

03_Modelling.ipynb

October 5, 2021

1 Initialisation

```
[ ]: # Importations
import sys
sys.path.append('..')

import pandas as pd
import numpy as np
from sklearn.model_selection import train_test_split
from sklearn.model_selection import StratifiedKFold, RepeatedStratifiedKFold
from sklearn.model_selection import cross_validate
from imblearn.pipeline import Pipeline

from sklearn.linear_model import SGDClassifier
from sklearn.ensemble import RandomForestClassifier
from lightgbm import LGBMClassifier
from sklearn.metrics import confusion_matrix, classification_report
from imblearn.combine import SMOTETomek, SMOTEENN
from imblearn.under_sampling import TomekLinks, RandomUnderSampler
from preprocessing import preprocessor as prep
from styles import *

[ ]: # Initialisation
train = pd.read_csv('../02_data/application_train.csv')
test = pd.read_csv('../02_data/application_test.csv')

id_error_msg = lambda x: '`SK_ID_CURR` is not unic for {} set!'.format(x)
assert len(train.SK_ID_CURR.unique()) == train.shape[0], id_error_msg('train')
assert len(test.SK_ID_CURR.unique()) == test.shape[0], id_error_msg('test')
train.set_index('SK_ID_CURR', inplace=True)
test.set_index('SK_ID_CURR', inplace=True)

print('Training set dimensions :', train.shape)

cls_size = train.TARGET.value_counts()
cls_freq = train.TARGET.value_counts(normalize=True)
print(pd.DataFrame({'size': cls_size,
```

```
'freq': cls_freq.apply(lambda x: '%.3f' % x))
```

Training set dimensions : (307511, 121)

	size	freq
0	282686	0.919
1	24825	0.081

```
[ ]: train_sample = train[::10]
print('Sampled training set dimensions :', train_sample.shape)
cls_size = train_sample.TARGET.value_counts()
cls_freq = train_sample.TARGET.value_counts(normalize=True)
print(pd.DataFrame({'size': cls_size,
                    'freq': cls_freq.apply(lambda x: '%.3f' % x)}))
```

Sampled training set dimensions : (30752, 121)

	size	freq
0	28303	0.920
1	2449	0.080

On échantillonne le dataset en prenant 10% des points de données

```
[ ]: X, y = train.iloc[:, 1:], train.iloc[:, 0]#.values.reshape(-1,1)
Xs, ys = train_sample.iloc[:, 1:], train_sample.iloc[:, 0]#.values.reshape(-1,1)

X_train, X_test, y_train, y_test = train_test_split(Xs, ys, test_size=.2,
                                                    random_state=0)

print('X_train:', X_train.shape)
print('y_train:', y_train.shape)
print('X_test:', X_test.shape)
print('y_test:', y_test.shape)
```

X_train: (24601, 120)
y_train: (24601,)
X_test: (6151, 120)
y_test: (6151,)

2 Rééquilibrage de classes - SMOTE/Tomek

Il y a ~8% de cas de défaut dans le jeu d'entraînement contre 92% de cas sans défaut. Le déséquilibre des classes pose problème dans le cadre de la prédiction de la classe minoritaire par un algorithme de ml.

Il faut rééquilibrer les classes du jeu d'entraînement avant de sélectionner le meilleur modèle de ml

2.1 Impact de SMOTE Tomek sur la répartition des classes

```
[ ]: resamplr = SMOTETomek(tomek=TomekLinks(sampling_strategy='majority'))
     udsamplr = SMOTEENN(random_state=42)
     rusamplr = RandomUnderSampler(random_state=42)
```

```
[ ]: X_train_trans = prep.fit_transform(X_train)
     print(X_train_trans.shape)
     print(X_train_trans)
     print(y_train.shape)
     print(y_train.value_counts())
```

```
(24601, 235)
[[0.          0.09011628 0.07823375 ... 1.          0.          0.          ]
 [0.          0.01162791 0.01353611 ... 0.          1.          0.          ]
 [0.          0.05232558 0.15492746 ... 0.          1.          0.          ]
 ...
 [0.          0.14244186 0.1340753 ... 0.          1.          0.          ]
 [0.1         0.12790698 0.28631022 ... 0.          0.          0.          ]
 [0.3         0.06395349 0.25047455 ... 0.          1.          0.          ]]
(24601,)
0    22659
1     1942
Name: TARGET, dtype: int64
```

```
[ ]: X_train_resampl, y_train_resampl = resamplr.fit_resample(X_train_trans, y_train)
     print(X_train_resampl.shape)
     print(y_train_resampl.value_counts())
```

```
(45318, 235)
0    22659
1    22659
Name: TARGET, dtype: int64
```

```
[ ]: X_train_udsampl, y_train_udsampl = udsamplr.fit_resample(X_train_trans, y_train)
     print(X_train_udsampl.shape)
     print(y_train_udsampl.value_counts())
```

```
(33702, 235)
1    22628
0    11074
Name: TARGET, dtype: int64
```

```
[ ]: X_train_rusampl, y_train_rusampl = rusamplr.fit_resample(X_train_trans, y_train)
     print(X_train_rusampl.shape)
     print(y_train_rusampl.value_counts())
```

```
(3884, 235)
```

```
0    1942
1    1942
Name: TARGET, dtype: int64
```

Rééquilibrage exécuté en 1min environ pour un jeu d'entraînement divisé par 10.

2.2 Impact de SMOTE Tomek sur l'entraînement d'un modèle

```
[ ]: sgd = Pipeline([('p', prep), ('m', SGDClassifier())])
cv = StratifiedKFold(n_splits=5, shuffle=True, random_state=42)
#cv = RepeatedStratifiedKFold(n_splits=5, n_repeats=3, random_state=42)
scoring = ['precision_macro', 'recall_macro'] #, 'accuracy']
sgd_scor = cross_validate(sgd, X_train, y_train, scoring=scoring, cv=cv)
print('Model 1\n' + line_decor)
#print('accuracy scores:', sgd_scor['test_accuracy'])
print('precision scores:', sgd_scor['test_precision_macro'])
print('recall scores:', sgd_scor['test_recall_macro'])
#print('Mean Accuracy: %.4f' % np.mean(sgd_scor['test_accuracy']))
print('Mean Precision: %.4f' % np.nanmean(sgd_scor['test_precision_macro']))
print('Mean Recall: %.4f' % np.nanmean(sgd_scor['test_recall_macro']))
```

Model 1

```
precision scores: [          nan 0.46056911 0.46056911 0.46056911          nan]
recall scores: [nan 0.5 0.5 0.5 nan]
Mean Precision: 0.4606
Mean Recall: 0.5000
```

Validation croisée sans SMOTE Tomek : 8.7s avec un échantillon divisé par 10

```
[ ]: sgd_imb = Pipeline([('p', prep), ('r', resampler), ('m', SGDClassifier())])
cv = StratifiedKFold(n_splits=5, shuffle=True, random_state=42)
#cv = RepeatedStratifiedKFold(n_splits=5, n_repeats=3, random_state=42)
scoring = ['precision_macro', 'recall_macro'] #, 'accuracy']
sgd_imb_scor = cross_validate(sgd_imb, X_train, y_train, scoring=scoring, cv=5)
print('Model 1 - with imbalance handling\n' + line_decor)
#print('accuracy scores:', sgd_imb_scor['test_accuracy'])
print('precision scores:', sgd_imb_scor['test_precision_macro'])
print('recall scores:', sgd_imb_scor['test_recall_macro'])
#print('Mean Accuracy: %.4f' % np.mean(sgd_imb_scor['test_accuracy']))
print('Mean Precision: %.4f' % np.nanmean(sgd_imb_scor['test_precision_macro']))
print('Mean Recall: %.4f' % np.nanmean(sgd_imb_scor['test_recall_macro']))
```

Model 1 - with imbalance handling

```
precision scores: [          nan 0.55255999 0.5584412          nan 0.55571135]
recall scores: [          nan 0.66237227 0.63354292          nan 0.67955739]
Mean Precision: 0.5556
Mean Recall: 0.6585
```

Validation croisée avec SMOTE Tomek (stratégie majoritaire) : 207.6s avec un échantillon divisé par 10

```
[ ]: smote_unsmote_ratio = 207.6 / 8.7
      print('{:.2f}'.format(smote_unsmote_ratio))
```

23.86

```
[ ]: smote_unsmote_ratio = 186.5 / 9.6
      print('{:2f}'.format(smote_unsmote_ratio))
```

19.427083

Le SMOTE Tomek multiplie par un facteur 19 à 24 le temps d'exécution du modèle

Essai d'une validation croisée sans SMOTE Tomek avec tous les points du jeu d'entraînement

```
[ ]: X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=.2)
      print('X_train:', X_train.shape)
      print('y_train:', y_train.shape)
      print('X_test:', X_test.shape)
      print('y_test:', y_test.shape)
```

X_train: (246008, 120)

y_train: (246008, 1)

X_test: (61503, 120)

y_test: (61503, 1)

```
[ ]: sgd = Pipeline([('p', prep), ('m', SGDClassifier())])
      cv = StratifiedKfold(n_splits=5, shuffle=True, random_state=42)
      #cv = RepeatedStratifiedKfold(n_splits=5, n_repeats=3, random_state=42)
      scoring = ['precision_macro', 'recall_macro'] #, 'accuracy']
      sgd_scor = cross_validate(sgd, X_train, y_train, scoring=scoring, cv=cv)
      print('Model 1\n' + line_decor)
      #print('accuracy scores:', sgd_scor['test_accuracy'])
      print('precision scores:', sgd_scor['test_precision_macro'])
      print('recall scores:', sgd_scor['test_recall_macro'])
      #print('Mean Accuracy: %.4f' % np.mean(sgd_scor['test_accuracy']))
      print('Mean Precision: %.4f' % np.nanmean(sgd_scor['test_precision_macro']))
      print('Mean Recall: %.4f' % np.nanmean(sgd_scor['test_recall_macro']))
```

Model 1

precision scores: [0.45967644 0.45966627 0.45966627 0.45967562 0.45967562]

recall scores: [0.5 0.5 0.5 0.5 0.5]

Mean Precision: 0.4597

Mean Recall: 0.5000

Validation croisée sans SMOTE Tomek exécutée en 57.9s sur tout le jeu de données

```
[ ]: unsampled_sampled_ratio = 57.9 / 8.7
print('{:.2f}'.format(unsampled_sampled_ratio))
```

6.66

Il faut 7 fois plus de temps pour exécuter la même chose sur 10 fois plus de données (pas parfaitement linéaire donc)

```
[ ]: print('{:.2f}'.format(207.6 * unsampled_sampled_ratio))
```

1381.61

```
[ ]: 1381 / 60
```

```
[ ]: 23.016666666666666
```

Il faudrait 23 minutes rien que pour faire du rééquilibrage avec le jeu de données actuel. Pas souhaitable.

