................................  
[CV] max\_depth=14, n\_estimators=25, score=(train=0.978, test=0.921), total= 0.7s  
[CV] max\_depth=14, n\_estimators=25 ...................................  
[CV] max\_depth=14, n\_estimators=25, score=(train=0.980, test=0.920), total= 0.7s  
[CV] max\_depth=14, n\_estimators=50 ...................................  
[CV] max\_depth=14, n\_estimators=50, score=(train=0.978, test=0.923), total= 1.6s  
[CV] max\_depth=14, n\_estimators=50 ...................................  
[CV] max\_depth=14, n\_estimators=50, score=(train=0.978, test=0.933), total= 1.7s  
[CV] max\_depth=14, n\_estimators=50 ...................................  
[CV] max\_depth=14, n\_estimators=50, score=(train=0.978, test=0.931), total= 1.7s  
[CV] max\_depth=14, n\_estimators=50 ...................................  
[CV] max\_depth=14, n\_estimators=50, score=(train=0.979, test=0.920), total= 1.8s  
[CV] max\_depth=14, n\_estimators=50 ...................................  
[CV] max\_depth=14, n\_estimators=50, score=(train=0.980, test=0.922), total= 1.7s  
[CV] max\_depth=14, n\_estimators=100 ..................................  
[CV] max\_depth=14, n\_estimators=100, score=(train=0.978, test=0.923), total= 3.4s  
[CV] max\_depth=14, n\_estimators=100 ..................................  
[CV] max\_depth=14, n\_estimators=100, score=(train=0.979, test=0.932), total= 2.9s  
[CV] max\_depth=14, n\_estimators=100 ..................................  
[CV] max\_depth=14, n\_estimators=100, score=(train=0.979, test=0.933), total= 2.8s  
[CV] max\_depth=14, n\_estimators=100 ..................................  
[CV] max\_depth=14, n\_estimators=100, score=(train=0.979, test=0.922), total= 2.9s  
[CV] max\_depth=14, n\_estimators=100 ..................................  
[CV] max\_depth=14, n\_estimators=100, score=(train=0.980, test=0.923), total= 3.2s  
[CV] max\_depth=15, n\_estimators=1 ....................................  
[CV] max\_depth=15, n\_estimators=1, score=(train=0.930, test=0.845), total= 0.0s  
[CV] max\_depth=15, n\_estimators=1 ....................................  
[CV] max\_depth=15, n\_estimators=1, score=(train=0.942, test=0.859), total= 0.0s  
[CV] max\_depth=15, n\_estimators=1 ....................................  
[CV] max\_depth=15, n\_estimators=1, score=(train=0.938, test=0.871), total= 0.0s  
[CV] max\_depth=15, n\_estimators=1 ....................................  
[CV] max\_depth=15, n\_estimators=1, score=(train=0.930, test=0.840), total= 0.1s  
[CV] max\_depth=15, n\_estimators=1 ....................................  
[CV] max\_depth=15, n\_estimators=1, score=(train=0.931, test=0.823), total= 0.0s  
[CV] max\_depth=15, n\_estimators=5 ....................................  
[CV] max\_depth=15, n\_estimators=5, score=(train=0.971, test=0.908), total= 0.2s  
[CV] max\_depth=15, n\_estimators=5 ....................................  
[CV] max\_depth=15, n\_estimators=5, score=(train=0.974, test=0.921), total= 0.2s  
[CV] max\_depth=15, n\_estimators=5 ....................................  
[CV] max\_depth=15, n\_estimators=5, score=(train=0.974, test=0.923), total= 0.2s  
[CV] max\_depth=15, n\_estimators=5 ....................................  
[CV] max\_depth=15, n\_estimators=5, score=(train=0.976, test=0.909), total= 0.2s  
[CV] max\_depth=15, n\_estimators=5 ....................................  
[CV] max\_depth=15, n\_estimators=5, score=(train=0.976, test=0.911), total= 0.2s  
[CV] max\_depth=15, n\_estimators=10 ...................................  
[CV] max\_depth=15, n\_estimators=10, score=(train=0.977, test=0.916), total= 0.4s  
[CV] max\_depth=15, n\_estimators=10 ...................................  
[CV] max\_depth=15, n\_estimators=10, score=(train=0.977, test=0.923), total= 0.4s  
[CV] max\_depth=15, n\_estimators=10 ...................................  
[CV] max\_depth=15, n\_estimators=10, score=(train=0.978, test=0.922), total= 0.4s  
[CV] max\_depth=15, n\_estimators=10 ...................................  
[CV] max\_depth=15, n\_estimators=10, score=(train=0.978, test=0.915), total= 0.4s  
[CV] max\_depth=15, n\_estimators=10 ...................................  
[CV] max\_depth=15, n\_estimators=10, score=(train=0.978, test=0.915), total= 0.4s  
[CV] max\_depth=15, n\_estimators=15 ...................................  
[CV] max\_depth=15, n\_estimators=15, score=(train=0.978, test=0.919), total= 0.5s  
[CV] max\_depth=15, n\_estimators=15 ...................................  
[CV] max\_depth=15, n\_estimators=15, score=(train=0.978, test=0.925), total= 0.5s  
[CV] max\_depth=15, n\_estimators=15 ...................................  
[CV] max\_depth=15, n\_estimators=15, score=(train=0.980, test=0.928), total= 0.5s  
[CV] max\_depth=15, n\_estimators=15 ...................................  
[CV] max\_depth=15, n\_estimators=15, score=(train=0.981, test=0.918), total= 0.5s  
[CV] max\_depth=15, n\_estimators=15 ...................................  
[CV] max\_depth=15, n\_estimators=15, score=(train=0.981, test=0.917), total= 0.5s  
[CV] max\_depth=15, n\_estimators=20 ...................................  
[CV] max\_depth=15, n\_estimators=20, score=(train=0.980, test=0.920), total= 0.7s  
[CV] max\_depth=15, n\_estimators=20 ...................................  
[CV] max\_depth=15, n\_estimators=20, score=(train=0.980, test=0.933), total= 0.7s  
[CV] max\_depth=15, n\_estimators=20 ...................................  
[CV] max\_depth=15, n\_estimators=20, score=(train=0.980, test=0.932), total= 0.7s  
[CV] max\_depth=15, n\_estimators=20 ...................................  
[CV] max\_depth=15, n\_estimators=20, score=(train=0.982, test=0.922), total= 0.7s  
[CV] max\_depth=15, n\_estimators=20 ...................................  
[CV] max\_depth=15, n\_estimators=20, score=(train=0.981, test=0.920), total= 0.7s  
[CV] max\_depth=15, n\_estimators=25 ...................................  
[CV] max\_depth=15, n\_estimators=25, score=(train=0.981, test=0.921), total= 0.9s  
[CV] max\_depth=15, n\_estimators=25 ...................................  
[CV] max\_depth=15, n\_estimators=25, score=(train=0.981, test=0.933), total= 0.9s  
[CV] max\_depth=15, n\_estimators=25 ...................................  
[CV] max\_depth=15, n\_estimators=25, score=(train=0.981, test=0.930), total= 0.9s  
[CV] max\_depth=15, n\_estimators=25 ...................................  
[CV] max\_depth=15, n\_estimators=25, score=(train=0.982, test=0.922), total= 0.9s  
[CV] max\_depth=15, n\_estimators=25 ...................................  
[CV] max\_depth=15, n\_estimators=25, score=(train=0.983, test=0.925), total= 0.8s  
[CV] max\_depth=15, n\_estimators=50 ...................................  
[CV] max\_depth=15, n\_estimators=50, score=(train=0.982, test=0.921), total= 1.7s  
[CV] max\_depth=15, n\_estimators=50 ...................................  
[CV] max\_depth=15, n\_estimators=50, score=(train=0.982, test=0.932), total= 1.7s  
[CV] max\_depth=15, n\_estimators=50 ...................................  
[CV] max\_depth=15, n\_estimators=50, score=(train=0.982, test=0.933), total= 1.7s  
[CV] max\_depth=15, n\_estimators=50 ...................................  
[CV] max\_depth=15, n\_estimators=50, score=(train=0.983, test=0.924), total= 1.7s  
[CV] max\_depth=15, n\_estimators=50 ...................................  
[CV] max\_depth=15, n\_estimators=50, score=(train=0.983, test=0.923), total= 1.8s  
[CV] max\_depth=15, n\_estimators=100 ..................................  
[CV] max\_depth=15, n\_estimators=100, score=(train=0.982, test=0.922), total= 3.5s  
[CV] max\_depth=15, n\_estimators=100 ..................................  
[CV] max\_depth=15, n\_estimators=100, score=(train=0.982, test=0.935), total= 3.1s  
[CV] max\_depth=15, n\_estimators=100 ..................................  
[CV] max\_depth=15, n\_estimators=100, score=(train=0.983, test=0.932), total= 3.7s  
[CV] max\_depth=15, n\_estimators=100 ..................................  
[CV] max\_depth=15, n\_estimators=100, score=(train=0.983, test=0.923), total= 3.7s  
[CV] max\_depth=15, n\_estimators=100 ..................................  
[CV] max\_depth=15, n\_estimators=100, score=(train=0.984, test=0.922), total= 4.0s  
[CV] max\_depth=16, n\_estimators=1 ....................................  
[CV] max\_depth=16, n\_estimators=1, score=(train=0.945, test=0.842), total= 0.1s  
[CV] max\_depth=16, n\_estimators=1 ....................................  
[CV] max\_depth=16, n\_estimators=1, score=(train=0.938, test=0.843), total= 0.1s  
[CV] max\_depth=16, n\_estimators=1 ....................................  
[CV] max\_depth=16, n\_estimators=1, score=(train=0.931, test=0.841), total= 0.1s  
[CV] max\_depth=16, n\_estimators=1 ....................................  
[CV] max\_depth=16, n\_estimators=1, score=(train=0.936, test=0.841), total= 0.1s  
[CV] max\_depth=16, n\_estimators=1 ....................................  
[CV] max\_depth=16, n\_estimators=1, score=(train=0.944, test=0.839), total= 0.1s  
[CV] max\_depth=16, n\_estimators=5 ....................................  
[CV] max\_depth=16, n\_estimators=5, score=(train=0.974, test=0.905), total= 0.2s  
[CV] max\_depth=16, n\_estimators=5 ....................................  
[CV] max\_depth=16, n\_estimators=5, score=(train=0.977, test=0.919), total= 0.2s  
[CV] max\_depth=16, n\_estimators=5 ....................................  
[CV] max\_depth=16, n\_estimators=5, score=(train=0.975, test=0.920), total= 0.3s  
[CV] max\_depth=16, n\_estimators=5 ....................................  
[CV] max\_depth=16, n\_estimators=5, score=(train=0.977, test=0.908), total= 0.3s  
[CV] max\_depth=16, n\_estimators=5 ....................................  
[CV] max\_depth=16, n\_estimators=5, score=(train=0.978, test=0.907), total= 0.2s  
[CV] max\_depth=16, n\_estimators=10 ...................................  
[CV] max\_depth=16, n\_estimators=10, score=(train=0.981, test=0.917), total= 0.4s  
[CV] max\_depth=16, n\_estimators=10 ...................................  
[CV] max\_depth=16, n\_estimators=10, score=(train=0.980, test=0.919), total= 0.4s  
[CV] max\_depth=16, n\_estimators=10 ...................................  
[CV] max\_depth=16, n\_estimators=10, score=(train=0.980, test=0.930), total= 0.4s  
[CV] max\_depth=16, n\_estimators=10 ...................................  
[CV] max\_depth=16, n\_estimators=10, score=(train=0.982, test=0.918), total= 0.4s  
[CV] max\_depth=16, n\_estimators=10 ...................................  
[CV] max\_depth=16, n\_estimators=10, score=(train=0.983, test=0.914), total= 0.4s  
[CV] max\_depth=16, n\_estimators=15 ...................................  
[CV] max\_depth=16, n\_estimators=15, score=(train=0.982, test=0.923), total= 0.6s  
[CV] max\_depth=16, n\_estimators=15 ...................................  
[CV] max\_depth=16, n\_estimators=15, score=(train=0.982, test=0.931), total= 0.6s  
[CV] max\_depth=16, n\_estimators=15 ...................................  
[CV] max\_depth=16, n\_estimators=15, score=(train=0.983, test=0.936), total= 0.6s  
[CV] max\_depth=16, n\_estimators=15 ...................................  
[CV] max\_depth=16, n\_estimators=15, score=(train=0.983, test=0.917), total= 0.6s  
[CV] max\_depth=16, n\_estimators=15 ...................................  
[CV] max\_depth=16, n\_estimators=15, score=(train=0.983, test=0.921), total= 0.6s  
[CV] max\_depth=16, n\_estimators=20 ...................................  
[CV] max\_depth=16, n\_estimators=20, score=(train=0.983, test=0.920), total= 0.8s  
[CV] max\_depth=16, n\_estimators=20 ...................................  
[CV] max\_depth=16, n\_estimators=20, score=(train=0.983, test=0.930), total= 0.7s  
[CV] max\_depth=16, n\_estimators=20 ...................................  
[CV] max\_depth=16, n\_estimators=20, score=(train=0.984, test=0.928), total= 0.7s  
[CV] max\_depth=16, n\_estimators=20 ...................................  
[CV] max\_depth=16, n\_estimators=20, score=(train=0.983, test=0.917), total= 0.7s  
[CV] max\_depth=16, n\_estimators=20 ...................................  
[CV] max\_depth=16, n\_estimators=20, score=(train=0.984, test=0.922), total= 0.7s  
[CV] max\_depth=16, n\_estimators=25 ...................................  
[CV] max\_depth=16, n\_estimators=25, score=(train=0.984, test=0.921), total= 0.9s  
[CV] max\_depth=16, n\_estimators=25 ...................................  
[CV] max\_depth=16, n\_estimators=25, score=(train=0.985, test=0.931), total= 0.9s  
[CV] max\_depth=16, n\_estimators=25 ...................................  
[CV] max\_depth=16, n\_estimators=25, score=(train=0.984, test=0.933), total= 1.0s  
[CV] max\_depth=16, n\_estimators=25 ...................................  
[CV] max\_depth=16, n\_estimators=25, score=(train=0.984, test=0.921), total= 1.0s  
[CV] max\_depth=16, n\_estimators=25 ...................................  
[CV] max\_depth=16, n\_estimators=25, score=(train=0.985, test=0.923), total= 1.2s  
[CV] max\_depth=16, n\_estimators=50 ...................................  
[CV] max\_depth=16, n\_estimators=50, score=(train=0.984, test=0.923), total= 1.9s  
[CV] max\_depth=16, n\_estimators=50 ...................................  
[CV] max\_depth=16, n\_estimators=50, score=(train=0.985, test=0.934), total= 1.8s  