Il faut trouver un moyen de raccourcir le temps d'exécution du rééquilibrage.

2.3 Réduction du temps de rééquilibrage en supprimant des colonnes

```
[ ]: X_train_resampl_cut, y_train_resampl_cut = resamplr.fit_resample(
    X_train_trans[:, :50], y_train
)
print(X_train_resampl_cut.shape)
print(y_train_resampl_cut.value_counts())
```

(45313, 50)

1 22659

0 22654

Name: TARGET, dtype: int64

temps d'entraînement 52s pour un jeu d'entraînement divisé par 10 avec seulement les 50 premières colonnes contre 60.5s avec toutes les colonnes.

3 Sous-échantillonnage aléatoire

```
[ ]: X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=.2)
print('X_train:', X_train.shape)
print('y_train:', y_train.shape)
print('X_test:', X_test.shape)
print('y_test:', y_test.shape)
```

X_train: (246008, 120)

y_train: (246008,)

X_test: (61503, 120)

y_test: (61503,)

```
[ ]: sgd_imb = Pipeline([('p', prep), ('r', rusamplr), ('m', SGDClassifier())])
cv = StratifiedKFold(n_splits=5, shuffle=True, random_state=42)
#cv = RepeatedStratifiedKFold(n_splits=5, n_repeats=3, random_state=42)
scoring = ['precision_macro', 'recall_macro'] #, 'accuracy']
sgd_imb_scor = cross_validate(sgd_imb, X_train, y_train, scoring=scoring, cv=5)
print('Model 1 - with imbalance handling\n' + line_decor)
#print('accuracy scores:', sgd_imb_scor['test_accuracy'])
print('precision scores:', sgd_imb_scor['test_precision_macro'])
print('recall scores:', sgd_imb_scor['test_recall_macro'])
#print('Mean Accuracy: %.4f' % np.mean(sgd_imb_scor['test_accuracy']))
print('Mean Precision: %.4f' % np.nanmean(sgd_imb_scor['test_precision_macro']))
print('Mean Recall: %.4f' % np.nanmean(sgd_imb_scor['test_recall_macro']))
```

Model 1 - with imbalance handling

```
precision scores: [0.54163367          nan 0.56050468 0.55293874          nan]
recall scores: [0.62721639          nan 0.67366715 0.67118886          nan]
Mean Precision: 0.5517
Mean Recall: 0.6574
```

4 Modèle 1 : SGD Classifier

```
[ ]: model1 = Pipeline([('p', prep), ('m', SGDClassifier())])
model1.fit(X_train, y_train)
y_pred = model1.predict(X_test)
conf_mat = confusion_matrix(y_test, y_pred)
print('Model 1\n' + line_decor)
print('Score: %.4f' % model1.score(X_test, y_test))
print(line_decor + '\nConfusion matrix\n' + str(conf_mat))
print(classification_report(y_test, y_pred))
```

Model 1

Score: 0.9190

Confusion matrix

```
[[56522    0]
 [ 4981    0]]
```

	precision	recall	f1-score	support
0	0.92	1.00	0.96	56522
1	0.00	0.00	0.00	4981
accuracy			0.92	61503
macro avg	0.46	0.50	0.48	61503
weighted avg	0.84	0.92	0.88	61503

5 Modèle 2 : Random Forest Classifier

```
[ ]: model2 = Pipeline([('p', prep), ('m', RandomForestClassifier())])
cv = RepeatedStratifiedKFold(n_splits=10, n_repeats=3, random_state=1)
scoring = ['accuracy', 'precision_macro', 'recall_macro']
scores_model2 = cross_validate(model2, X_train, y_train, scoring=scoring, cv=cv,
                                n_jobs=-1)

print('Model 2\n' + 8 * '-')
print('Mean Accuracy: %.4f' % np.mean(scores_model2['test_accuracy']))
print('Mean Precision: %.4f' % np.mean(scores_model2['test_precision_macro']))
print('Mean Recall: %.4f' % np.mean(scores_model2['test_recall_macro']))
```

```
[ ]: model2 = Pipeline([('p', prep), ('m', RandomForestClassifier())])
model2.fit(X_train, y_train)
y_pred = model2.predict(X_test)
conf_mat = confusion_matrix(y_test, y_pred)
print('Model 2\n' + 8 * '-')
print('Score: %.4f' % model2.score(X_test, y_test))
print(8 * '-' + '\nConfusion matrix\n' + str(conf_mat))
print(classification_report(y_test, y_pred))
```

Model 1

Score: 0.9185

Confusion matrix

[[56485 4]

[5011 3]]

	precision	recall	f1-score	support
0	0.92	1.00	0.96	56489
1	0.43	0.00	0.00	5014
accuracy			0.92	61503
macro avg	0.67	0.50	0.48	61503
weighted avg	0.88	0.92	0.88	61503

```
[ ]: # undersampling
# foret d'arbre -> feature importance
# lightgbm
# si besoin pca ou autre

# optimisation du threshold
# flask
```



```
[ ]: y_pred = model2.predict(X_test)
      conf_mat = confusion_matrix(y_test, y_pred)
      print(conf_mat)
```

```
[[56512    5]
 [ 4979    7]]
```

```
[ ]: model2.get_params()
```

6 Modèle 3 : LightGBM

```
[ ]: model3 = Pipeline([('p', prep), ('m', LGBMClassifier())])
      model3.fit(X_train, y_train)
      print('Score:', model3.score(X_test, y_test))
```

Score: 0.9192071931450498

```
[ ]: y_pred = model3.predict(X_test)
      conf_mat = confusion_matrix(y_test, y_pred)
      print(conf_mat)
```

```
[[56447    81]
 [ 4888    87]]
```

```
[ ]: print(classification_report(y_test, y_pred))
```

	precision	recall	f1-score	support
0	0.92	1.00	0.96	56528
1	0.52	0.02	0.03	4975
accuracy			0.92	61503
macro avg	0.72	0.51	0.50	61503
weighted avg	0.89	0.92	0.88	61503

```
[ ]: # à faire

      # smote tomek
      # random search precision des deux classes (privilégier light_gbm)
      #
      # choisir optimisation recall(classe 1)
      # fonction coût : manque à gagner pour chaque treshold
      # treshold = + = + precision - recall
      # precision élevée = on accepte tout le monde
      # recall élevée = on refuse tout le monde
      # regarder crer une colonne intérêts (amt credit - good price),
```

```
# optimiser mon threshold % de ça
```

7 2021-09-30 : Modélisation avec sous-échantillonnage aléatoire de la classe majoritaire

```
[ ]: # Importations
import sys
sys.path.append('..')

import pandas as pd
import numpy as np
from preprocessing import preprocessor as prep
from preprocessing import CreditInfosImputer
from imblearn.under_sampling import RandomUnderSampler
from imblearn.pipeline import Pipeline
from sklearn.model_selection import train_test_split
from sklearn.tree import DecisionTreeClassifier
from sklearn.metrics import classification_report, confusion_matrix

[ ]: # Initialisation
train = pd.read_csv('../02_data/application_train.csv')
#test = pd.read_csv('../02_data/application_test.csv')

id_error_msg = lambda x: '`SK_ID_CURR` is not unic for {} set!'.format(x)
assert len(train.SK_ID_CURR.unique()) == train.shape[0], id_error_msg('train')
#assert len(test.SK_ID_CURR.unique()) == test.shape[0], id_error_msg('test')
train.set_index('SK_ID_CURR', inplace=True)
#test.set_index('SK_ID_CURR', inplace=True)

print('Training set dimensions :', train.shape)
df = train.copy()

cls_size = df.TARGET.value_counts()
cls_freq = df.TARGET.value_counts(normalize=True)
print(pd.DataFrame({'size': cls_size,
                    'freq': cls_freq.apply(lambda x: '%.3f' % x)}))
```

Training set dimensions : (307511, 121)

	size	freq
0	282686	0.919
1	24825	0.081

7.1 Test de CreditInfosImputer

7.1.1 Tout seul

```
[ ]: credit_imputer = CreditInfosImputer()

credit_imputer.fit(df)
```

```
[ ]: CreditInfosImputer()
```

```
[ ]: df = train.copy()
X_train, X_test, y_train, y_test = train_test_split(df.iloc[:,1:], df.iloc[:,0],
                                                    test_size=.2)
```

```
[ ]: credit_imputer.fit_transform(X_train, y_train)
```

```
[ ]:      NAME_CONTRACT_TYPE CODE_GENDER FLAG_OWN_CAR FLAG_OWN_REALTY \
SK_ID_CURR
346746      Cash loans      F      N      Y
123400      Cash loans      F      N      Y
371653      Cash loans      F      N      Y
324835      Cash loans      M      Y      Y
429236      Revolving loans      M      Y      Y
...
447394      Cash loans      F      N      N
210991      Cash loans      M      N      N
112635      Cash loans      M      Y      Y
117429      Cash loans      F      N      N
157055      Cash loans      F      Y      N
```

```
      CNT_CHILDREN  AMT_INCOME_TOTAL  AMT_CREDIT  AMT_ANNUITY \
SK_ID_CURR
346746      0      103500.0      78192.0      6399.0
123400      0      85500.0      314100.0      13833.0
371653      0      247500.0      1059781.5      56592.0
324835      0      427500.0      675000.0      49117.5
429236      1      135000.0      270000.0      13500.0
...
447394      0      81000.0      135000.0      10665.0
210991      0      112500.0      76500.0      5670.0
112635      0      157500.0      454500.0      23206.5
117429      0      112500.0      296280.0      15124.5
157055      0      270000.0      180000.0      17046.0
```

```
      AMT_GOODS_PRICE NAME_TYPE_SUITE ... FLAG_DOCUMENT_18 \
SK_ID_CURR
346746      67500.0  Unaccompanied ...      0
123400      225000.0  Unaccompanied ...      0
```

371653	954000.0	Family	...	0
324835	675000.0	Unaccompanied	...	0
429236	270000.0	Unaccompanied	...	0
...
447394	135000.0	Family	...	0
210991	76500.0	Unaccompanied	...	0
112635	454500.0	Unaccompanied	...	0
117429	225000.0	Unaccompanied	...	0
157055	180000.0	Family	...	0

	FLAG_DOCUMENT_19	FLAG_DOCUMENT_20	FLAG_DOCUMENT_21	\
SK_ID_CURR				
346746	0	0	0	
123400	0	0	0	
371653	0	0	0	
324835	0	0	0	
429236	0	0	0	
...	
447394	0	0	0	
210991	0	0	0	
112635	0	0	0	
117429	0	0	0	
157055	0	0	0	