[CV] max\_depth=16, n\_estimators=50 ...................................  
[CV] max\_depth=16, n\_estimators=50, score=(train=0.985, test=0.933), total= 1.8s  
[CV] max\_depth=16, n\_estimators=50 ...................................  
[CV] max\_depth=16, n\_estimators=50, score=(train=0.985, test=0.923), total= 2.0s  
[CV] max\_depth=16, n\_estimators=50 ...................................  
[CV] max\_depth=16, n\_estimators=50, score=(train=0.986, test=0.924), total= 2.1s  
[CV] max\_depth=16, n\_estimators=100 ..................................  
[CV] max\_depth=16, n\_estimators=100, score=(train=0.985, test=0.925), total= 4.2s  
[CV] max\_depth=16, n\_estimators=100 ..................................  
[CV] max\_depth=16, n\_estimators=100, score=(train=0.985, test=0.935), total= 3.8s  
[CV] max\_depth=16, n\_estimators=100 ..................................  
[CV] max\_depth=16, n\_estimators=100, score=(train=0.985, test=0.935), total= 3.6s  
[CV] max\_depth=16, n\_estimators=100 ..................................  
[CV] max\_depth=16, n\_estimators=100, score=(train=0.985, test=0.925), total= 3.5s  
[CV] max\_depth=16, n\_estimators=100 ..................................  
[CV] max\_depth=16, n\_estimators=100, score=(train=0.986, test=0.925), total= 3.7s  
[CV] max\_depth=17, n\_estimators=1 ....................................  
[CV] max\_depth=17, n\_estimators=1, score=(train=0.939, test=0.822), total= 0.1s  
[CV] max\_depth=17, n\_estimators=1 ....................................  
[CV] max\_depth=17, n\_estimators=1, score=(train=0.929, test=0.854), total= 0.1s  
[CV] max\_depth=17, n\_estimators=1 ....................................  
[CV] max\_depth=17, n\_estimators=1, score=(train=0.936, test=0.854), total= 0.0s  
[CV] max\_depth=17, n\_estimators=1 ....................................  
[CV] max\_depth=17, n\_estimators=1, score=(train=0.939, test=0.846), total= 0.0s  
[CV] max\_depth=17, n\_estimators=1 ....................................  
[CV] max\_depth=17, n\_estimators=1, score=(train=0.949, test=0.846), total= 0.0s  
[CV] max\_depth=17, n\_estimators=5 ....................................  
[CV] max\_depth=17, n\_estimators=5, score=(train=0.977, test=0.909), total= 0.2s  
[CV] max\_depth=17, n\_estimators=5 ....................................  
[CV] max\_depth=17, n\_estimators=5, score=(train=0.976, test=0.917), total= 0.2s  
[CV] max\_depth=17, n\_estimators=5 ....................................  
[CV] max\_depth=17, n\_estimators=5, score=(train=0.978, test=0.920), total= 0.2s  
[CV] max\_depth=17, n\_estimators=5 ....................................  
[CV] max\_depth=17, n\_estimators=5, score=(train=0.978, test=0.904), total= 0.2s  
[CV] max\_depth=17, n\_estimators=5 ....................................  
[CV] max\_depth=17, n\_estimators=5, score=(train=0.978, test=0.905), total= 0.2s  
[CV] max\_depth=17, n\_estimators=10 ...................................  
[CV] max\_depth=17, n\_estimators=10, score=(train=0.982, test=0.917), total= 0.4s  
[CV] max\_depth=17, n\_estimators=10 ...................................  
[CV] max\_depth=17, n\_estimators=10, score=(train=0.983, test=0.928), total= 0.4s  
[CV] max\_depth=17, n\_estimators=10 ...................................  
[CV] max\_depth=17, n\_estimators=10, score=(train=0.982, test=0.925), total= 0.6s  
[CV] max\_depth=17, n\_estimators=10 ...................................  
[CV] max\_depth=17, n\_estimators=10, score=(train=0.984, test=0.919), total= 0.7s  
[CV] max\_depth=17, n\_estimators=10 ...................................  
[CV] max\_depth=17, n\_estimators=10, score=(train=0.984, test=0.920), total= 0.6s  
[CV] max\_depth=17, n\_estimators=15 ...................................  
[CV] max\_depth=17, n\_estimators=15, score=(train=0.984, test=0.917), total= 0.9s  
[CV] max\_depth=17, n\_estimators=15 ...................................  
[CV] max\_depth=17, n\_estimators=15, score=(train=0.984, test=0.930), total= 0.9s  
[CV] max\_depth=17, n\_estimators=15 ...................................  
[CV] max\_depth=17, n\_estimators=15, score=(train=0.984, test=0.929), total= 0.6s  
[CV] max\_depth=17, n\_estimators=15 ...................................  
[CV] max\_depth=17, n\_estimators=15, score=(train=0.986, test=0.922), total= 0.6s  
[CV] max\_depth=17, n\_estimators=15 ...................................  
[CV] max\_depth=17, n\_estimators=15, score=(train=0.985, test=0.921), total= 0.6s  
[CV] max\_depth=17, n\_estimators=20 ...................................  
[CV] max\_depth=17, n\_estimators=20, score=(train=0.985, test=0.919), total= 0.8s  
[CV] max\_depth=17, n\_estimators=20 ...................................  
[CV] max\_depth=17, n\_estimators=20, score=(train=0.985, test=0.933), total= 0.7s  
[CV] max\_depth=17, n\_estimators=20 ...................................  
[CV] max\_depth=17, n\_estimators=20, score=(train=0.985, test=0.933), total= 0.8s  
[CV] max\_depth=17, n\_estimators=20 ...................................  
[CV] max\_depth=17, n\_estimators=20, score=(train=0.985, test=0.921), total= 0.7s  
[CV] max\_depth=17, n\_estimators=20 ...................................  
[CV] max\_depth=17, n\_estimators=20, score=(train=0.986, test=0.922), total= 0.7s  
[CV] max\_depth=17, n\_estimators=25 ...................................  
[CV] max\_depth=17, n\_estimators=25, score=(train=0.986, test=0.922), total= 0.9s  
[CV] max\_depth=17, n\_estimators=25 ...................................  
[CV] max\_depth=17, n\_estimators=25, score=(train=0.986, test=0.933), total= 0.9s  
[CV] max\_depth=17, n\_estimators=25 ...................................  
[CV] max\_depth=17, n\_estimators=25, score=(train=0.985, test=0.931), total= 0.9s  
[CV] max\_depth=17, n\_estimators=25 ...................................  
[CV] max\_depth=17, n\_estimators=25, score=(train=0.986, test=0.920), total= 0.9s  
[CV] max\_depth=17, n\_estimators=25 ...................................  
[CV] max\_depth=17, n\_estimators=25, score=(train=0.986, test=0.924), total= 1.0s  
[CV] max\_depth=17, n\_estimators=50 ...................................  
[CV] max\_depth=17, n\_estimators=50, score=(train=0.986, test=0.924), total= 2.0s  
[CV] max\_depth=17, n\_estimators=50 ...................................  
[CV] max\_depth=17, n\_estimators=50, score=(train=0.986, test=0.933), total= 2.0s  
[CV] max\_depth=17, n\_estimators=50 ...................................  
[CV] max\_depth=17, n\_estimators=50, score=(train=0.986, test=0.933), total= 1.9s  
[CV] max\_depth=17, n\_estimators=50 ...................................  
[CV] max\_depth=17, n\_estimators=50, score=(train=0.987, test=0.923), total= 1.9s  
[CV] max\_depth=17, n\_estimators=50 ...................................  
[CV] max\_depth=17, n\_estimators=50, score=(train=0.988, test=0.924), total= 1.9s  
[CV] max\_depth=17, n\_estimators=100 ..................................  
[CV] max\_depth=17, n\_estimators=100, score=(train=0.987, test=0.925), total= 3.7s  
[CV] max\_depth=17, n\_estimators=100 ..................................  
[CV] max\_depth=17, n\_estimators=100, score=(train=0.986, test=0.936), total= 3.7s  
[CV] max\_depth=17, n\_estimators=100 ..................................  
[CV] max\_depth=17, n\_estimators=100, score=(train=0.987, test=0.935), total= 3.7s  
[CV] max\_depth=17, n\_estimators=100 ..................................  
[CV] max\_depth=17, n\_estimators=100, score=(train=0.987, test=0.925), total= 3.8s  
[CV] max\_depth=17, n\_estimators=100 ..................................  
[CV] max\_depth=17, n\_estimators=100, score=(train=0.987, test=0.925), total= 3.7s  
[CV] max\_depth=18, n\_estimators=1 ....................................  
[CV] max\_depth=18, n\_estimators=1, score=(train=0.942, test=0.854), total= 0.0s  
[CV] max\_depth=18, n\_estimators=1 ....................................  
[CV] max\_depth=18, n\_estimators=1, score=(train=0.938, test=0.819), total= 0.1s  
[CV] max\_depth=18, n\_estimators=1 ....................................  
[CV] max\_depth=18, n\_estimators=1, score=(train=0.942, test=0.864), total= 0.0s  
[CV] max\_depth=18, n\_estimators=1 ....................................  
[CV] max\_depth=18, n\_estimators=1, score=(train=0.938, test=0.830), total= 0.0s  
[CV] max\_depth=18, n\_estimators=1 ....................................  
[CV] max\_depth=18, n\_estimators=1, score=(train=0.946, test=0.837), total= 0.0s  
[CV] max\_depth=18, n\_estimators=5 ....................................  
[CV] max\_depth=18, n\_estimators=5, score=(train=0.978, test=0.906), total= 0.2s  
[CV] max\_depth=18, n\_estimators=5 ....................................  
[CV] max\_depth=18, n\_estimators=5, score=(train=0.978, test=0.924), total= 0.2s  
[CV] max\_depth=18, n\_estimators=5 ....................................  
[CV] max\_depth=18, n\_estimators=5, score=(train=0.979, test=0.922), total= 0.2s  
[CV] max\_depth=18, n\_estimators=5 ....................................  
[CV] max\_depth=18, n\_estimators=5, score=(train=0.978, test=0.908), total= 0.2s  
[CV] max\_depth=18, n\_estimators=5 ....................................  
[CV] max\_depth=18, n\_estimators=5, score=(train=0.981, test=0.914), total= 0.2s  
[CV] max\_depth=18, n\_estimators=10 ...................................  
[CV] max\_depth=18, n\_estimators=10, score=(train=0.983, test=0.922), total= 0.4s  
[CV] max\_depth=18, n\_estimators=10 ...................................  
[CV] max\_depth=18, n\_estimators=10, score=(train=0.983, test=0.930), total= 0.4s  
[CV] max\_depth=18, n\_estimators=10 ...................................  
[CV] max\_depth=18, n\_estimators=10, score=(train=0.984, test=0.924), total= 0.4s  
[CV] max\_depth=18, n\_estimators=10 ...................................  
[CV] max\_depth=18, n\_estimators=10, score=(train=0.983, test=0.917), total= 0.6s  
[CV] max\_depth=18, n\_estimators=10 ...................................  
[CV] max\_depth=18, n\_estimators=10, score=(train=0.986, test=0.914), total= 0.5s  
[CV] max\_depth=18, n\_estimators=15 ...................................  
[CV] max\_depth=18, n\_estimators=15, score=(train=0.986, test=0.916), total= 0.8s  
[CV] max\_depth=18, n\_estimators=15 ...................................  
[CV] max\_depth=18, n\_estimators=15, score=(train=0.985, test=0.928), total= 0.9s  
[CV] max\_depth=18, n\_estimators=15 ...................................  
[CV] max\_depth=18, n\_estimators=15, score=(train=0.985, test=0.930), total= 0.7s  
[CV] max\_depth=18, n\_estimators=15 ...................................  
[CV] max\_depth=18, n\_estimators=15, score=(train=0.986, test=0.919), total= 0.6s  
[CV] max\_depth=18, n\_estimators=15 ...................................  
[CV] max\_depth=18, n\_estimators=15, score=(train=0.986, test=0.921), total= 0.6s  
[CV] max\_depth=18, n\_estimators=20 ...................................  
[CV] max\_depth=18, n\_estimators=20, score=(train=0.986, test=0.923), total= 0.8s  
[CV] max\_depth=18, n\_estimators=20 ...................................  
[CV] max\_depth=18, n\_estimators=20, score=(train=0.985, test=0.933), total= 0.8s  
[CV] max\_depth=18, n\_estimators=20 ...................................  
[CV] max\_depth=18, n\_estimators=20, score=(train=0.986, test=0.929), total= 0.8s  
[CV] max\_depth=18, n\_estimators=20 ...................................  
[CV] max\_depth=18, n\_estimators=20, score=(train=0.986, test=0.920), total= 0.8s  
[CV] max\_depth=18, n\_estimators=20 ...................................  
[CV] max\_depth=18, n\_estimators=20, score=(train=0.987, test=0.922), total= 0.8s  
[CV] max\_depth=18, n\_estimators=25 ...................................  
[CV] max\_depth=18, n\_estimators=25, score=(train=0.986, test=0.919), total= 1.0s  
[CV] max\_depth=18, n\_estimators=25 ...................................  
[CV] max\_depth=18, n\_estimators=25, score=(train=0.986, test=0.936), total= 1.0s  
[CV] max\_depth=18, n\_estimators=25 ...................................  
[CV] max\_depth=18, n\_estimators=25, score=(train=0.986, test=0.933), total= 1.0s  
[CV] max\_depth=18, n\_estimators=25 ...................................  
[CV] max\_depth=18, n\_estimators=25, score=(train=0.987, test=0.921), total= 1.0s  
[CV] max\_depth=18, n\_estimators=25 ...................................  
[CV] max\_depth=18, n\_estimators=25, score=(train=0.987, test=0.922), total= 1.1s  
[CV] max\_depth=18, n\_estimators=50 ...................................  
[CV] max\_depth=18, n\_estimators=50, score=(train=0.988, test=0.924), total= 1.9s  
[CV] max\_depth=18, n\_estimators=50 ...................................  
[CV] max\_depth=18, n\_estimators=50, score=(train=0.987, test=0.935), total= 1.9s  
[CV] max\_depth=18, n\_estimators=50 ...................................  
[CV] max\_depth=18, n\_estimators=50, score=(train=0.988, test=0.936), total= 2.0s  
[CV] max\_depth=18, n\_estimators=50 ...................................  
[CV] max\_depth=18, n\_estimators=50, score=(train=0.988, test=0.925), total= 1.9s  
[CV] max\_depth=18, n\_estimators=50 ...................................  
[CV] max\_depth=18, n\_estimators=50, score=(train=0.988, test=0.923), total= 1.9s  
[CV] max\_depth=18, n\_estimators=100 ..................................  
[CV] max\_depth=18, n\_estimators=100, score=(train=0.988, test=0.924), total= 4.0s  