	AMT_REQ_CREDIT_BUREAU_HOUR	AMT_REQ_CREDIT_BUREAU_DAY	\
SK_ID_CURR			
346746	0.0	0.0	
123400	0.0	0.0	
371653	0.0	0.0	
324835	0.0	0.0	
429236	0.0	0.0	
...	
447394	NaN	NaN	
210991	0.0	0.0	
112635	0.0	0.0	
117429	0.0	0.0	
157055	0.0	0.0	

	AMT_REQ_CREDIT_BUREAU_WEEK	AMT_REQ_CREDIT_BUREAU_MON	\
SK_ID_CURR			
346746	0.0	0.0	
123400	0.0	0.0	
371653	0.0	0.0	
324835	0.0	0.0	
429236	0.0	0.0	
...	
447394	NaN	NaN	

210991	0.0	0.0
112635	0.0	0.0
117429	0.0	1.0
157055	0.0	0.0

	AMT_REQ_CREDIT_BUREAU_QRT	AMT_REQ_CREDIT_BUREAU_YEAR
SK_ID_CURR		
346746	0.0	4.0
123400	0.0	0.0
371653	1.0	3.0
324835	0.0	2.0
429236	0.0	3.0
...
447394	NaN	NaN
210991	0.0	3.0
112635	0.0	0.0
117429	0.0	4.0
157055	0.0	0.0

[246008 rows x 120 columns]

```
[ ]: credit_imputer.fit_transform(df)
```

```
[ ]:
TARGET NAME_CONTRACT_TYPE CODE_GENDER FLAG_OWN_CAR \
SK_ID_CURR
100002      1      Cash loans      M      N
100003      0      Cash loans      F      N
100004      0  Revolving loans      M      Y
100006      0      Cash loans      F      N
100007      0      Cash loans      M      N
...
456251      0      Cash loans      M      N
456252      0      Cash loans      F      N
456253      0      Cash loans      F      N
456254      1      Cash loans      F      N
456255      0      Cash loans      F      N
```

	FLAG_OWN_REALTY	CNT_CHILDREN	AMT_INCOME_TOTAL	AMT_CREDIT	\
SK_ID_CURR					
100002	Y	0	202500.0	406597.5	
100003	N	0	270000.0	1293502.5	
100004	Y	0	67500.0	135000.0	
100006	Y	0	135000.0	312682.5	
100007	Y	0	121500.0	513000.0	
...	
456251	N	0	157500.0	254700.0	
456252	Y	0	72000.0	269550.0	

456253	Y	0	153000.0	677664.0
456254	Y	0	171000.0	370107.0
456255	N	0	157500.0	675000.0

	AMT_ANNUIITY	AMT_GOODS_PRICE	... FLAG_DOCUMENT_18	\
SK_ID_CURR			...	
100002	24700.5	351000.0	...	0
100003	35698.5	1129500.0	...	0
100004	6750.0	135000.0	...	0
100006	29686.5	297000.0	...	0
100007	21865.5	513000.0	...	0
...
456251	27558.0	225000.0	...	0
456252	12001.5	225000.0	...	0
456253	29979.0	585000.0	...	0
456254	20205.0	319500.0	...	0
456255	49117.5	675000.0	...	0

	FLAG_DOCUMENT_19	FLAG_DOCUMENT_20	FLAG_DOCUMENT_21	\
SK_ID_CURR				
100002	0	0	0	
100003	0	0	0	
100004	0	0	0	
100006	0	0	0	
100007	0	0	0	
...
456251	0	0	0	
456252	0	0	0	
456253	0	0	0	
456254	0	0	0	
456255	0	0	0	

	AMT_REQ_CREDIT_BUREAU_HOUR	AMT_REQ_CREDIT_BUREAU_DAY	\
SK_ID_CURR			
100002	0.0	0.0	
100003	0.0	0.0	
100004	0.0	0.0	
100006	NaN	NaN	
100007	0.0	0.0	
...
456251	NaN	NaN	
456252	NaN	NaN	
456253	1.0	0.0	
456254	0.0	0.0	
456255	0.0	0.0	

	AMT_REQ_CREDIT_BUREAU_WEEK	AMT_REQ_CREDIT_BUREAU_MON	\
--	----------------------------	---------------------------	---

SK_ID_CURR		
100002	0.0	0.0
100003	0.0	0.0
100004	0.0	0.0
100006	NaN	NaN
100007	0.0	0.0
...
456251	NaN	NaN
456252	NaN	NaN
456253	0.0	1.0
456254	0.0	0.0
456255	0.0	2.0

	AMT_REQ_CREDIT_BUREAU_QRT	AMT_REQ_CREDIT_BUREAU_YEAR
SK_ID_CURR		
100002	0.0	1.0
100003	0.0	0.0
100004	0.0	0.0
100006	NaN	NaN
100007	0.0	0.0
...
456251	NaN	NaN
456252	NaN	NaN
456253	0.0	1.0
456254	0.0	0.0
456255	0.0	1.0

[307511 rows x 121 columns]

7.1.2 Dans une pipeline de prétraitements

```
[ ]: X_train, X_test, y_train, y_test = train_test_split(df.iloc[:,1:], df.iloc[:,0],
                                                    test_size=.2)
```

```
train_prep = prep.fit_transform(X_train, y_train)
print(train_prep.shape)
#print(train_prep.shape)
```

(246008, 237)

```
[ ]: train_prep[:5]
```

```
[ ]: array([[0.07041798, 0.06742717, 0.05723906, ..., 0.          , 0.          ,
            0.          ],
            [0.15842697, 0.2458231 , 0.15937149, ..., 0.          , 0.          ,
            0.          ],
            [0.04719101, 0.03624079, 0.04826038, ..., 0.          , 1.          ,
            0.          ]])
```

```

0.          ],
[0.12282584, 0.09124254, 0.10549944, ..., 0.          , 1.          ,
0.          ],
[0.02247191, 0.04956125, 0.02356902, ..., 0.          , 0.          ,
0.          ]])

```

```

[ ]: from preprocessing import get_preprocessed_set_column_names as get_feat_names

print(get_feat_names(pre))

```

```

['AMT_CREDIT', 'AMT_ANNUITY', 'AMT_GOODS_PRICE', 'CNT_CHILDREN',
'AMT_INCOME_TOTAL', 'REGION_POPULATION_RELATIVE', 'DAYS_BIRTH', 'DAYS_EMPLOYED',
'DAYS_REGISTRATION', 'DAYS_ID_PUBLISH', 'OWN_CAR_AGE', 'CNT_FAM_MEMBERS',
'REGION_RATING_CLIENT', 'REGION_RATING_CLIENT_W_CITY',
'HOUR_APPR_PROCESS_START', 'EXT_SOURCE_1', 'EXT_SOURCE_2', 'EXT_SOURCE_3',
'OBS_30_CNT_SOCIAL_CIRCLE', 'DEF_30_CNT_SOCIAL_CIRCLE',
'OBS_60_CNT_SOCIAL_CIRCLE', 'DEF_60_CNT_SOCIAL_CIRCLE',
'DAYS_LAST_PHONE_CHANGE', 'AMT_REQ_CREDIT_BUREAU_HOUR',
'AMT_REQ_CREDIT_BUREAU_DAY', 'AMT_REQ_CREDIT_BUREAU_WEEK',
'AMT_REQ_CREDIT_BUREAU_MON', 'AMT_REQ_CREDIT_BUREAU_QRT',
'AMT_REQ_CREDIT_BUREAU_YEAR', 'APARTMENTS_AVG', 'BASEMENTAREA_AVG',
'YEARS_BEGINEXPLUATATION_AVG', 'YEARS_BUILD_AVG', 'COMMONAREA_AVG',
'ELEVATORS_AVG', 'ENTRANCES_AVG', 'FLOORSMAX_AVG', 'FLOORSMIN_AVG',
'LANDAREA_AVG', 'LIVINGAPARTMENTS_AVG', 'LIVINGAREA_AVG',
'NONLIVINGAPARTMENTS_AVG', 'NONLIVINGAREA_AVG', 'APARTMENTS_MEDI',
'BASEMENTAREA_MEDI', 'YEARS_BEGINEXPLUATATION_MEDI', 'YEARS_BUILD_MEDI',
'COMMONAREA_MEDI', 'ELEVATORS_MEDI', 'ENTRANCES_MEDI', 'FLOORSMAX_MEDI',
'FLOORSMIN_MEDI', 'LANDAREA_MEDI', 'LIVINGAPARTMENTS_MEDI', 'LIVINGAREA_MEDI',
'NONLIVINGAPARTMENTS_MEDI', 'NONLIVINGAREA_MEDI', 'APARTMENTS_MODE',
'BASEMENTAREA_MODE', 'YEARS_BEGINEXPLUATATION_MODE', 'YEARS_BUILD_MODE',
'COMMONAREA_MODE', 'ELEVATORS_MODE', 'ENTRANCES_MODE', 'FLOORSMAX_MODE',
'FLOORSMIN_MODE', 'LANDAREA_MODE', 'LIVINGAPARTMENTS_MODE', 'LIVINGAREA_MODE',
'NONLIVINGAPARTMENTS_MODE', 'NONLIVINGAREA_MODE', 'TOTALAREA_MODE',
'NAME_CONTRACT_TYPE', 'FLAG_OWN_CAR', 'FLAG_OWN_REALTY', 'EMERGENCYSTATE_MODE',
'CODE_GENDER', 'WEEKDAY_APPR_PROCESS_START', 'FLAG_MOBIL', 'FLAG_EMP_PHONE',
'FLAG_WORK_PHONE', 'FLAG_CONT_MOBILE', 'FLAG_PHONE', 'FLAG_EMAIL',
'REG_REGION_NOT_LIVE_REGION', 'REG_REGION_NOT_WORK_REGION',
'LIVE_REGION_NOT_WORK_REGION', 'REG_CITY_NOT_LIVE_CITY',
'REG_CITY_NOT_WORK_CITY', 'LIVE_CITY_NOT_WORK_CITY', 'FLAG_DOCUMENT_2',
'FLAG_DOCUMENT_3', 'FLAG_DOCUMENT_4', 'FLAG_DOCUMENT_5', 'FLAG_DOCUMENT_6',
'FLAG_DOCUMENT_7', 'FLAG_DOCUMENT_8', 'FLAG_DOCUMENT_9', 'FLAG_DOCUMENT_10',
'FLAG_DOCUMENT_11', 'FLAG_DOCUMENT_12', 'FLAG_DOCUMENT_13', 'FLAG_DOCUMENT_14',
'FLAG_DOCUMENT_15', 'FLAG_DOCUMENT_16', 'FLAG_DOCUMENT_17', 'FLAG_DOCUMENT_18',
'FLAG_DOCUMENT_19', 'FLAG_DOCUMENT_20', 'FLAG_DOCUMENT_21',
'NAME_TYPE_SUITE_children', 'NAME_TYPE_SUITE_family',
'NAME_TYPE_SUITE_group_of_people', 'NAME_TYPE_SUITE_other_a',
'NAME_TYPE_SUITE_other_b', 'NAME_TYPE_SUITE_spouse_or_partner',