[CV] max\_depth=18, n\_estimators=100 ..................................  
[CV] max\_depth=18, n\_estimators=100, score=(train=0.988, test=0.936), total= 3.9s  
[CV] max\_depth=18, n\_estimators=100 ..................................  
[CV] max\_depth=18, n\_estimators=100, score=(train=0.988, test=0.933), total= 3.8s  
[CV] max\_depth=18, n\_estimators=100 ..................................  
[CV] max\_depth=18, n\_estimators=100, score=(train=0.989, test=0.925), total= 3.9s  
[CV] max\_depth=18, n\_estimators=100 ..................................  
[CV] max\_depth=18, n\_estimators=100, score=(train=0.988, test=0.924), total= 4.0s  
[CV] max\_depth=19, n\_estimators=1 ....................................  
[CV] max\_depth=19, n\_estimators=1, score=(train=0.937, test=0.815), total= 0.1s  
[CV] max\_depth=19, n\_estimators=1 ....................................  
[CV] max\_depth=19, n\_estimators=1, score=(train=0.941, test=0.836), total= 0.1s  
[CV] max\_depth=19, n\_estimators=1 ....................................  
[CV] max\_depth=19, n\_estimators=1, score=(train=0.948, test=0.813), total= 0.1s  
[CV] max\_depth=19, n\_estimators=1 ....................................  
[CV] max\_depth=19, n\_estimators=1, score=(train=0.945, test=0.837), total= 0.1s  
[CV] max\_depth=19, n\_estimators=1 ....................................  
[CV] max\_depth=19, n\_estimators=1, score=(train=0.933, test=0.804), total= 0.1s  
[CV] max\_depth=19, n\_estimators=5 ....................................  
[CV] max\_depth=19, n\_estimators=5, score=(train=0.977, test=0.907), total= 0.2s  
[CV] max\_depth=19, n\_estimators=5 ....................................  
[CV] max\_depth=19, n\_estimators=5, score=(train=0.979, test=0.917), total= 0.2s  
[CV] max\_depth=19, n\_estimators=5 ....................................  
[CV] max\_depth=19, n\_estimators=5, score=(train=0.980, test=0.926), total= 0.2s  
[CV] max\_depth=19, n\_estimators=5 ....................................  
[CV] max\_depth=19, n\_estimators=5, score=(train=0.981, test=0.906), total= 0.2s  
[CV] max\_depth=19, n\_estimators=5 ....................................  
[CV] max\_depth=19, n\_estimators=5, score=(train=0.981, test=0.905), total= 0.2s  
[CV] max\_depth=19, n\_estimators=10 ...................................  
[CV] max\_depth=19, n\_estimators=10, score=(train=0.984, test=0.921), total= 0.4s  
[CV] max\_depth=19, n\_estimators=10 ...................................  
[CV] max\_depth=19, n\_estimators=10, score=(train=0.984, test=0.928), total= 0.4s  
[CV] max\_depth=19, n\_estimators=10 ...................................  
[CV] max\_depth=19, n\_estimators=10, score=(train=0.985, test=0.924), total= 0.4s  
[CV] max\_depth=19, n\_estimators=10 ...................................  
[CV] max\_depth=19, n\_estimators=10, score=(train=0.985, test=0.918), total= 0.4s  
[CV] max\_depth=19, n\_estimators=10 ...................................  
[CV] max\_depth=19, n\_estimators=10, score=(train=0.985, test=0.918), total= 0.4s  
[CV] max\_depth=19, n\_estimators=15 ...................................  
[CV] max\_depth=19, n\_estimators=15, score=(train=0.985, test=0.922), total= 0.6s  
[CV] max\_depth=19, n\_estimators=15 ...................................  
[CV] max\_depth=19, n\_estimators=15, score=(train=0.986, test=0.936), total= 0.6s  
[CV] max\_depth=19, n\_estimators=15 ...................................  
[CV] max\_depth=19, n\_estimators=15, score=(train=0.986, test=0.929), total= 0.6s  
[CV] max\_depth=19, n\_estimators=15 ...................................  
[CV] max\_depth=19, n\_estimators=15, score=(train=0.987, test=0.922), total= 0.6s  
[CV] max\_depth=19, n\_estimators=15 ...................................  
[CV] max\_depth=19, n\_estimators=15, score=(train=0.987, test=0.921), total= 0.6s  
[CV] max\_depth=19, n\_estimators=20 ...................................  
[CV] max\_depth=19, n\_estimators=20, score=(train=0.987, test=0.922), total= 0.8s  
[CV] max\_depth=19, n\_estimators=20 ...................................  
[CV] max\_depth=19, n\_estimators=20, score=(train=0.986, test=0.936), total= 0.8s  
[CV] max\_depth=19, n\_estimators=20 ...................................  
[CV] max\_depth=19, n\_estimators=20, score=(train=0.987, test=0.933), total= 0.8s  
[CV] max\_depth=19, n\_estimators=20 ...................................  
[CV] max\_depth=19, n\_estimators=20, score=(train=0.987, test=0.921), total= 0.8s  
[CV] max\_depth=19, n\_estimators=20 ...................................  
[CV] max\_depth=19, n\_estimators=20, score=(train=0.988, test=0.922), total= 0.8s  
[CV] max\_depth=19, n\_estimators=25 ...................................  
[CV] max\_depth=19, n\_estimators=25, score=(train=0.987, test=0.922), total= 1.0s  
[CV] max\_depth=19, n\_estimators=25 ...................................  
[CV] max\_depth=19, n\_estimators=25, score=(train=0.987, test=0.931), total= 1.1s  
[CV] max\_depth=19, n\_estimators=25 ...................................  
[CV] max\_depth=19, n\_estimators=25, score=(train=0.988, test=0.933), total= 1.0s  
[CV] max\_depth=19, n\_estimators=25 ...................................  
[CV] max\_depth=19, n\_estimators=25, score=(train=0.988, test=0.925), total= 1.0s  
[CV] max\_depth=19, n\_estimators=25 ...................................  
[CV] max\_depth=19, n\_estimators=25, score=(train=0.988, test=0.920), total= 1.0s  
[CV] max\_depth=19, n\_estimators=50 ...................................  
[CV] max\_depth=19, n\_estimators=50, score=(train=0.988, test=0.924), total= 2.1s  
[CV] max\_depth=19, n\_estimators=50 ...................................  
[CV] max\_depth=19, n\_estimators=50, score=(train=0.988, test=0.936), total= 2.0s  
[CV] max\_depth=19, n\_estimators=50 ...................................  
[CV] max\_depth=19, n\_estimators=50, score=(train=0.988, test=0.935), total= 2.1s  
[CV] max\_depth=19, n\_estimators=50 ...................................  
[CV] max\_depth=19, n\_estimators=50, score=(train=0.989, test=0.924), total= 2.0s  
[CV] max\_depth=19, n\_estimators=50 ...................................  
[CV] max\_depth=19, n\_estimators=50, score=(train=0.989, test=0.925), total= 1.9s  
[CV] max\_depth=19, n\_estimators=100 ..................................  
[CV] max\_depth=19, n\_estimators=100, score=(train=0.989, test=0.924), total= 3.8s  
[CV] max\_depth=19, n\_estimators=100 ..................................  
[CV] max\_depth=19, n\_estimators=100, score=(train=0.989, test=0.935), total= 3.4s  
[CV] max\_depth=19, n\_estimators=100 ..................................  
[CV] max\_depth=19, n\_estimators=100, score=(train=0.989, test=0.934), total= 3.9s  
[CV] max\_depth=19, n\_estimators=100 ..................................  
[CV] max\_depth=19, n\_estimators=100, score=(train=0.989, test=0.926), total= 3.8s  
[CV] max\_depth=19, n\_estimators=100 ..................................  
[CV] max\_depth=19, n\_estimators=100, score=(train=0.989, test=0.925), total= 3.7s  
[CV] max\_depth=20, n\_estimators=1 ....................................  
[CV] max\_depth=20, n\_estimators=1, score=(train=0.942, test=0.842), total= 0.1s  
[CV] max\_depth=20, n\_estimators=1 ....................................  
[CV] max\_depth=20, n\_estimators=1, score=(train=0.934, test=0.824), total= 0.0s  
[CV] max\_depth=20, n\_estimators=1 ....................................  
[CV] max\_depth=20, n\_estimators=1, score=(train=0.936, test=0.839), total= 0.0s  
[CV] max\_depth=20, n\_estimators=1 ....................................  
[CV] max\_depth=20, n\_estimators=1, score=(train=0.943, test=0.845), total= 0.1s  
[CV] max\_depth=20, n\_estimators=1 ....................................  
[CV] max\_depth=20, n\_estimators=1, score=(train=0.947, test=0.842), total= 0.1s  
[CV] max\_depth=20, n\_estimators=5 ....................................  
[CV] max\_depth=20, n\_estimators=5, score=(train=0.980, test=0.911), total= 0.2s  
[CV] max\_depth=20, n\_estimators=5 ....................................  
[CV] max\_depth=20, n\_estimators=5, score=(train=0.979, test=0.919), total= 0.2s  
[CV] max\_depth=20, n\_estimators=5 ....................................  
[CV] max\_depth=20, n\_estimators=5, score=(train=0.979, test=0.919), total= 0.2s  
[CV] max\_depth=20, n\_estimators=5 ....................................  
[CV] max\_depth=20, n\_estimators=5, score=(train=0.981, test=0.906), total= 0.2s  
[CV] max\_depth=20, n\_estimators=5 ....................................  
[CV] max\_depth=20, n\_estimators=5, score=(train=0.981, test=0.905), total= 0.2s  
[CV] max\_depth=20, n\_estimators=10 ...................................  
[CV] max\_depth=20, n\_estimators=10, score=(train=0.985, test=0.915), total= 0.4s  
[CV] max\_depth=20, n\_estimators=10 ...................................  
[CV] max\_depth=20, n\_estimators=10, score=(train=0.984, test=0.928), total= 0.4s  
[CV] max\_depth=20, n\_estimators=10 ...................................  
[CV] max\_depth=20, n\_estimators=10, score=(train=0.985, test=0.924), total= 0.4s  
[CV] max\_depth=20, n\_estimators=10 ...................................  
[CV] max\_depth=20, n\_estimators=10, score=(train=0.986, test=0.916), total= 0.4s  
[CV] max\_depth=20, n\_estimators=10 ...................................  
[CV] max\_depth=20, n\_estimators=10, score=(train=0.986, test=0.913), total= 0.4s  
[CV] max\_depth=20, n\_estimators=15 ...................................  
[CV] max\_depth=20, n\_estimators=15, score=(train=0.986, test=0.923), total= 0.6s  
[CV] max\_depth=20, n\_estimators=15 ...................................  
[CV] max\_depth=20, n\_estimators=15, score=(train=0.986, test=0.933), total= 0.6s  
[CV] max\_depth=20, n\_estimators=15 ...................................  
[CV] max\_depth=20, n\_estimators=15, score=(train=0.987, test=0.926), total= 0.6s  
[CV] max\_depth=20, n\_estimators=15 ...................................  
[CV] max\_depth=20, n\_estimators=15, score=(train=0.988, test=0.919), total= 0.6s  
[CV] max\_depth=20, n\_estimators=15 ...................................  
[CV] max\_depth=20, n\_estimators=15, score=(train=0.987, test=0.917), total= 0.6s  
[CV] max\_depth=20, n\_estimators=20 ...................................  
[CV] max\_depth=20, n\_estimators=20, score=(train=0.987, test=0.922), total= 0.8s  
[CV] max\_depth=20, n\_estimators=20 ...................................  
[CV] max\_depth=20, n\_estimators=20, score=(train=0.988, test=0.933), total= 0.8s  
[CV] max\_depth=20, n\_estimators=20 ...................................  
[CV] max\_depth=20, n\_estimators=20, score=(train=0.987, test=0.929), total= 0.8s  
[CV] max\_depth=20, n\_estimators=20 ...................................  
[CV] max\_depth=20, n\_estimators=20, score=(train=0.989, test=0.923), total= 0.8s  
[CV] max\_depth=20, n\_estimators=20 ...................................  
[CV] max\_depth=20, n\_estimators=20, score=(train=0.987, test=0.924), total= 0.8s  
[CV] max\_depth=20, n\_estimators=25 ...................................  
[CV] max\_depth=20, n\_estimators=25, score=(train=0.988, test=0.922), total= 1.0s  
[CV] max\_depth=20, n\_estimators=25 ...................................  
[CV] max\_depth=20, n\_estimators=25, score=(train=0.988, test=0.937), total= 1.0s  
[CV] max\_depth=20, n\_estimators=25 ...................................  
[CV] max\_depth=20, n\_estimators=25, score=(train=0.988, test=0.934), total= 1.0s  
[CV] max\_depth=20, n\_estimators=25 ...................................  
[CV] max\_depth=20, n\_estimators=25, score=(train=0.988, test=0.923), total= 0.9s  
[CV] max\_depth=20, n\_estimators=25 ...................................  
[CV] max\_depth=20, n\_estimators=25, score=(train=0.989, test=0.920), total= 1.0s  
[CV] max\_depth=20, n\_estimators=50 ...................................  
[CV] max\_depth=20, n\_estimators=50, score=(train=0.988, test=0.926), total= 1.9s  
[CV] max\_depth=20, n\_estimators=50 ...................................  
[CV] max\_depth=20, n\_estimators=50, score=(train=0.989, test=0.935), total= 2.0s  
[CV] max\_depth=20, n\_estimators=50 ...................................  
[CV] max\_depth=20, n\_estimators=50, score=(train=0.989, test=0.935), total= 1.9s  
[CV] max\_depth=20, n\_estimators=50 ...................................  
[CV] max\_depth=20, n\_estimators=50, score=(train=0.989, test=0.923), total= 1.9s  
[CV] max\_depth=20, n\_estimators=50 ...................................  
[CV] max\_depth=20, n\_estimators=50, score=(train=0.989, test=0.924), total= 2.0s  
[CV] max\_depth=20, n\_estimators=100 ..................................  
[CV] max\_depth=20, n\_estimators=100, score=(train=0.989, test=0.926), total= 4.0s  
[CV] max\_depth=20, n\_estimators=100 ..................................  
[CV] max\_depth=20, n\_estimators=100, score=(train=0.989, test=0.935), total= 4.0s  
[CV] max\_depth=20, n\_estimators=100 ..................................  
[CV] max\_depth=20, n\_estimators=100, score=(train=0.990, test=0.934), total= 4.0s  
[CV] max\_depth=20, n\_estimators=100 ..................................  
[CV] max\_depth=20, n\_estimators=100, score=(train=0.990, test=0.925), total= 3.9s  
[CV] max\_depth=20, n\_estimators=100 ..................................  
[CV] max\_depth=20, n\_estimators=100, score=(train=0.990, test=0.925), total= 4.2s

[Parallel(n\_jobs=1)]: Done 800 out of 800 | elapsed: 9.5min finished

RandomForestRegressor(max\_depth=20)

0.9292056744107098

Out[45]:

0.6451499905429483

In [ ]:

parameters\_grid = {  
 'max\_depth': range(1, 21),  
 'n\_estimators': [1, 5, 10, 15, 20, 25, 50, 100]  
}  
model = RandomForestRegressor()  
model\_gs\_casual = find\_best\_regressor(model, parameters\_grid, data\_train, data\_casual\_train)  
model\_gs\_registered = find\_best\_regressor(model, parameters\_grid, data\_train, data\_registered\_train)

In [48]:

display(f'Casual model validation score: **{**model\_gs\_casual.best\_score\_**}**')  
display(f'Registered model validation score: **{**model\_gs\_registered.best\_score\_**}**')  
y\_pred1\_casual = model\_gs\_casual.predict(data\_test)  
y\_pred1\_registered = model\_gs\_registered.predict(data\_test)  
display(f'Casual prediction on the next year score: **{**r2\_score(data\_casual\_test, y\_pred1\_casual)**}**')  
display(f'Registered prediction on the next year score: **{**r2\_score(data\_registered\_test, y\_pred1\_registered)**}**')  
display(f'Total prediction on the next year score: **{**r2\_score(data\_cnt\_test, y\_pred1\_casual+y\_pred1\_registered)**}**')

'Casual model validation score: 0.9033729249704994'

'Registered model validation score: 0.9345469294967094'

'Casual prediction on the next year score: 0.7397801322126231'

'Registered prediction on the next year score: 0.6286181918015915'

'Total prediction on the next year score: 0.6490028056615986'

Results using cnt as target - 0.645 for the second year. Using sum of casual and registered targets - 0.649. So, the second model is slightly better, but the difference seems not significant and may be qualified as random.