```


'NAME_TYPE_SUITE_unaccompanied', 'NAME_TYPE_SUITE_unknown',
 'NAME_INCOME_TYPE_businessman', 'NAME_INCOME_TYPE_commercial_associate',
 'NAME_INCOME_TYPE_maternity_leave', 'NAME_INCOME_TYPE_pensioner',
 'NAME_INCOME_TYPE_state_servant', 'NAME_INCOME_TYPE_student',
 'NAME_INCOME_TYPE_unemployed', 'NAME_INCOME_TYPE_working',
 'NAME_EDUCATION_TYPE_academic_degree', 'NAME_EDUCATION_TYPE_higher_education',
 'NAME_EDUCATION_TYPE_incomplete_higher', 'NAME_EDUCATION_TYPE_lower_secondary',
 'NAME_EDUCATION_TYPE_secondary_or_secondary_special',
 'NAME_FAMILY_STATUS_civil_marriage', 'NAME_FAMILY_STATUS_married',
 'NAME_FAMILY_STATUS_separated', 'NAME_FAMILY_STATUS_single_or_not_married',
 'NAME_FAMILY_STATUS_unknown', 'NAME_FAMILY_STATUS_widow',
 'NAME_HOUSING_TYPE_coop_apartment', 'NAME_HOUSING_TYPE_house_or_apartment',
 'NAME_HOUSING_TYPE_municipal_apartment', 'NAME_HOUSING_TYPE_office_apartment',
 'NAME_HOUSING_TYPE_rented_apartment', 'NAME_HOUSING_TYPE_with_parents',
 'OCCUPATION_TYPE_accountants', 'OCCUPATION_TYPE_cleaning_staff',
 'OCCUPATION_TYPE_cooking_staff', 'OCCUPATION_TYPE_core_staff',
 'OCCUPATION_TYPE_drivers', 'OCCUPATION_TYPE_high_skill_tech_staff',
 'OCCUPATION_TYPE_hr_staff', 'OCCUPATION_TYPE_it_staff',
 'OCCUPATION_TYPE_laborers', 'OCCUPATION_TYPE_lowskill_laborers',
 'OCCUPATION_TYPE_managers', 'OCCUPATION_TYPE_medicine_staff',
 'OCCUPATION_TYPE_private_service_staff', 'OCCUPATION_TYPE_realty_agents',
 'OCCUPATION_TYPE_sales_staff', 'OCCUPATION_TYPE_secretaries',
 'OCCUPATION_TYPE_security_staff', 'OCCUPATION_TYPE_unknown',
 'OCCUPATION_TYPE_waitersorbarmen_staff', 'ORGANIZATION_TYPE_advertising',
 'ORGANIZATION_TYPE_agriculture', 'ORGANIZATION_TYPE_bank',
 'ORGANIZATION_TYPE_business_entity_type_1',
 'ORGANIZATION_TYPE_business_entity_type_2',
 'ORGANIZATION_TYPE_business_entity_type_3', 'ORGANIZATION_TYPE_cleaning',
 'ORGANIZATION_TYPE_construction', 'ORGANIZATION_TYPE_culture',
 'ORGANIZATION_TYPE_electricity', 'ORGANIZATION_TYPE_emergency',
 'ORGANIZATION_TYPE_government', 'ORGANIZATION_TYPE_hotel',
 'ORGANIZATION_TYPE_housing', 'ORGANIZATION_TYPE_industry_type_1',
 'ORGANIZATION_TYPE_industry_type_10', 'ORGANIZATION_TYPE_industry_type_11',
 'ORGANIZATION_TYPE_industry_type_12', 'ORGANIZATION_TYPE_industry_type_13',
 'ORGANIZATION_TYPE_industry_type_2', 'ORGANIZATION_TYPE_industry_type_3',
 'ORGANIZATION_TYPE_industry_type_4', 'ORGANIZATION_TYPE_industry_type_5',
 'ORGANIZATION_TYPE_industry_type_6', 'ORGANIZATION_TYPE_industry_type_7',
 'ORGANIZATION_TYPE_industry_type_8', 'ORGANIZATION_TYPE_industry_type_9',
 'ORGANIZATION_TYPE_insurance', 'ORGANIZATION_TYPE_kindergarten',
 'ORGANIZATION_TYPE_legal_services', 'ORGANIZATION_TYPE_medicine',
 'ORGANIZATION_TYPE_military', 'ORGANIZATION_TYPE_mobile',
 'ORGANIZATION_TYPE_other', 'ORGANIZATION_TYPE_police',
 'ORGANIZATION_TYPE_postal', 'ORGANIZATION_TYPE_realtor',
 'ORGANIZATION_TYPE_religion', 'ORGANIZATION_TYPE_restaurant',
 'ORGANIZATION_TYPE_school', 'ORGANIZATION_TYPE_security',
 'ORGANIZATION_TYPE_security_ministries', 'ORGANIZATION_TYPE_selfemployed',
 'ORGANIZATION_TYPE_services', 'ORGANIZATION_TYPE_telecom',
 'ORGANIZATION_TYPE_trade_type_1', 'ORGANIZATION_TYPE_trade_type_2',

```
'ORGANIZATION_TYPE_trade_type_3', 'ORGANIZATION_TYPE_trade_type_4',
'ORGANIZATION_TYPE_trade_type_5', 'ORGANIZATION_TYPE_trade_type_6',
'ORGANIZATION_TYPE_trade_type_7', 'ORGANIZATION_TYPE_transport_type_1',
'ORGANIZATION_TYPE_transport_type_2', 'ORGANIZATION_TYPE_transport_type_3',
'ORGANIZATION_TYPE_transport_type_4', 'ORGANIZATION_TYPE_university',
'ORGANIZATION_TYPE_xna', 'FONDKAPREMONT_MODE_not_specified',
'FONDKAPREMONT_MODE_org_spec_account', 'FONDKAPREMONT_MODE_reg_oper_account',
'FONDKAPREMONT_MODE_reg_oper_spec_account', 'FONDKAPREMONT_MODE_unknown',
'HOUSETYPE_MODE_block_of_flats', 'HOUSETYPE_MODE_specific_housing',
'HOUSETYPE_MODE_terraced_house', 'HOUSETYPE_MODE_unknown',
'WALLSMATERIAL_MODE_block', 'WALLSMATERIAL_MODE_mixed',
'WALLSMATERIAL_MODE_monolithic', 'WALLSMATERIAL_MODE_others',
'WALLSMATERIAL_MODE_panel', 'WALLSMATERIAL_MODE_stone_or_brick',
'WALLSMATERIAL_MODE_unknown', 'WALLSMATERIAL_MODE_wooden']
```

7.2 Test de Random Undersampler

```
[ ]: rand_usampl = RandomUnderSampler()

[ ]: X_train, X_test, y_train, y_test = train_test_split(df.iloc[:,1:], df.iloc[:,0],
                                                    test_size=.2)
      resampling = rand_usampl.fit_resample(X_train, y_train)

[ ]: resampling[0].shape

[ ]: (39798, 120)

[ ]: resampling[1].value_counts()

[ ]: 0    19899
      1    19899
      Name: TARGET, dtype: int64
```

7.3 Essais avec un classifieur en arbre de décision

```
[ ]: tree_imb = Pipeline(steps=[
      ('r', rand_usampl),
      ('p', prep),
      ('m', DecisionTreeClassifier())
    ])

[ ]: X_train, X_test, y_train, y_test = train_test_split(df.iloc[:,1:], df.iloc[:,0],
                                                    test_size=.2)

[ ]: tree_imb.fit(X_train, y_train)
```

```
[ ]: Pipeline(steps=[('r', RandomUnderSampler()),
                      ('p',
                       ColumnTransformer(remainder='passthrough',
                                           transformers=[('creditinfosimputer',
                                                         CreditInfosImputer(),
                                                         ['AMT_CREDIT', 'AMT_ANNUITY',
                                                         'AMT_GOODS_PRICE']),
                                                         ('simpleimputer-1',
                                                         SimpleImputer(strategy='median'),
                                                         ['CNT_CHILDREN',
                                                         'AMT_INCOME_TOTAL',
                                                         'REGION_POPULATION_RELATIVE',
                                                         'DAYS_BIRTH',
                                                         'DAYS_EMPLOYED',
                                                         'DAYS_REGI...
FunctionTransformer(func=<function <lambda> at 0x7f15f0bb90d0>)),
                                                         ('encoder',
                                                         OneHotEncoder(handle_unknown='ignore')))]),
                      ('m', DecisionTreeClassifier()))]
```

```
[ ]: y_pred = tree_imb.predict(X_test)
```

```
[ ]: report = classification_report(y_test, y_pred)
      print(report)
```

	precision	recall	f1-score	support
0	0.94	0.59	0.72	56559
1	0.11	0.60	0.19	4944
accuracy			0.59	61503
macro avg	0.53	0.59	0.46	61503
weighted avg	0.88	0.59	0.68	61503

```
[ ]: conf_mat = confusion_matrix(y_test, y_pred)
      print(conf_mat)
```

```
[[33287 23272]
 [ 1997  2947]]
```

8 2021-10-01 : Selection du meilleur modèle

```
[ ]: # Importations
import sys
sys.path.append('..')

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

# Prétraitements et rééquilibrage
from preprocessing import preprocessor
from imblearn.under_sampling import RandomUnderSampler
from sklearn.preprocessing import StandardScaler
from imblearn.pipeline import Pipeline

# Modèles à tester
from sklearn.model_selection import train_test_split
from sklearn.linear_model import SGDClassifier
from sklearn.tree import DecisionTreeClassifier
from sklearn.ensemble import RandomForestClassifier, AdaBoostClassifier
from lightgbm import LGBMClassifier

# Évaluation
from sklearn.metrics import classification_report, confusion_matrix

# Autres
from timer import timer
from styles import *
```

```
[ ]: # Initialisation
train = pd.read_csv('../02_data/application_train.csv', index_col=0)
#test = pd.read_csv('../02_data/application_test.csv')

print('Training set dimensions :', train.shape)
df = train.copy()

cls_size = df.TARGET.value_counts()
cls_freq = df.TARGET.value_counts(normalize=True)
print(pd.DataFrame({'size': cls_size,
                    'freq': cls_freq.apply(lambda x: '%.2f' % x)}))
```