**AdaBoost**[**¶**](#4d34og8)

In [92]:

parameters\_grid = {  
 'base\_estimator\_\_max\_depth': range(1, 16),  
 'n\_estimators': [1, 5, 10, 15, 20, 25, 50, 100]  
}  
model = AdaBoostRegressor(base\_estimator=DecisionTreeRegressor())  
find\_best\_regressor(model, parameters\_grid)

Fitting 5 folds for each of 120 candidates, totalling 600 fits  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=1, score=(train=0.305, test=0.297), total= 0.0s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=1, score=(train=0.299, test=0.319), total= 0.0s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=1, score=(train=0.309, test=0.279), total= 0.0s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=1, score=(train=0.301, test=0.311), total= 0.0s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=1, score=(train=0.302, test=0.309), total= 0.0s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=5 .....................

[Parallel(n\_jobs=1)]: Using backend SequentialBackend with 1 concurrent workers.  
[Parallel(n\_jobs=1)]: Done 1 out of 1 | elapsed: 0.0s remaining: 0.0s  
[Parallel(n\_jobs=1)]: Done 2 out of 2 | elapsed: 0.1s remaining: 0.0s  
[Parallel(n\_jobs=1)]: Done 3 out of 3 | elapsed: 0.1s remaining: 0.0s

[CV] base\_estimator\_\_max\_depth=1, n\_estimators=5, score=(train=0.343, test=0.340), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=5, score=(train=0.340, test=0.362), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=5, score=(train=0.349, test=0.318), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=5, score=(train=0.341, test=0.344), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=5, score=(train=0.335, test=0.343), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=10, score=(train=0.395, test=0.396), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=10, score=(train=0.406, test=0.417), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=10, score=(train=0.411, test=0.391), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=10, score=(train=0.406, test=0.402), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=10, score=(train=0.401, test=0.413), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=15, score=(train=0.386, test=0.386), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=15, score=(train=0.407, test=0.414), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=15, score=(train=0.413, test=0.395), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=15, score=(train=0.407, test=0.403), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=15, score=(train=0.402, test=0.418), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=20, score=(train=0.404, test=0.406), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=20, score=(train=0.409, test=0.415), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=20, score=(train=0.407, test=0.388), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=20, score=(train=0.403, test=0.400), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=20, score=(train=0.403, test=0.418), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=25, score=(train=0.403, test=0.405), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=25, score=(train=0.405, test=0.412), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=25, score=(train=0.408, test=0.389), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=25, score=(train=0.404, test=0.400), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=25, score=(train=0.402, test=0.418), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=50, score=(train=0.395, test=0.396), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=50, score=(train=0.403, test=0.411), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=50, score=(train=0.411, test=0.390), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=50, score=(train=0.406, test=0.402), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=50, score=(train=0.408, test=0.420), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=100, score=(train=0.399, test=0.402), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=100, score=(train=0.349, test=0.370), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=100, score=(train=0.405, test=0.384), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=100, score=(train=0.411, test=0.407), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=1, n\_estimators=100, score=(train=0.406, test=0.418), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=1, score=(train=0.411, test=0.404), total= 0.0s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=1, score=(train=0.409, test=0.422), total= 0.0s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=1, score=(train=0.416, test=0.394), total= 0.0s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=1, score=(train=0.411, test=0.412), total= 0.0s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=1, score=(train=0.410, test=0.418), total= 0.0s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=5, score=(train=0.463, test=0.467), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=5, score=(train=0.459, test=0.473), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=5, score=(train=0.454, test=0.438), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=5, score=(train=0.500, test=0.504), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=5, score=(train=0.495, test=0.491), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=10, score=(train=0.520, test=0.520), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=10, score=(train=0.520, test=0.524), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=10, score=(train=0.515, test=0.493), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=10, score=(train=0.500, test=0.498), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=10, score=(train=0.527, test=0.524), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=15, score=(train=0.506, test=0.518), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=15, score=(train=0.514, test=0.516), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=15, score=(train=0.556, test=0.538), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=15, score=(train=0.531, test=0.524), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=15, score=(train=0.550, test=0.552), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=20, score=(train=0.563, test=0.573), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=20, score=(train=0.542, test=0.553), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=20, score=(train=0.574, test=0.550), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=20, score=(train=0.542, test=0.534), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=20, score=(train=0.549, test=0.544), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=25, score=(train=0.535, test=0.548), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=25, score=(train=0.540, test=0.541), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=25, score=(train=0.544, test=0.527), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=25, score=(train=0.544, test=0.539), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=25, score=(train=0.541, test=0.540), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=50, score=(train=0.475, test=0.479), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=50, score=(train=0.440, test=0.436), total= 1.0s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=50, score=(train=0.453, test=0.445), total= 1.0s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=50, score=(train=0.527, test=0.518), total= 0.7s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=50, score=(train=0.480, test=0.491), total= 0.9s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=100, score=(train=0.545, test=0.549), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=100, score=(train=0.513, test=0.510), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=100, score=(train=0.404, test=0.395), total= 1.2s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=100, score=(train=0.546, test=0.539), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=2, n\_estimators=100, score=(train=0.512, test=0.511), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=1, score=(train=0.491, test=0.499), total= 0.0s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=1, score=(train=0.490, test=0.482), total= 0.0s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=1, score=(train=0.494, test=0.486), total= 0.0s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=1, score=(train=0.491, test=0.498), total= 0.0s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=1, score=(train=0.495, test=0.486), total= 0.0s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=5, score=(train=0.584, test=0.597), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=5, score=(train=0.587, test=0.582), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=5, score=(train=0.586, test=0.572), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=5, score=(train=0.577, test=0.581), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=5, score=(train=0.565, test=0.564), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=10, score=(train=0.617, test=0.624), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=10, score=(train=0.624, test=0.625), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=10, score=(train=0.645, test=0.630), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=10, score=(train=0.630, test=0.631), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=10, score=(train=0.620, test=0.620), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=15, score=(train=0.625, test=0.626), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=15, score=(train=0.666, test=0.661), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=15, score=(train=0.655, test=0.635), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=15, score=(train=0.673, test=0.662), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=15, score=(train=0.628, test=0.625), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=20, score=(train=0.679, test=0.675), total= 0.7s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=20, score=(train=0.676, test=0.679), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=20, score=(train=0.665, test=0.655), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=20, score=(train=0.672, test=0.668), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=20, score=(train=0.647, test=0.653), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=25, score=(train=0.670, test=0.668), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=25, score=(train=0.654, test=0.647), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=25, score=(train=0.684, test=0.678), total= 0.7s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=25, score=(train=0.664, test=0.651), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=25, score=(train=0.665, test=0.675), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=50, score=(train=0.661, test=0.659), total= 1.1s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=50, score=(train=0.627, test=0.623), total= 1.2s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=50, score=(train=0.619, test=0.614), total= 1.2s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=50, score=(train=0.704, test=0.692), total= 1.2s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=50, score=(train=0.632, test=0.636), total= 1.2s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=100, score=(train=0.628, test=0.624), total= 1.9s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=100, score=(train=0.642, test=0.637), total= 1.1s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=100, score=(train=0.640, test=0.637), total= 1.5s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=100, score=(train=0.653, test=0.637), total= 2.4s  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=3, n\_estimators=100, score=(train=0.593, test=0.597), total= 1.1s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=1, score=(train=0.571, test=0.568), total= 0.0s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=1, score=(train=0.570, test=0.566), total= 0.0s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=1, score=(train=0.572, test=0.559), total= 0.0s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=1, score=(train=0.567, test=0.578), total= 0.0s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=1, score=(train=0.569, test=0.569), total= 0.0s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=5, score=(train=0.664, test=0.669), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=5, score=(train=0.662, test=0.654), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=5, score=(train=0.668, test=0.660), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=5, score=(train=0.676, test=0.674), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=5, score=(train=0.667, test=0.671), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=10, score=(train=0.694, test=0.700), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=10, score=(train=0.679, test=0.681), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=10, score=(train=0.698, test=0.683), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=10, score=(train=0.713, test=0.711), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=10, score=(train=0.700, test=0.703), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=15, score=(train=0.704, test=0.705), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=15, score=(train=0.737, test=0.730), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=15, score=(train=0.725, test=0.717), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=15, score=(train=0.701, test=0.697), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=15, score=(train=0.713, test=0.714), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=20, score=(train=0.733, test=0.727), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=20, score=(train=0.738, test=0.732), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=20, score=(train=0.720, test=0.712), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=20, score=(train=0.715, test=0.706), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=20, score=(train=0.705, test=0.706), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=25, score=(train=0.734, test=0.730), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=25, score=(train=0.746, test=0.741), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=25, score=(train=0.723, test=0.714), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=25, score=(train=0.751, test=0.744), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=25, score=(train=0.748, test=0.753), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=50, score=(train=0.725, test=0.719), total= 1.5s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=50, score=(train=0.717, test=0.709), total= 1.6s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=50, score=(train=0.710, test=0.695), total= 1.5s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=50, score=(train=0.735, test=0.721), total= 1.5s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=50, score=(train=0.736, test=0.742), total= 1.5s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=100, score=(train=0.747, test=0.736), total= 2.8s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=100, score=(train=0.737, test=0.723), total= 2.7s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=100, score=(train=0.748, test=0.737), total= 2.8s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=100, score=(train=0.743, test=0.730), total= 2.8s  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=4, n\_estimators=100, score=(train=0.752, test=0.759), total= 3.2s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=1, score=(train=0.645, test=0.647), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=1, score=(train=0.650, test=0.640), total= 0.0s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=1, score=(train=0.650, test=0.641), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=1, score=(train=0.646, test=0.647), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=1, score=(train=0.644, test=0.648), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=5, score=(train=0.722, test=0.718), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=5, score=(train=0.738, test=0.733), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=5, score=(train=0.701, test=0.683), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=5, score=(train=0.711, test=0.702), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=5, score=(train=0.703, test=0.707), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=10, score=(train=0.768, test=0.762), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=10, score=(train=0.774, test=0.763), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=10, score=(train=0.764, test=0.749), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=10, score=(train=0.748, test=0.742), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=10, score=(train=0.767, test=0.770), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=15, score=(train=0.775, test=0.776), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=15, score=(train=0.792, test=0.788), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=15, score=(train=0.780, test=0.774), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=15, score=(train=0.774, test=0.754), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=15, score=(train=0.802, test=0.808), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=20, score=(train=0.782, test=0.777), total= 0.7s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=20, score=(train=0.808, test=0.798), total= 0.7s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=20, score=(train=0.789, test=0.781), total= 0.7s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=20, score=(train=0.817, test=0.801), total= 0.7s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=20, score=(train=0.783, test=0.785), total= 0.7s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=25, score=(train=0.795, test=0.787), total= 0.9s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=25, score=(train=0.799, test=0.788), total= 0.9s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=25, score=(train=0.786, test=0.774), total= 0.9s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=25, score=(train=0.799, test=0.787), total= 0.9s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=25, score=(train=0.812, test=0.810), total= 0.9s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=50, score=(train=0.797, test=0.791), total= 1.7s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=50, score=(train=0.817, test=0.805), total= 1.7s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=50, score=(train=0.787, test=0.774), total= 1.7s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=50, score=(train=0.797, test=0.780), total= 1.7s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=50, score=(train=0.805, test=0.804), total= 1.7s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=100, score=(train=0.810, test=0.798), total= 3.1s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=100, score=(train=0.807, test=0.793), total= 3.2s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=100, score=(train=0.800, test=0.788), total= 3.2s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=100, score=(train=0.800, test=0.779), total= 3.2s  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=5, n\_estimators=100, score=(train=0.787, test=0.788), total= 3.3s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=1, score=(train=0.693, test=0.701), total= 0.0s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=1, score=(train=0.691, test=0.681), total= 0.0s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=1, score=(train=0.692, test=0.678), total= 0.0s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=1, score=(train=0.694, test=0.684), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=1, score=(train=0.689, test=0.686), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=5, score=(train=0.775, test=0.768), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=5, score=(train=0.786, test=0.784), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=5, score=(train=0.761, test=0.746), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=5, score=(train=0.775, test=0.768), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=5, score=(train=0.773, test=0.772), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=10, score=(train=0.803, test=0.801), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=10, score=(train=0.794, test=0.781), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=10, score=(train=0.797, test=0.789), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=10, score=(train=0.808, test=0.786), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=10, score=(train=0.791, test=0.791), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=15, score=(train=0.828, test=0.816), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=15, score=(train=0.830, test=0.815), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=15, score=(train=0.826, test=0.818), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=15, score=(train=0.820, test=0.796), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=15, score=(train=0.831, test=0.829), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=20, score=(train=0.842, test=0.833), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=20, score=(train=0.850, test=0.832), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=20, score=(train=0.834, test=0.824), total= 0.9s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=20, score=(train=0.855, test=0.834), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=20, score=(train=0.827, test=0.824), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=25, score=(train=0.841, test=0.832), total= 1.0s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=25, score=(train=0.866, test=0.846), total= 1.0s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=25, score=(train=0.845, test=0.836), total= 1.0s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=25, score=(train=0.845, test=0.823), total= 1.0s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=25, score=(train=0.870, test=0.869), total= 1.0s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=50, score=(train=0.865, test=0.852), total= 1.9s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=50, score=(train=0.873, test=0.856), total= 1.9s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=50, score=(train=0.855, test=0.842), total= 1.9s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=50, score=(train=0.862, test=0.840), total= 2.0s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=50, score=(train=0.860, test=0.853), total= 1.9s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=100, score=(train=0.877, test=0.860), total= 3.6s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=100, score=(train=0.859, test=0.842), total= 3.6s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=100, score=(train=0.857, test=0.843), total= 3.6s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=100, score=(train=0.874, test=0.851), total= 3.6s  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=6, n\_estimators=100, score=(train=0.854, test=0.850), total= 3.7s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=1, score=(train=0.795, test=0.790), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=1, score=(train=0.783, test=0.774), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=1, score=(train=0.798, test=0.795), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=1, score=(train=0.800, test=0.794), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=1, score=(train=0.787, test=0.783), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=5, score=(train=0.847, test=0.838), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=5, score=(train=0.860, test=0.846), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=5, score=(train=0.856, test=0.843), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=5, score=(train=0.857, test=0.841), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=5, score=(train=0.859, test=0.854), total= 0.2s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=10, score=(train=0.875, test=0.861), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=10, score=(train=0.886, test=0.870), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=10, score=(train=0.872, test=0.858), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=10, score=(train=0.883, test=0.866), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=10, score=(train=0.876, test=0.864), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=15, score=(train=0.884, test=0.868), total= 0.7s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=15, score=(train=0.898, test=0.879), total= 0.7s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=15, score=(train=0.882, test=0.868), total= 0.7s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=15, score=(train=0.885, test=0.857), total= 0.7s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=15, score=(train=0.891, test=0.884), total= 0.7s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=20, score=(train=0.902, test=0.881), total= 0.9s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=20, score=(train=0.896, test=0.874), total= 0.9s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=20, score=(train=0.897, test=0.885), total= 0.9s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=20, score=(train=0.910, test=0.888), total= 0.9s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=20, score=(train=0.891, test=0.879), total= 0.9s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=25, score=(train=0.911, test=0.893), total= 1.1s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=25, score=(train=0.908, test=0.887), total= 1.1s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=25, score=(train=0.901, test=0.882), total= 1.1s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=25, score=(train=0.910, test=0.885), total= 1.1s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=25, score=(train=0.906, test=0.897), total= 1.1s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=50, score=(train=0.911, test=0.891), total= 2.1s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=50, score=(train=0.920, test=0.898), total= 2.1s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=50, score=(train=0.909, test=0.892), total= 2.1s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=50, score=(train=0.916, test=0.891), total= 2.1s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=50, score=(train=0.911, test=0.903), total= 2.1s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=100, score=(train=0.911, test=0.891), total= 4.1s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=100, score=(train=0.913, test=0.892), total= 4.0s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=100, score=(train=0.914, test=0.896), total= 4.1s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=100, score=(train=0.915, test=0.888), total= 4.0s  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=7, n\_estimators=100, score=(train=0.910, test=0.899), total= 4.1s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=1, score=(train=0.846, test=0.826), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=1, score=(train=0.844, test=0.819), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=1, score=(train=0.829, test=0.813), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=1, score=(train=0.833, test=0.816), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=1, score=(train=0.817, test=0.800), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=5, score=(train=0.895, test=0.877), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=5, score=(train=0.893, test=0.868), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=5, score=(train=0.890, test=0.876), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=5, score=(train=0.892, test=0.872), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=5, score=(train=0.882, test=0.873), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=10, score=(train=0.911, test=0.887), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=10, score=(train=0.912, test=0.887), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=10, score=(train=0.912, test=0.897), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=10, score=(train=0.912, test=0.895), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=10, score=(train=0.914, test=0.905), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=15, score=(train=0.919, test=0.897), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=15, score=(train=0.927, test=0.902), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=15, score=(train=0.924, test=0.906), total= 0.7s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=15, score=(train=0.922, test=0.897), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=15, score=(train=0.927, test=0.912), total= 0.7s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=20, score=(train=0.937, test=0.910), total= 1.0s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=20, score=(train=0.934, test=0.907), total= 1.0s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=20, score=(train=0.931, test=0.913), total= 1.0s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=20, score=(train=0.932, test=0.907), total= 1.0s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=20, score=(train=0.932, test=0.918), total= 1.0s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=25, score=(train=0.936, test=0.909), total= 1.2s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=25, score=(train=0.937, test=0.909), total= 1.2s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=25, score=(train=0.934, test=0.913), total= 1.2s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=25, score=(train=0.939, test=0.910), total= 1.2s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=25, score=(train=0.937, test=0.920), total= 1.2s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=50, score=(train=0.943, test=0.917), total= 2.3s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=50, score=(train=0.946, test=0.918), total= 2.4s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=50, score=(train=0.943, test=0.922), total= 2.4s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=50, score=(train=0.944, test=0.914), total= 2.3s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=50, score=(train=0.943, test=0.926), total= 2.3s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=100, score=(train=0.942, test=0.915), total= 4.6s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=100, score=(train=0.944, test=0.916), total= 4.5s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=100, score=(train=0.942, test=0.918), total= 4.6s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=100, score=(train=0.944, test=0.912), total= 4.5s  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=8, n\_estimators=100, score=(train=0.942, test=0.925), total= 4.5s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=1, score=(train=0.890, test=0.865), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=1, score=(train=0.878, test=0.847), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=1, score=(train=0.869, test=0.857), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=1, score=(train=0.873, test=0.856), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=1 .....