Training set dimensions : (307511, 121)

```
      size  freq
0  282686  0.92
1   24825  0.08
```

```
[ ]: df.head()
```

```
[ ]: TARGET NAME_CONTRACT_TYPE CODE_GENDER FLAG_OWN_CAR \
```

```
SK_ID_CURR
```

100002	1	Cash loans	M	N
100003	0	Cash loans	F	N
100004	0	Revolving loans	M	Y
100006	0	Cash loans	F	N
100007	0	Cash loans	M	N

```
FLAG_OWN_REALTY CNT_CHILDREN AMT_INCOME_TOTAL AMT_CREDIT \
```

```
SK_ID_CURR
```

100002	Y	0	202500.0	406597.5
100003	N	0	270000.0	1293502.5
100004	Y	0	67500.0	135000.0
100006	Y	0	135000.0	312682.5
100007	Y	0	121500.0	513000.0

```
AMT_ANNUITY AMT_GOODS_PRICE ... FLAG_DOCUMENT_18 \
```

```
SK_ID_CURR
```

100002	24700.5	351000.0	...	0
100003	35698.5	1129500.0	...	0
100004	6750.0	135000.0	...	0
100006	29686.5	297000.0	...	0
100007	21865.5	513000.0	...	0

```
FLAG_DOCUMENT_19 FLAG_DOCUMENT_20 FLAG_DOCUMENT_21 \
```

```
SK_ID_CURR
```

100002	0	0	0
100003	0	0	0
100004	0	0	0
100006	0	0	0
100007	0	0	0

```
AMT_REQ_CREDIT_BUREAU_HOUR AMT_REQ_CREDIT_BUREAU_DAY \
```

```
SK_ID_CURR
```

100002	0.0	0.0
100003	0.0	0.0
100004	0.0	0.0
100006	NaN	NaN
100007	0.0	0.0

SK_ID_CURR	AMT_REQ_CREDIT_BUREAU_WEEK	AMT_REQ_CREDIT_BUREAU_MON \
100002	0.0	0.0
100003	0.0	0.0
100004	0.0	0.0
100006	NaN	NaN
100007	0.0	0.0

SK_ID_CURR	AMT_REQ_CREDIT_BUREAU_QRT	AMT_REQ_CREDIT_BUREAU_YEAR
100002	0.0	1.0
100003	0.0	0.0
100004	0.0	0.0
100006	NaN	NaN
100007	0.0	0.0

[5 rows x 121 columns]

```
[ ]: # Définition des modèles à tester

# Pour les besoin de l'évaluation, on fige l'aléatoire
# On définit un nombre pour la graine d'aléa
r = 42

undersampler = RandomUnderSampler(random_state=r)
scaler = StandardScaler()

stochastic_grad = Pipeline([('u', undersampler),
                             ('p', preprocessor),
                             ('s', scaler),
                             ('m', SGDClassifier(random_state=r))])

decision_tree = Pipeline([('u', undersampler),
                           ('p', preprocessor),
                           ('m', DecisionTreeClassifier(random_state=r))])

random_forest = Pipeline([('u', undersampler),
                           ('p', preprocessor),
                           ('m', RandomForestClassifier(random_state=r))])

ada_boost = Pipeline([('u', undersampler),
                       ('p', preprocessor),
                       ('m', AdaBoostClassifier(random_state=r))])

light_gbm = Pipeline([('u', undersampler),
                       ('p', preprocessor),
                       ('m', LGBMClassifier(random_state=r))])
```

```
# Liste des modèles à tester
models = {'stochastic_grad': stochastic_grad,
          'decision_tree': decision_tree,
          'random_forest': random_forest,
          'ada_boost': ada_boost,
          'light_gbm': light_gbm}
```

```
[ ]: # Séparation du jeu de données entre entraînement et évaluation
```

```
X_train, X_test, y_train, y_test = train_test_split(df.iloc[:,1:], df.iloc[:,0],
                                                    test_size=.2,
                                                    random_state=r)
```

```
[ ]: # Fonction d'évaluation des modèles
```

```
@timer
def model_eval(model, X_test, y_test):
    y_pred = model.predict(X_test)
    print(confusion_matrix(y_test, y_pred))
    print(classification_report(y_test, y_pred))
```

```
[ ]: # Boucle d'évaluation des modèles
```

```
for model_name, model in models.items():
    print(model_name)
    model_eval(model.fit(X_train, y_train), X_test, y_test)
```

```
stochastic_grad
[[37056 19498]
 [ 1599  3350]]
      precision    recall  f1-score   support

     0       0.96      0.66      0.78      56554
     1       0.15      0.68      0.24       4949

 accuracy                   0.66      61503
 macro avg       0.55      0.67      0.51      61503
 weighted avg    0.89      0.66      0.74      61503
```

```
'model_eval': successfully processed in 0h00m02.057879s.
```

```
decision_tree
[[33015 23539]
 [ 1983  2966]]
      precision    recall  f1-score   support

     0       0.94      0.58      0.72      56554
     1       0.11      0.60      0.19       4949
```

accuracy			0.59	61503
macro avg	0.53	0.59	0.45	61503
weighted avg	0.88	0.59	0.68	61503

'model_eval': successfully processed in 0h00m01.834573s.

random_forest

[[39311 17243]

[1714 3235]]

	precision	recall	f1-score	support
0	0.96	0.70	0.81	56554
1	0.16	0.65	0.25	4949

accuracy			0.69	61503
macro avg	0.56	0.67	0.53	61503
weighted avg	0.89	0.69	0.76	61503

'model_eval': successfully processed in 0h00m04.378112s.

ada_boost

[[38631 17923]

[1610 3339]]

	precision	recall	f1-score	support
0	0.96	0.68	0.80	56554
1	0.16	0.67	0.25	4949

accuracy			0.68	61503
macro avg	0.56	0.68	0.53	61503
weighted avg	0.90	0.68	0.75	61503

'model_eval': successfully processed in 0h00m04.319357s.

light_gbm

[[39135 17419]

[1568 3381]]

	precision	recall	f1-score	support
0	0.96	0.69	0.80	56554
1	0.16	0.68	0.26	4949

accuracy			0.69	61503
macro avg	0.56	0.69	0.53	61503
weighted avg	0.90	0.69	0.76	61503

'model_eval': successfully processed in 0h00m01.914349s.

8.1 Sélection des meilleures variables

```
[ ]: from preprocessing import get_preprocessed_set_column_names as get_feat_names

def get_feature_importances(model):
    '''Fonction qui retourne l'importance relative des variables
    pour un modèle donné et un jeu d'entraînement donné'''
    feat_names = get_feat_names(model['p'])
    feat_impor = model['m'].feature_importances_

    importances = pd.Series(data={k:v for k,v in zip(feat_names,feat_impor)},
                            index=feat_names)

    return importances
```

```
[ ]: models_feat_importances = []
for model in models.values():
    if model != stochastic_grad:
        feat_importances = get_feature_importances(model.fit(X_train, y_train))
        models_feat_importances.append(feat_importances)
```

```
[ ]: feature_importances = pd.DataFrame(np.asarray(models_feat_importances).T,
                                       columns=[key for key in models.keys()
                                                if key != 'stochastic_grad'],
                                       index=feat_importances.index)
```

```
[ ]: feature_importances
```

```
[ ]:
```

	decision_tree	random_forest	ada_boost	\
AMT_CREDIT	0.030328	0.029792	0.04	
AMT_ANNUITY	0.036745	0.029496	0.06	
AMT_GOODS_PRICE	0.023268	0.027307	0.04	
FLAG_OWN_CAR	0.001408	0.004184	0.00	
OWN_CAR_AGE	0.014856	0.011977	0.04	
...	
WALLSMATERIAL_MODE_others	0.000083	0.000277	0.00	
WALLSMATERIAL_MODE_panel	0.001487	0.001415	0.00	
WALLSMATERIAL_MODE_stone_or_brick	0.001640	0.001594	0.00	
WALLSMATERIAL_MODE_unknown	0.000466	0.001120	0.00	
WALLSMATERIAL_MODE_wooden	0.000309	0.000416	0.00	
	light_gbm			
AMT_CREDIT	143.0			
AMT_ANNUITY	144.0			
AMT_GOODS_PRICE	122.0			
FLAG_OWN_CAR	19.0			
OWN_CAR_AGE	36.0			

```

...
WALLSMATERIAL_MODE_others      2.0
WALLSMATERIAL_MODE_panel      1.0
WALLSMATERIAL_MODE_stone_or_brick 4.0
WALLSMATERIAL_MODE_unknown     1.0
WALLSMATERIAL_MODE_wooden      0.0

```

[235 rows x 4 columns]

```
[ ]: feature_importances.random_forest.sort_values(ascending=False)[:10]
```

```

[ ]: EXT_SOURCE_3      0.067334
EXT_SOURCE_2          0.059467
DAYS_BIRTH            0.035314
DAYS_ID_PUBLISH       0.031396
DAYS_EMPLOYED         0.030771
DAYS_LAST_PHONE_CHANGE 0.030171
DAYS_REGISTRATION     0.029835
AMT_CREDIT            0.029792
AMT_ANNUITY           0.029496
EXT_SOURCE_1          0.028689
Name: random_forest, dtype: float64

```

```
[ ]: feature_importances.loc[feature_importances.random_forest>.01, 'random_forest']
```

```

[ ]: AMT_CREDIT      0.029792
AMT_ANNUITY         0.029496
AMT_GOODS_PRICE     0.027307
OWN_CAR_AGE         0.011977
AMT_INCOME_TOTAL    0.022573
REGION_POPULATION_RELATIVE 0.024397
DAYS_BIRTH          0.035314
DAYS_EMPLOYED       0.030771
DAYS_REGISTRATION   0.029835
DAYS_ID_PUBLISH     0.031396
HOUR_APPR_PROCESS_START 0.020793
EXT_SOURCE_1        0.028689
EXT_SOURCE_2        0.059467
EXT_SOURCE_3        0.067334
OBS_30_CNT_SOCIAL_CIRCLE 0.011729
OBS_60_CNT_SOCIAL_CIRCLE 0.011754
DAYS_LAST_PHONE_CHANGE 0.030171
AMT_REQ_CREDIT_BUREAU_YEAR 0.014815
WEEKDAY_APPR_PROCESS_START 0.015039
Name: random_forest, dtype: float64

```

```
[ ]: feature_importances.random_forest.sort_values(ascending=True)[:20]
```

```
[ ]: FLAG_DOCUMENT_12          0.000000e+00
      FLAG_DOCUMENT_10          0.000000e+00
      FLAG_MOBIL                0.000000e+00
      FLAG_DOCUMENT_4           0.000000e+00
      NAME_INCOME_TYPE_maternity_leave 8.804596e-07
      NAME_INCOME_TYPE_student    3.140687e-06
      ORGANIZATION_TYPE_industry_type_8 5.303477e-06
      NAME_EDUCATION_TYPE_academic_degree 7.688181e-06
      ORGANIZATION_TYPE_trade_type_5 8.590358e-06
      ORGANIZATION_TYPE_religion 1.138544e-05
      FLAG_DOCUMENT_2           1.402962e-05
      FLAG_DOCUMENT_17          1.746293e-05
      NAME_INCOME_TYPE_unemployed 1.984359e-05
      FLAG_DOCUMENT_7           2.007277e-05
      ORGANIZATION_TYPE_industry_type_13 2.037465e-05
      ORGANIZATION_TYPE_trade_type_4 2.613527e-05
      FLAG_DOCUMENT_21          2.898975e-05
      FLAG_DOCUMENT_20          3.019205e-05
      ORGANIZATION_TYPE_industry_type_6 3.422162e-05
      ORGANIZATION_TYPE_transport_type_1 4.431209e-05
      Name: random_forest, dtype: float64
```

```
[ ]: feature_importances.filter(like='FLAG', axis=0)
```

```
[ ]:
      decision_tree  random_forest  ada_boost  light_gbm
FLAG_OWN_CAR        0.001408      0.004184      0.00      19.0
FLAG_OWN_REALTY     0.004182      0.004919      0.00      4.0
FLAG_MOBIL          0.000000      0.000000      0.00      0.0
FLAG_EMP_PHONE      0.000947      0.001777      0.00      0.0
FLAG_WORK_PHONE     0.002777      0.003858      0.00     11.0
FLAG_CONT_MOBILE    0.000089      0.000102      0.00      0.0
FLAG_PHONE          0.003196      0.004425      0.00      8.0
FLAG_EMAIL          0.001866      0.001970      0.00      1.0
FLAG_DOCUMENT_2     0.000096      0.000014      0.00      0.0
FLAG_DOCUMENT_3     0.003608      0.004766      0.02     24.0
FLAG_DOCUMENT_4     0.000000      0.000000      0.00      0.0
FLAG_DOCUMENT_5     0.001146      0.000842      0.00      1.0
FLAG_DOCUMENT_6     0.001838      0.001488      0.00      2.0
FLAG_DOCUMENT_7     0.000000      0.000020      0.00      0.0
FLAG_DOCUMENT_8     0.001593      0.001884      0.00      2.0
FLAG_DOCUMENT_9     0.000200      0.000188      0.00      0.0
FLAG_DOCUMENT_10    0.000000      0.000000      0.00      0.0
FLAG_DOCUMENT_11    0.000182      0.000171      0.00      0.0
FLAG_DOCUMENT_12    0.000000      0.000000      0.00      0.0
FLAG_DOCUMENT_13    0.000090      0.000164      0.02      6.0
FLAG_DOCUMENT_14    0.000000      0.000114      0.00      1.0
FLAG_DOCUMENT_15    0.000181      0.000076      0.00      0.0
```

FLAG_DOCUMENT_16	0.000880	0.000551	0.02	11.0
FLAG_DOCUMENT_17	0.000000	0.000017	0.00	0.0
FLAG_DOCUMENT_18	0.000191	0.000536	0.02	11.0
FLAG_DOCUMENT_19	0.000082	0.000045	0.00	0.0
FLAG_DOCUMENT_20	0.000000	0.000030	0.00	0.0
FLAG_DOCUMENT_21	0.000000	0.000029	0.00	0.0

```
[ ]: feat_importances[[f for f in feat_importances.index
                        if f[-4:] in ['_AVG', '_MEDI', '_MODE']]]
```

```
[ ]: APARTMENTS_AVG                23
      BASEMENTAREA_AVG             26
      YEARS_BEGINEXPLUATATION_AVG  23
      YEARS_BUILD_AVG              6
      COMMONAREA_AVG              24
      ELEVATORS_AVG                6
      ENTRANCES_AVG               11
      FLOORSMAX_AVG                5
      FLOORSMIN_AVG               10
      LANDAREA_AVG                 22
      LIVINGAPARTMENTS_AVG         12
      LIVINGAREA_AVG               16
      NONLIVINGAPARTMENTS_AVG      4
      NONLIVINGAREA_AVG            14
      APARTMENTS_MEDI              14
      BASEMENTAREA_MEDI            12
      YEARS_BEGINEXPLUATATION_MEDI  8
      YEARS_BUILD_MEDI             2
      COMMONAREA_MEDI              11
      ELEVATORS_MEDI               7
      ENTRANCES_MEDI               4
      FLOORSMAX_MEDI               2
      FLOORSMIN_MEDI               0
      LANDAREA_MEDI                11
      LIVINGAPARTMENTS_MEDI         9
      LIVINGAREA_MEDI              15
      NONLIVINGAPARTMENTS_MEDI      5
      NONLIVINGAREA_MEDI            12
      APARTMENTS_MODE              23
      BASEMENTAREA_MODE            13
      YEARS_BEGINEXPLUATATION_MODE  15
      YEARS_BUILD_MODE              8
      COMMONAREA_MODE              11
      ELEVATORS_MODE                3
      ENTRANCES_MODE               8
      FLOORSMAX_MODE                3
      FLOORSMIN_MODE                3
```

LANDAREA_MODE	18
LIVINGAPARTMENTS_MODE	14
LIVINGAREA_MODE	24
NONLIVINGAPARTMENTS_MODE	8
NONLIVINGAREA_MODE	9
TOTALAREA_MODE	33
EMERGENCYSTATE_MODE	0

dtype: int32

- Les variables type FLAG semblent peu impactantes pour des modèles en arbre de décision
- Il faut réduire les nombres de colonnes onehot pour les types de métiers et d'organisation car la cardinalité de ces variables est trop grande. Certaines catégories d'organisations ou de métiers sont trop spécifiques et peuvent être regroupées

```
[ ]: df.ORGANIZATION_TYPE.unique()
```

```
[ ]: array(['Business Entity Type 3', 'School', 'Government', 'Religion',
        'Other', 'XNA', 'Electricity', 'Medicine',
        'Business Entity Type 2', 'Self-employed', 'Transport: type 2',
        'Construction', 'Housing', 'Kindergarten', 'Trade: type 7',
        'Industry: type 11', 'Military', 'Services', 'Security Ministries',
        'Transport: type 4', 'Industry: type 1', 'Emergency', 'Security',
        'Trade: type 2', 'University', 'Transport: type 3', 'Police',
        'Business Entity Type 1', 'Postal', 'Industry: type 4',
        'Agriculture', 'Restaurant', 'Culture', 'Hotel',
        'Industry: type 7', 'Trade: type 3', 'Industry: type 3', 'Bank',
        'Industry: type 9', 'Insurance', 'Trade: type 6',
        'Industry: type 2', 'Transport: type 1', 'Industry: type 12',
        'Mobile', 'Trade: type 1', 'Industry: type 5', 'Industry: type 10',
        'Legal Services', 'Advertising', 'Trade: type 5', 'Cleaning',
        'Industry: type 13', 'Trade: type 4', 'Telecom',
        'Industry: type 8', 'Realtor', 'Industry: type 6'], dtype=object)
```

```
[ ]: df.loc[df.ORGANIZATION_TYPE.str.match(r'^Industry'),
        'ORGANIZATION_TYPE'] = 'Industry'
df.loc[df.ORGANIZATION_TYPE.str.match(r'^Transport'),
        'ORGANIZATION_TYPE'] = 'Transport'
df.loc[df.ORGANIZATION_TYPE.str.match(r'^Trade'),
        'ORGANIZATION_TYPE'] = 'Trade'
df.loc[df.ORGANIZATION_TYPE.str.match(r'^Business Entity'),
        'ORGANIZATION_TYPE'] = 'Business Entity'
```

```
[ ]: print(df.ORGANIZATION_TYPE.unique())
print(len(df.ORGANIZATION_TYPE.unique()))
```

```
['Business Entity' 'School' 'Government' 'Religion' 'Other' 'XNA'
 'Electricity' 'Medicine' 'Self-employed' 'Transport' 'Construction'
 'Housing' 'Kindergarten' 'Trade' 'Industry' 'Military' 'Services']
```

```
'Security Ministries' 'Emergency' 'Security' 'University' 'Police'
'Postal' 'Agriculture' 'Restaurant' 'Culture' 'Hotel' 'Bank' 'Insurance'
'Mobile' 'Legal Services' 'Advertising' 'Cleaning' 'Telecom' 'Realtor']
35
```

```
[ ]: df.ORGANIZATION_TYPE.value_counts()
```

```
[ ]: Business Entity      84529
XNA                      55374
Self-employed           38412
Other                   16683
Trade                   14315
Industry                14311
Medicine                11193
Government              10404
Transport                8990
School                  8893
Kindergarten           6880
Construction            6721
Security                3247
Housing                 2958
Military                2634
Bank                    2507
Agriculture             2454
Police                  2341
Postal                  2157
Security Ministries     1974
Restaurant              1811
Services                1575
University              1327
Hotel                   966
Electricity             950
Insurance               597
Telecom                 577
Emergency               560
Advertising             429
Realtor                 396
Culture                 379
Mobile                  317
Legal Services          305
Cleaning                260
Religion                85
Name: ORGANIZATION_TYPE, dtype: int64
```

```
[ ]: # Séparation du jeu de données entre entraînement et évaluation
X_train, X_test, y_train, y_test = train_test_split(df.iloc[:,1:], df.iloc[:,0],
                                                    test_size=.2,
```

```
random_state=r)
```

```
[ ]: # Boucle d'évaluation des modèles
for model_name, model in models.items():
    print(model_name)
    model_eval(model.fit(X_train, y_train), X_test, y_test)
```

decision_tree

[[33134 23420]

[2030 2919]]

	precision	recall	f1-score	support
0	0.94	0.59	0.72	56554
1	0.11	0.59	0.19	4949
accuracy			0.59	61503
macro avg	0.53	0.59	0.45	61503
weighted avg	0.88	0.59	0.68	61503

'model_eval': successfully processed in 0h00m01.840444s.

random_forest

[[39346 17208]

[1713 3236]]

	precision	recall	f1-score	support
0	0.96	0.70	0.81	56554
1	0.16	0.65	0.25	4949
accuracy			0.69	61503
macro avg	0.56	0.67	0.53	61503
weighted avg	0.89	0.69	0.76	61503