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=1, score=(train=0.875, test=0.862), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=5, score=(train=0.915, test=0.894), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=5, score=(train=0.923, test=0.896), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=5, score=(train=0.922, test=0.907), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=5, score=(train=0.920, test=0.893), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=5 .....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=5, score=(train=0.920, test=0.904), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=10, score=(train=0.935, test=0.908), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=10, score=(train=0.934, test=0.903), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=10, score=(train=0.938, test=0.920), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=10, score=(train=0.936, test=0.910), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=10 ....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=10, score=(train=0.936, test=0.921), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=15, score=(train=0.950, test=0.918), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=15, score=(train=0.948, test=0.918), total= 1.0s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=15, score=(train=0.946, test=0.927), total= 1.0s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=15, score=(train=0.951, test=0.921), total= 1.1s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=15 ....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=15, score=(train=0.943, test=0.921), total= 0.9s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=20, score=(train=0.953, test=0.921), total= 1.1s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=20, score=(train=0.955, test=0.924), total= 1.1s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=20, score=(train=0.953, test=0.926), total= 1.1s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=20, score=(train=0.956, test=0.925), total= 1.1s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=20 ....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=20, score=(train=0.953, test=0.931), total= 1.1s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=25, score=(train=0.957, test=0.924), total= 1.3s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=25, score=(train=0.958, test=0.921), total= 1.3s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=25, score=(train=0.958, test=0.931), total= 1.4s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=25, score=(train=0.957, test=0.923), total= 1.3s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=25 ....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=25, score=(train=0.957, test=0.935), total= 1.4s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=50, score=(train=0.963, test=0.930), total= 2.6s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=50, score=(train=0.964, test=0.927), total= 2.6s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=50, score=(train=0.962, test=0.935), total= 2.6s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=50, score=(train=0.963, test=0.930), total= 2.7s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=50 ....................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=50, score=(train=0.962, test=0.939), total= 2.6s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=100, score=(train=0.963, test=0.929), total= 4.9s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=100, score=(train=0.965, test=0.929), total= 4.9s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=100, score=(train=0.962, test=0.935), total= 4.9s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=100, score=(train=0.963, test=0.928), total= 4.9s  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=100 ...................  
[CV] base\_estimator\_\_max\_depth=9, n\_estimators=100, score=(train=0.962, test=0.938), total= 5.0s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=1, score=(train=0.908, test=0.879), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=1, score=(train=0.909, test=0.870), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=1, score=(train=0.902, test=0.887), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=1, score=(train=0.909, test=0.883), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=1, score=(train=0.908, test=0.892), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=5, score=(train=0.945, test=0.909), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=5, score=(train=0.943, test=0.908), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=5, score=(train=0.942, test=0.921), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=5, score=(train=0.943, test=0.914), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=5, score=(train=0.945, test=0.924), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=10, score=(train=0.956, test=0.921), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=10, score=(train=0.956, test=0.924), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=10, score=(train=0.952, test=0.925), total= 0.7s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=10, score=(train=0.955, test=0.923), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=10, score=(train=0.954, test=0.930), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=15, score=(train=0.964, test=0.928), total= 0.9s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=15, score=(train=0.964, test=0.928), total= 0.9s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=15, score=(train=0.964, test=0.935), total= 0.9s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=15, score=(train=0.965, test=0.931), total= 0.9s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=15, score=(train=0.964, test=0.939), total= 0.9s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=20, score=(train=0.968, test=0.930), total= 1.2s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=20, score=(train=0.970, test=0.930), total= 1.2s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=20, score=(train=0.967, test=0.937), total= 1.1s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=20, score=(train=0.969, test=0.932), total= 1.2s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=20, score=(train=0.967, test=0.940), total= 1.2s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=25, score=(train=0.971, test=0.932), total= 1.4s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=25, score=(train=0.974, test=0.932), total= 1.4s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=25, score=(train=0.971, test=0.941), total= 1.4s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=25, score=(train=0.974, test=0.936), total= 1.5s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=25, score=(train=0.971, test=0.941), total= 1.4s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=50, score=(train=0.976, test=0.936), total= 2.9s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=50, score=(train=0.977, test=0.934), total= 2.8s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=50, score=(train=0.976, test=0.944), total= 2.8s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=50, score=(train=0.978, test=0.936), total= 2.8s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=50, score=(train=0.975, test=0.946), total= 2.8s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=100, score=(train=0.978, test=0.938), total= 5.4s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=100, score=(train=0.979, test=0.936), total= 5.3s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=100, score=(train=0.978, test=0.945), total= 5.4s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=100, score=(train=0.979, test=0.939), total= 5.3s  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=10, n\_estimators=100, score=(train=0.975, test=0.946), total= 5.4s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=1, score=(train=0.927, test=0.881), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=1, score=(train=0.927, test=0.882), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=1, score=(train=0.925, test=0.896), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=1, score=(train=0.922, test=0.889), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=1, score=(train=0.920, test=0.882), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=5, score=(train=0.962, test=0.919), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=5, score=(train=0.962, test=0.922), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=5, score=(train=0.961, test=0.928), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=5, score=(train=0.960, test=0.920), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=5, score=(train=0.958, test=0.929), total= 0.3s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=10, score=(train=0.969, test=0.924), total= 0.7s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=10, score=(train=0.970, test=0.924), total= 0.6s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=10, score=(train=0.969, test=0.935), total= 0.7s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=10, score=(train=0.969, test=0.929), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=10, score=(train=0.968, test=0.934), total= 0.7s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=15, score=(train=0.977, test=0.934), total= 1.0s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=15, score=(train=0.976, test=0.932), total= 1.0s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=15, score=(train=0.976, test=0.940), total= 0.9s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=15, score=(train=0.977, test=0.933), total= 1.0s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=15, score=(train=0.975, test=0.942), total= 1.0s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=20, score=(train=0.980, test=0.936), total= 1.3s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=20, score=(train=0.980, test=0.934), total= 1.3s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=20, score=(train=0.978, test=0.940), total= 1.3s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=20, score=(train=0.979, test=0.937), total= 1.3s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=20, score=(train=0.979, test=0.939), total= 1.3s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=25, score=(train=0.982, test=0.936), total= 1.5s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=25, score=(train=0.982, test=0.937), total= 1.5s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=25, score=(train=0.981, test=0.945), total= 1.6s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=25, score=(train=0.982, test=0.935), total= 1.6s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=25, score=(train=0.981, test=0.945), total= 1.6s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=50, score=(train=0.985, test=0.940), total= 3.0s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=50, score=(train=0.985, test=0.939), total= 3.0s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=50, score=(train=0.984, test=0.949), total= 3.0s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=50, score=(train=0.987, test=0.941), total= 3.0s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=50, score=(train=0.984, test=0.949), total= 3.0s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=100, score=(train=0.987, test=0.942), total= 6.6s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=100, score=(train=0.987, test=0.941), total= 6.1s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=100, score=(train=0.987, test=0.948), total= 6.0s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=100, score=(train=0.986, test=0.941), total= 6.0s  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=11, n\_estimators=100, score=(train=0.986, test=0.952), total= 5.9s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=1, score=(train=0.935, test=0.881), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=1, score=(train=0.935, test=0.876), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=1, score=(train=0.939, test=0.906), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=1, score=(train=0.934, test=0.899), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=1, score=(train=0.936, test=0.893), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=5, score=(train=0.972, test=0.917), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=5, score=(train=0.973, test=0.918), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=5, score=(train=0.973, test=0.937), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=5, score=(train=0.973, test=0.932), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=5, score=(train=0.971, test=0.933), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=10, score=(train=0.978, test=0.926), total= 0.7s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=10, score=(train=0.980, test=0.931), total= 0.7s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=10, score=(train=0.977, test=0.936), total= 0.7s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=10, score=(train=0.979, test=0.931), total= 0.7s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=10, score=(train=0.979, test=0.940), total= 0.7s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=15, score=(train=0.985, test=0.935), total= 1.1s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=15, score=(train=0.985, test=0.933), total= 1.1s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=15, score=(train=0.984, test=0.942), total= 1.1s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=15, score=(train=0.984, test=0.938), total= 1.1s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=15, score=(train=0.984, test=0.942), total= 1.1s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=20, score=(train=0.986, test=0.938), total= 1.4s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=20, score=(train=0.987, test=0.935), total= 1.4s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=20, score=(train=0.986, test=0.946), total= 1.4s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=20, score=(train=0.987, test=0.938), total= 1.4s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=20, score=(train=0.986, test=0.947), total= 1.4s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=25, score=(train=0.988, test=0.941), total= 1.7s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=25, score=(train=0.989, test=0.936), total= 1.8s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=25, score=(train=0.988, test=0.948), total= 1.7s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=25, score=(train=0.988, test=0.938), total= 1.7s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=25, score=(train=0.988, test=0.947), total= 1.7s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=50, score=(train=0.990, test=0.942), total= 3.3s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=50, score=(train=0.991, test=0.941), total= 3.3s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=50, score=(train=0.990, test=0.951), total= 3.3s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=50, score=(train=0.990, test=0.943), total= 3.3s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=50, score=(train=0.990, test=0.950), total= 3.3s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=100, score=(train=0.992, test=0.945), total= 6.6s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=100, score=(train=0.993, test=0.939), total= 6.5s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=100, score=(train=0.991, test=0.949), total= 6.4s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=100, score=(train=0.992, test=0.944), total= 7.0s  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=12, n\_estimators=100, score=(train=0.991, test=0.952), total= 6.4s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=1, score=(train=0.944, test=0.879), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=1, score=(train=0.945, test=0.877), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=1, score=(train=0.936, test=0.890), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=1, score=(train=0.941, test=0.890), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=1, score=(train=0.930, test=0.888), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=5, score=(train=0.981, test=0.917), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=5, score=(train=0.982, test=0.925), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=5, score=(train=0.980, test=0.936), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=5, score=(train=0.981, test=0.929), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=5, score=(train=0.980, test=0.934), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=10, score=(train=0.987, test=0.926), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=10, score=(train=0.986, test=0.929), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=10, score=(train=0.986, test=0.938), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=10, score=(train=0.986, test=0.935), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=10, score=(train=0.985, test=0.940), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=15, score=(train=0.990, test=0.933), total= 1.1s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=15, score=(train=0.990, test=0.935), total= 1.2s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=15, score=(train=0.990, test=0.948), total= 1.3s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=15, score=(train=0.990, test=0.936), total= 1.5s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=15, score=(train=0.989, test=0.945), total= 1.3s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=20, score=(train=0.991, test=0.938), total= 1.7s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=20, score=(train=0.991, test=0.936), total= 1.5s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=20, score=(train=0.991, test=0.946), total= 1.5s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=20, score=(train=0.991, test=0.938), total= 1.5s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=20, score=(train=0.991, test=0.947), total= 1.5s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=25, score=(train=0.992, test=0.937), total= 1.9s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=25, score=(train=0.993, test=0.934), total= 1.9s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=25, score=(train=0.992, test=0.947), total= 1.8s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=25, score=(train=0.992, test=0.938), total= 1.8s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=25, score=(train=0.992, test=0.950), total= 1.9s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=50, score=(train=0.994, test=0.943), total= 3.5s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=50, score=(train=0.995, test=0.939), total= 3.6s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=50, score=(train=0.994, test=0.950), total= 3.6s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=50, score=(train=0.994, test=0.942), total= 3.6s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=50, score=(train=0.994, test=0.952), total= 3.7s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=100, score=(train=0.995, test=0.945), total= 6.8s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=100, score=(train=0.995, test=0.941), total= 7.0s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=100, score=(train=0.995, test=0.950), total= 7.0s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=100, score=(train=0.995, test=0.946), total= 7.0s  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=13, n\_estimators=100, score=(train=0.994, test=0.953), total= 6.9s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=1, score=(train=0.946, test=0.877), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=1, score=(train=0.943, test=0.856), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=1, score=(train=0.946, test=0.886), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=1, score=(train=0.946, test=0.881), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=1, score=(train=0.939, test=0.894), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=5, score=(train=0.986, test=0.925), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=5, score=(train=0.987, test=0.921), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=5, score=(train=0.987, test=0.938), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=5, score=(train=0.986, test=0.925), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=5, score=(train=0.987, test=0.936), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=10, score=(train=0.990, test=0.929), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=10, score=(train=0.991, test=0.936), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=10, score=(train=0.990, test=0.943), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=10, score=(train=0.991, test=0.938), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=10, score=(train=0.991, test=0.944), total= 0.9s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=15, score=(train=0.994, test=0.936), total= 1.2s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=15, score=(train=0.994, test=0.935), total= 1.2s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=15, score=(train=0.993, test=0.944), total= 1.2s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=15, score=(train=0.993, test=0.937), total= 1.2s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=15, score=(train=0.993, test=0.948), total= 1.2s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=20, score=(train=0.995, test=0.939), total= 1.6s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=20, score=(train=0.995, test=0.935), total= 1.6s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=20, score=(train=0.995, test=0.949), total= 1.6s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=20, score=(train=0.994, test=0.940), total= 1.6s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=20, score=(train=0.994, test=0.949), total= 1.6s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=25, score=(train=0.996, test=0.939), total= 2.0s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=25, score=(train=0.996, test=0.935), total= 2.0s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=25, score=(train=0.995, test=0.947), total= 2.0s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=25, score=(train=0.996, test=0.940), total= 1.9s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=25, score=(train=0.995, test=0.950), total= 2.0s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=50, score=(train=0.996, test=0.944), total= 3.8s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=50, score=(train=0.997, test=0.938), total= 3.8s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=50, score=(train=0.997, test=0.949), total= 3.8s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=50, score=(train=0.996, test=0.944), total= 3.8s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=50, score=(train=0.996, test=0.952), total= 3.8s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=100, score=(train=0.997, test=0.945), total= 7.5s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=100, score=(train=0.997, test=0.941), total= 8.1s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=100, score=(train=0.997, test=0.949), total= 7.5s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=100, score=(train=0.997, test=0.945), total= 7.6s  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=14, n\_estimators=100, score=(train=0.997, test=0.953), total= 7.5s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=1, score=(train=0.948, test=0.870), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=1, score=(train=0.942, test=0.863), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=1, score=(train=0.952, test=0.883), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=1, score=(train=0.955, test=0.882), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=1 ....................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=1, score=(train=0.951, test=0.902), total= 0.1s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=5, score=(train=0.990, test=0.923), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=5, score=(train=0.991, test=0.922), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=5, score=(train=0.991, test=0.942), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=5, score=(train=0.991, test=0.931), total= 0.4s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=5 ....................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=5, score=(train=0.991, test=0.934), total= 0.5s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=10, score=(train=0.994, test=0.931), total= 0.9s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=10, score=(train=0.994, test=0.928), total= 0.9s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=10, score=(train=0.994, test=0.945), total= 0.9s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=10, score=(train=0.994, test=0.937), total= 0.8s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=10 ...................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=10, score=(train=0.994, test=0.945), total= 0.9s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=15, score=(train=0.996, test=0.936), total= 1.3s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=15, score=(train=0.996, test=0.932), total= 1.3s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=15, score=(train=0.995, test=0.945), total= 1.3s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=15, score=(train=0.996, test=0.938), total= 1.3s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=15 ...................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=15, score=(train=0.996, test=0.946), total= 1.3s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=20, score=(train=0.997, test=0.937), total= 1.7s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=20, score=(train=0.997, test=0.940), total= 1.7s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=20, score=(train=0.996, test=0.949), total= 1.7s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=20, score=(train=0.996, test=0.943), total= 1.7s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=20 ...................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=20, score=(train=0.997, test=0.950), total= 1.7s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=25, score=(train=0.997, test=0.939), total= 2.1s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=25, score=(train=0.997, test=0.938), total= 2.0s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=25, score=(train=0.997, test=0.947), total= 2.0s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=25, score=(train=0.997, test=0.941), total= 2.1s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=25 ...................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=25, score=(train=0.997, test=0.949), total= 2.1s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=50, score=(train=0.998, test=0.943), total= 4.1s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=50, score=(train=0.998, test=0.941), total= 4.0s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=50, score=(train=0.998, test=0.947), total= 4.1s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=50, score=(train=0.998, test=0.943), total= 3.9s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=50 ...................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=50, score=(train=0.998, test=0.952), total= 4.2s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=100, score=(train=0.998, test=0.944), total= 7.7s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=100, score=(train=0.998, test=0.943), total= 7.8s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=100, score=(train=0.998, test=0.951), total= 7.9s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=100, score=(train=0.998, test=0.944), total= 7.9s  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=100 ..................  
[CV] base\_estimator\_\_max\_depth=15, n\_estimators=100, score=(train=0.998, test=0.953), total= 7.7s