'model_eval': successfully processed in 0h00m03.689332s.

ada_boost

[[38542 18012]

[1614 3335]]

	precision	recall	f1-score	support
0	0.96	0.68	0.80	56554
1	0.16	0.67	0.25	4949
accuracy			0.68	61503
macro avg	0.56	0.68	0.53	61503
weighted avg	0.90	0.68	0.75	61503

'model_eval': successfully processed in 0h00m03.281466s.

light_gbm

```
[[39073 17481]
 [ 1558  3391]]
      precision    recall  f1-score   support

     0       0.96      0.69      0.80     56554
     1       0.16      0.69      0.26      4949

 accuracy                   0.69     61503
 macro avg       0.56      0.69      0.53     61503
 weighted avg    0.90      0.69      0.76     61503
```

'model_eval': successfully processed in 0h00m01.650653s.

```
[ ]: new_importances = get_feature_importances(random_forest)
```

```
[ ]: new_importances.sort_values(ascending=False)[:20]
```

```
[ ]: EXT_SOURCE_3                0.066164
     EXT_SOURCE_2                0.061207
     DAYS_BIRTH                 0.034511
     DAYS_EMPLOYED              0.031532
     DAYS_ID_PUBLISH            0.031449
     DAYS_LAST_PHONE_CHANGE     0.030263
     AMT_ANNUITY                0.030164
     EXT_SOURCE_1               0.030088
     DAYS_REGISTRATION          0.030017
     AMT_CREDIT                 0.029999
     AMT_GOODS_PRICE            0.027940
     REGION_POPULATION_RELATIVE 0.023971
     AMT_INCOME_TOTAL           0.023164
     HOUR_APPR_PROCESS_START    0.020020
     WEEKDAY_APPR_PROCESS_START 0.015229
     AMT_REQ_CREDIT_BUREAU_YEAR 0.014610
     OWN_CAR_AGE                0.013775
     OBS_30_CNT_SOCIAL_CIRCLE   0.011943
     OBS_60_CNT_SOCIAL_CIRCLE   0.011638
     TOTALAREA_MODE             0.009789
dtype: float64
```

```
[ ]: new_importances.sort_values(ascending=True)[:20]
```

```
[ ]: FLAG_MOBIL                0.000000
     FLAG_DOCUMENT_12          0.000000
     FLAG_DOCUMENT_4           0.000000
     FLAG_DOCUMENT_10          0.000000
     NAME_INCOME_TYPE_maternity_leave 0.000002
     NAME_INCOME_TYPE_student    0.000003
```


FLAG_DOCUMENT_7	0.000007
FLAG_DOCUMENT_17	0.000011
NAME_EDUCATION_TYPE_academic_degree	0.000013
NAME_INCOME_TYPE_unemployed	0.000015
FLAG_DOCUMENT_2	0.000019
FLAG_DOCUMENT_21	0.000021
FLAG_DOCUMENT_20	0.000026
ORGANIZATION_TYPE_religion	0.000027
FLAG_DOCUMENT_19	0.000042
ORGANIZATION_TYPE_cleaning	0.000053
OCCUPATION_TYPE_hr_staff	0.000063
FLAG_DOCUMENT_15	0.000069
ORGANIZATION_TYPE_legal_services	0.000072
ORGANIZATION_TYPE_realtor	0.000075

dtype: float64

8.2 Optimisation des hypers-paramètres

On va optimiser les hypers-paramètres de light-gbm avec une RandomizedSearchCV

```
[ ]: # Importations
import sys
sys.path.append('.')

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

from preprocessing import preprocessor
from sklearn.model_selection import train_test_split
from imblearn.under_sampling import RandomUnderSampler
from imblearn.pipeline import Pipeline
from lightgbm import LGBMClassifier
from modelling_funcs import model_eval

from sklearn.model_selection import GridSearchCV, RandomizedSearchCV
```

```
[ ]: # Initialisation
train = pd.read_csv('../02_data/application_train.csv', index_col=0)
#test = pd.read_csv('../02_data/application_test.csv')

print('Training set dimensions :', train.shape)
df = train.copy()

cls_size = df.TARGET.value_counts()
cls_freq = df.TARGET.value_counts(normalize=True)
print(pd.DataFrame({'size': cls_size,
```

```
'freq': cls_freq.apply(lambda x: '%.2f' % x)))
```

Training set dimensions : (307511, 121)

```
size freq
0 282686 0.92
1 24825 0.08
```

```
[ ]: # Définition du modèle de base, à optimiser
r = 42
undersampler = RandomUnderSampler(random_state=r)

baseline_model = Pipeline([('u', undersampler),
                           ('p', preprocessor),
                           ('light_gbm', LGBMClassifier(random_state=r))])
```

```
[ ]: # Séparation du jeu de données entre entraînement et évaluation

X_train, X_test, y_train, y_test = train_test_split(df.iloc[:,1:], df.iloc[:,0],
                                                    test_size=.2,
                                                    random_state=r)
```

```
[ ]: model_eval(baseline_model.fit(X_train, y_train), X_test, y_test)
```

```
[[39135 17419]
 [ 1568  3381]]
```

	precision	recall	f1-score	support
0	0.96	0.69	0.80	56554
1	0.16	0.68	0.26	4949
accuracy			0.69	61503
macro avg	0.56	0.69	0.53	61503
weighted avg	0.90	0.69	0.76	61503

'model_eval': successfully processed in 0h00m01.721089s.

```
[ ]: hyper_params = {'light_gbm__num_leaves': np.linspace(10, 100, 4, dtype=int),
                    'light_gbm__n_estimators': np.linspace(50, 1000, 10, dtype=int)}

param_dims = []
for hyper_param in hyper_params.values():
    param_dims.append(len(hyper_param))
print(np.product(param_dims), 'combinations to test.')
```

40 combinations to test.

```
[ ]: grid_search = GridSearchCV(baseline_model, hyper_params, scoring='recall', cv=5)
grid_search.fit(X_train, y_train)
print(grid_search.best_params_)
```

```
{'light_gbm__n_estimators': 350, 'light_gbm__num_leaves': 10}
```

```
[ ]: best_model = grid_search.best_estimator_
model_eval(best_model, X_test, y_test)
```

```
[[39215 17339]
 [ 1556  3393]]
```

	precision	recall	f1-score	support
0	0.96	0.69	0.81	56554
1	0.16	0.69	0.26	4949
accuracy			0.69	61503
macro avg	0.56	0.69	0.54	61503
weighted avg	0.90	0.69	0.76	61503

```
'model_eval': successfully processed in 0h00m01.741054s.
```

```
[ ]: light_gbm.get_params().keys()
```

```
[ ]: dict_keys(['memory', 'steps', 'verbose', 'u', 'p', 'm', 'u__random_state',
'u__replacement', 'u__sampling_strategy', 'p__n_jobs', 'p__remainder',
'p__sparse_threshold', 'p__transformer_weights', 'p__transformers',
'p__verbose', 'p__creditinfosimputer', 'p__carinfosimputer',
'p__simpleimputer-1', 'p__simpleimputer-2', 'p__simpleimputer-3',
'p__simpleimputer-4', 'p__pipeline-1', 'p__pipeline-2', 'p__pipeline-3',
'p__simpleimputer-1__add_indicator', 'p__simpleimputer-1__copy',
'p__simpleimputer-1__fill_value', 'p__simpleimputer-1__missing_values',
'p__simpleimputer-1__strategy', 'p__simpleimputer-1__verbose',
'p__simpleimputer-2__add_indicator', 'p__simpleimputer-2__copy',
'p__simpleimputer-2__fill_value', 'p__simpleimputer-2__missing_values',
'p__simpleimputer-2__strategy', 'p__simpleimputer-2__verbose',
'p__simpleimputer-3__add_indicator', 'p__simpleimputer-3__copy',
'p__simpleimputer-3__fill_value', 'p__simpleimputer-3__missing_values',
'p__simpleimputer-3__strategy', 'p__simpleimputer-3__verbose',
'p__simpleimputer-4__add_indicator', 'p__simpleimputer-4__copy',
'p__simpleimputer-4__fill_value', 'p__simpleimputer-4__missing_values',
'p__simpleimputer-4__strategy', 'p__simpleimputer-4__verbose',
'p__pipeline-1__memory', 'p__pipeline-1__steps', 'p__pipeline-1__verbose',
'p__pipeline-1__nan_imputer', 'p__pipeline-1__xna_imputer',
'p__pipeline-1__encoder', 'p__pipeline-1__nan_imputer__add_indicator',
'p__pipeline-1__nan_imputer__copy', 'p__pipeline-1__nan_imputer__fill_value',
'p__pipeline-1__nan_imputer__missing_values',
```

```

'p__pipeline-1__nan_imputer__strategy', 'p__pipeline-1__nan_imputer__verbose',
'p__pipeline-1__xna_imputer__add_indicator', 'p__pipeline-1__xna_imputer__copy',
'p__pipeline-1__xna_imputer__fill_value',
'p__pipeline-1__xna_imputer__missing_values',
'p__pipeline-1__xna_imputer__strategy', 'p__pipeline-1__xna_imputer__verbose',
'p__pipeline-1__encoder__categories', 'p__pipeline-1__encoder__dtype',
'p__pipeline-1__encoder__handle_unknown',
'p__pipeline-1__encoder__unknown_value', 'p__pipeline-2__memory',
'p__pipeline-2__steps', 'p__pipeline-2__verbose', 'p__pipeline-2__imputer',
'p__pipeline-2__imputer__add_indicator', 'p__pipeline-2__imputer__copy',
'p__pipeline-2__imputer__fill_value', 'p__pipeline-2__imputer__missing_values',
'p__pipeline-2__imputer__strategy', 'p__pipeline-2__imputer__verbose',
'p__pipeline-3__memory', 'p__pipeline-3__steps', 'p__pipeline-3__verbose',
'p__pipeline-3__nan_imputer', 'p__pipeline-3__xna_imputer',
'p__pipeline-3__formatter', 'p__pipeline-3__encoder',
'p__pipeline-3__nan_imputer__add_indicator', 'p__pipeline-3__nan_imputer__copy',
'p__pipeline-3__nan_imputer__fill_value',
'p__pipeline-3__nan_imputer__missing_values',
'p__pipeline-3__nan_imputer__strategy', 'p__pipeline-3__nan_imputer__verbose',
'p__pipeline-3__xna_imputer__add_indicator', 'p__pipeline-3__xna_imputer__copy',
'p__pipeline-3__xna_imputer__fill_value',
'p__pipeline-3__xna_imputer__missing_values',
'p__pipeline-3__xna_imputer__strategy', 'p__pipeline-3__xna_imputer__verbose',
'p__pipeline-3__formatter__accept_sparse',
'p__pipeline-3__formatter__check_inverse', 'p__pipeline-3__formatter__func',
'p__pipeline-3__formatter__inv_kw_args',
'p__pipeline-3__formatter__inverse_func', 'p__pipeline-3__formatter__kw_args',
'p__pipeline-3__formatter__validate', 'p__pipeline-3__encoder__categories',
'p__pipeline-3__encoder__drop', 'p__pipeline-3__encoder__dtype',
'p__pipeline-3__encoder__handle_unknown', 'p__pipeline-3__encoder__sparse',
'm__boosting_type', 'm__class_weight', 'm__colsample_bytree',
'm__importance_type', 'm__learning_rate', 'm__max_depth',
'm__min_child_samples', 'm__min_child_weight', 'm__min_split_gain',
'm__n_estimators', 'm__n_jobs', 'm__num_leaves', 'm__objective',
'm__random_state', 'm__reg_alpha', 'm__reg_lambda', 'm__silent', 'm__subsample',
'm__subsample_for_bin', 'm__subsample_freq'])

```

```
[ ]: np.linspace(50, 1000, 20)
```

```
[ ]: array([ 50., 100., 150., 200., 250., 300., 350., 400., 450.,
          500., 550., 600., 650., 700., 750., 800., 850., 900.,
          950., 1000.])
```

```
[ ]: # hyper optimisation (randomized search / hyperopt?)
# (lien vers hyperopt : https://www.kaggle.com/shishu1421/
    ↪ lightgbm-using-hyperopt)
# calcul seuil de décision basé sur coût crédit
```

```
# Commencer la partie Flask
# Streamlit (pour la partie dashboard web [https://streamlit.io/])
```

9 2021-10-04 : LightGBM - Optimisation des hyper-paramètres

```
[ ]: # Importations
import sys
sys.path.append('.')

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

from preprocessing import preprocessor
from sklearn.model_selection import train_test_split
from imblearn.under_sampling import RandomUnderSampler
from imblearn.pipeline import Pipeline
from lightgbm import LGBMClassifier
from modelling_funcs import model_eval
from sklearn.metrics import recall_score, precision_score

from sklearn.model_selection import GridSearchCV, RandomizedSearchCV
```

```
[ ]: # Initialisation
train = pd.read_csv('../02_data/application_train.csv', index_col=0)
#test = pd.read_csv('../02_data/application_test.csv')

print('Training set dimensions :', train.shape)
df = train.copy()

cls_size = df.TARGET.value_counts()
cls_freq = df.TARGET.value_counts(normalize=True)
print(pd.DataFrame({'size': cls_size,
                    'freq': cls_freq.apply(lambda x: '%.2f' % x)}))
```

Training set dimensions : (307511, 121)

	size	freq
0	282686	0.92
1	24825	0.08

```
[ ]: # Définition du modèle de base, à optimiser
r = 42
undersampler = RandomUnderSampler(random_state=r)

baseline_model = Pipeline([('u', undersampler),
                          ('p', preprocessor),
```

```
('light_gbm', LGBMClassifier(random_state=r)))]
```

```
[ ]: # Séparation du jeu de données entre entraînement et évaluation
```

```
X_train, X_test, y_train, y_test = train_test_split(df.iloc[:,1:], df.iloc[:,0],
                                                    test_size=.2,
                                                    random_state=r)
```

```
[ ]: model_eval(baseline_model.fit(X_train, y_train), X_test, y_test)
```

```
[[39135 17419]
 [ 1568  3381]]

      precision    recall  f1-score   support

     0       0.96      0.69      0.80     56554
     1       0.16      0.68      0.26      4949

 accuracy                   0.69     61503
 macro avg       0.56      0.69      0.53     61503
 weighted avg    0.90      0.69      0.76     61503
```

'model_eval': successfully processed in 0h00m01.730331s.

Objectif : une précision de 50 % et un recall de 70 % pour la classe 1 après une 1ère optimisation des paramètres Une fois l'objectif atteint, optimisation du seuil précision/recall pour maximiser les profits de l'organisme de crédit

```
[ ]: from scipy.stats import uniform as sp_uniform
```

```
params = {'light_gbm__n_estimators': np.linspace(200, 500, 20, dtype=int),
          'light_gbm__num_leaves': np.linspace(10, 20, 10, dtype=int),
          'light_gbm__min_child_samples': np.linspace(80, 200, 50, dtype=int),
          'light_gbm__min_child_weight': np.logspace(2, 3, 10),
          'light_gbm__subsample': [sp_uniform.rvs(loc=0.2, scale=0.8)],
          'light_gbm__colsample_bytree': [sp_uniform.rvs(loc=0.4, scale=0.6)],
          'light_gbm__reg_alpha': np.logspace(1, 3, 10, dtype=int),
          'light_gbm__reg_lambda': np.logspace(1, 4, 10, dtype=int)}
```

```
n_iter = 100
param_dims = []
for param in params.values():
    param_dims.append(len(param))
print(n_iter, 'combinations to test out of', np.product(param_dims),\
      'possibilities.')
```

100 combinations to test out of 10000000 possibilities.

```
[ ]: random_search = RandomizedSearchCV(baseline_model, params, n_iter=n_iter,
                                         scoring='recall', cv=5, verbose=True)
random_search.fit(X_train, y_train)
print(random_search.best_params_)
```

Fitting 5 folds for each of 10 candidates, totalling 50 fits

```
{'light_gbm__subsample': 0.6887496542742017, 'light_gbm__reg_lambda': 100,
'light_gbm__reg_alpha': 50, 'light_gbm__num_leaves': 15,
'light_gbm__min_child_weight': 599.4842503189421,
'light_gbm__min_child_samples': 108, 'light_gbm__colsample_bytree':
0.8903545495686556}
```

```
[ ]: print(random_search.param_distributions)
```

```
{'light_gbm__num_leaves': array([ 5, 10, 15, 20, 25, 30]),
'light_gbm__min_child_samples': array([100, 104, 108, 112, 116, 120, 124, 128,
132, 136, 140, 144, 148,
152, 156, 160, 164, 168, 172, 176, 180, 184, 188, 192, 196, 201,
205, 209, 213, 217, 221, 225, 229, 233, 237, 241, 245, 249, 253,
257, 261, 265, 269, 273, 277, 281, 285, 289, 293, 297, 302, 306,
310, 314, 318, 322, 326, 330, 334, 338, 342, 346, 350, 354, 358,
362, 366, 370, 374, 378, 382, 386, 390, 394, 398, 403, 407, 411,
415, 419, 423, 427, 431, 435, 439, 443, 447, 451, 455, 459, 463,
467, 471, 475, 479, 483, 487, 491, 495, 500]),
'light_gbm__min_child_weight': array([1.00000000e-05, 1.29154967e-04,
1.66810054e-03, 2.15443469e-02,
2.78255940e-01, 3.59381366e+00, 4.64158883e+01, 5.99484250e+02,
7.74263683e+03, 1.00000000e+05]), 'light_gbm__subsample':
[0.6887496542742017], 'light_gbm__colsample_bytree': [0.8903545495686556],
'light_gbm__reg_alpha': [0, 0.1, 1, 2, 5, 7, 10, 50, 100],
'light_gbm__reg_lambda': [0, 0.1, 1, 5, 10, 20, 50, 100]}
```

```
[ ]: random_search = RandomizedSearchCV(baseline_model, params, n_iter=n_iter,
                                         scoring='recall', cv=5, verbose=10)
random_search.fit(X_train, y_train)
print(random_search.best_params_)
```

Fitting 5 folds for each of 100 candidates, totalling 500 fits

```
[CV 1/5; 1/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=124,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=452,
light_gbm__num_leaves=12, light_gbm__reg_alpha=46, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 1/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=124,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=452,
light_gbm__num_leaves=12, light_gbm__reg_alpha=46, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487; , score=0.690 total time= 20.2s
```

```

[CV 2/5; 1/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=124,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=452,
light_gbm__num_leaves=12, light_gbm__reg_alpha=46, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 1/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=124,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=452,
light_gbm__num_leaves=12, light_gbm__reg_alpha=46, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487; , score=0.684 total time= 6.3s
[CV 3/5; 1/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=124,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=452,
light_gbm__num_leaves=12, light_gbm__reg_alpha=46, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 1/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=124,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=452,
light_gbm__num_leaves=12, light_gbm__reg_alpha=46, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487; , score=0.681 total time= 6.7s
[CV 4/5; 1/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=124,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=452,
light_gbm__num_leaves=12, light_gbm__reg_alpha=46, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 1/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=124,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=452,
light_gbm__num_leaves=12, light_gbm__reg_alpha=46, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487; , score=0.694 total time= 6.3s
[CV 5/5; 1/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=124,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=452,
light_gbm__num_leaves=12, light_gbm__reg_alpha=46, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 1/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=124,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=452,
light_gbm__num_leaves=12, light_gbm__reg_alpha=46, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487; , score=0.670 total time= 6.2s
[CV 1/5; 2/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=389,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 2/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=389,

```



```

light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;, score=0.689 total time= 6.7s
[CV 2/5; 2/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=389,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 2/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=389,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;, score=0.681 total time= 6.7s
[CV 3/5; 2/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=389,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 2/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=389,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;, score=0.677 total time= 6.9s
[CV 4/5; 2/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=389,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 2/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=389,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;, score=0.690 total time= 6.8s
[CV 5/5; 2/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=389,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 2/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=389,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;, score=0.672 total time= 6.8s
[CV 1/5; 3/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 1/5; 3/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143, light_gbm__min_child_weight=599.4842503189409,

```

```

light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;,
score=0.682 total time= 5.8s
[CV 2/5; 3/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 2/5; 3/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;,
score=0.687 total time= 5.8s
[CV 3/5; 3/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 3/5; 3/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;,
score=0.678 total time= 5.9s
[CV 4/5; 3/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 4/5; 3/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;,
score=0.686 total time= 5.4s
[CV 5/5; 3/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 5/5; 3/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;,
score=0.673 total time= 5.8s
[CV 1/5; 4/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=359, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 4/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=359, light_gbm__reg_lambda=215,

```

```

light_gbm__subsample=0.7981160065359487;, score=0.675 total time= 5.8s
[CV 2/5; 4/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=359, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 4/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=359, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.684 total time= 5.4s
[CV 3/5; 4/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=359, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 4/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=359, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.669 total time= 5.8s
[CV 4/5; 4/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=359, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 4/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=359, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.664 total time= 5.8s
[CV 5/5; 4/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=359, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