[Parallel(n\_jobs=1)]: Done 600 out of 600 | elapsed: 13.9min finished

AdaBoostRegressor(base\_estimator=DecisionTreeRegressor(max\_depth=13),  
 n\_estimators=100)

0.9470456491346025

**SVM Regression**[**¶**](#2s8eyo1)

In [89]:

parameters\_grid = {  
 'C': [0.01, 0.05, 0.1, 0.5, 1, 2, 5, 10, 20, 50, 100]  
}  
model = SVR()  
find\_best\_regressor(model, parameters\_grid)

Fitting 5 folds for each of 11 candidates, totalling 55 fits  
[CV] C=0.01 ..........................................................

[Parallel(n\_jobs=1)]: Using backend SequentialBackend with 1 concurrent workers.

[CV] ........ C=0.01, score=(train=-0.005, test=-0.009), total= 20.7s  
[CV] C=0.01 ..........................................................

[Parallel(n\_jobs=1)]: Done 1 out of 1 | elapsed: 31.1s remaining: 0.0s

[CV] ........ C=0.01, score=(train=-0.009, test=-0.015), total= 20.6s  
[CV] C=0.01 ..........................................................

[Parallel(n\_jobs=1)]: Done 2 out of 2 | elapsed: 1.0min remaining: 0.0s

[CV] ........ C=0.01, score=(train=-0.005, test=-0.009), total= 20.5s  
[CV] C=0.01 ..........................................................

[Parallel(n\_jobs=1)]: Done 3 out of 3 | elapsed: 1.5min remaining: 0.0s

[CV] ........ C=0.01, score=(train=-0.007, test=-0.004), total= 20.6s  
[CV] C=0.01 ..........................................................  
[CV] ......... C=0.01, score=(train=-0.008, test=0.002), total= 20.6s  
[CV] C=0.05 ..........................................................  
[CV] .......... C=0.05, score=(train=0.124, test=0.117), total= 20.2s  
[CV] C=0.05 ..........................................................  
[CV] .......... C=0.05, score=(train=0.121, test=0.114), total= 20.6s  
[CV] C=0.05 ..........................................................  
[CV] .......... C=0.05, score=(train=0.124, test=0.115), total= 22.8s  
[CV] C=0.05 ..........................................................  
[CV] .......... C=0.05, score=(train=0.120, test=0.123), total= 21.2s  
[CV] C=0.05 ..........................................................  
[CV] .......... C=0.05, score=(train=0.117, test=0.135), total= 20.9s  
[CV] C=0.1 ...........................................................  
[CV] ........... C=0.1, score=(train=0.185, test=0.177), total= 20.1s  
[CV] C=0.1 ...........................................................  
[CV] ........... C=0.1, score=(train=0.183, test=0.176), total= 20.2s  
[CV] C=0.1 ...........................................................  
[CV] ........... C=0.1, score=(train=0.184, test=0.173), total= 20.0s  
[CV] C=0.1 ...........................................................  
[CV] ........... C=0.1, score=(train=0.180, test=0.183), total= 20.1s  
[CV] C=0.1 ...........................................................  
[CV] ........... C=0.1, score=(train=0.177, test=0.198), total= 20.1s  
[CV] C=0.5 ...........................................................  
[CV] ........... C=0.5, score=(train=0.295, test=0.283), total= 19.9s  
[CV] C=0.5 ...........................................................  
[CV] ........... C=0.5, score=(train=0.293, test=0.289), total= 19.8s  
[CV] C=0.5 ...........................................................  
[CV] ........... C=0.5, score=(train=0.296, test=0.281), total= 19.8s  
[CV] C=0.5 ...........................................................  
[CV] ........... C=0.5, score=(train=0.291, test=0.293), total= 19.9s  
[CV] C=0.5 ...........................................................  
[CV] ........... C=0.5, score=(train=0.286, test=0.312), total= 20.5s  
[CV] C=1 .............................................................  
[CV] ............. C=1, score=(train=0.338, test=0.326), total= 19.4s  
[CV] C=1 .............................................................  
[CV] ............. C=1, score=(train=0.335, test=0.332), total= 19.6s  
[CV] C=1 .............................................................  
[CV] ............. C=1, score=(train=0.339, test=0.324), total= 19.5s  
[CV] C=1 .............................................................  
[CV] ............. C=1, score=(train=0.334, test=0.336), total= 19.6s  
[CV] C=1 .............................................................  
[CV] ............. C=1, score=(train=0.328, test=0.356), total= 19.5s  
[CV] C=2 .............................................................  
[CV] ............. C=2, score=(train=0.385, test=0.372), total= 20.6s  
[CV] C=2 .............................................................  
[CV] ............. C=2, score=(train=0.380, test=0.378), total= 19.8s  
[CV] C=2 .............................................................  
[CV] ............. C=2, score=(train=0.385, test=0.370), total= 20.8s  
[CV] C=2 .............................................................  
[CV] ............. C=2, score=(train=0.382, test=0.382), total= 19.7s  
[CV] C=2 .............................................................  
[CV] ............. C=2, score=(train=0.374, test=0.402), total= 19.7s  
[CV] C=5 .............................................................  
[CV] ............. C=5, score=(train=0.442, test=0.432), total= 19.7s  
[CV] C=5 .............................................................  
[CV] ............. C=5, score=(train=0.438, test=0.436), total= 19.8s  
[CV] C=5 .............................................................  
[CV] ............. C=5, score=(train=0.442, test=0.428), total= 19.8s  
[CV] C=5 .............................................................  
[CV] ............. C=5, score=(train=0.440, test=0.437), total= 19.6s  
[CV] C=5 .............................................................  
[CV] ............. C=5, score=(train=0.432, test=0.458), total= 19.8s  
[CV] C=10 ............................................................  
[CV] ............ C=10, score=(train=0.478, test=0.470), total= 20.3s  
[CV] C=10 ............................................................  
[CV] ............ C=10, score=(train=0.476, test=0.474), total= 19.6s  
[CV] C=10 ............................................................  
[CV] ............ C=10, score=(train=0.479, test=0.466), total= 19.7s  
[CV] C=10 ............................................................  
[CV] ............ C=10, score=(train=0.478, test=0.473), total= 19.7s  
[CV] C=10 ............................................................  
[CV] ............ C=10, score=(train=0.469, test=0.493), total= 19.6s  
[CV] C=20 ............................................................  
[CV] ............ C=20, score=(train=0.507, test=0.500), total= 19.8s  
[CV] C=20 ............................................................  
[CV] ............ C=20, score=(train=0.505, test=0.505), total= 19.8s  
[CV] C=20 ............................................................  
[CV] ............ C=20, score=(train=0.509, test=0.497), total= 19.7s  
[CV] C=20 ............................................................  
[CV] ............ C=20, score=(train=0.509, test=0.502), total= 19.7s  
[CV] C=20 ............................................................  
[CV] ............ C=20, score=(train=0.501, test=0.521), total= 19.6s  
[CV] C=50 ............................................................  
[CV] ............ C=50, score=(train=0.536, test=0.532), total= 19.9s  
[CV] C=50 ............................................................  
[CV] ............ C=50, score=(train=0.535, test=0.536), total= 19.8s  
[CV] C=50 ............................................................  
[CV] ............ C=50, score=(train=0.539, test=0.528), total= 19.8s  
[CV] C=50 ............................................................  
[CV] ............ C=50, score=(train=0.538, test=0.530), total= 19.8s  
[CV] C=50 ............................................................  
[CV] ............ C=50, score=(train=0.533, test=0.549), total= 21.5s  
[CV] C=100 ...........................................................  
[CV] ........... C=100, score=(train=0.555, test=0.551), total= 19.9s  
[CV] C=100 ...........................................................  
[CV] ........... C=100, score=(train=0.555, test=0.557), total= 19.9s  
[CV] C=100 ...........................................................  
[CV] ........... C=100, score=(train=0.559, test=0.547), total= 19.9s  
[CV] C=100 ...........................................................  
[CV] ........... C=100, score=(train=0.557, test=0.547), total= 19.9s  
[CV] C=100 ...........................................................  
[CV] ........... C=100, score=(train=0.554, test=0.568), total= 19.9s

[Parallel(n\_jobs=1)]: Done 55 out of 55 | elapsed: 28.0min finished

SVR(C=100)

0.5541529168426559

In [73]:

data\_preprocessed.columns

Out[73]:

Index(['yr', 'hr', 'holiday', 'workingday', 'temp', 'atemp', 'hum',  
 'windspeed', 'casual', 'registered', 'cnt', 'season1', 'season2',  
 'season3', 'season4', 'mnth1', 'mnth2', 'mnth3', 'mnth4', 'mnth5',  
 'mnth6', 'mnth7', 'mnth8', 'mnth9', 'mnth10', 'mnth11', 'mnth12',  
 'weekday0', 'weekday1', 'weekday2', 'weekday3', 'weekday4', 'weekday5',  
 'weekday6', 'weathersit1', 'weathersit2', 'weathersit3', 'weathersit4'],  
 dtype='object')

In [ ]: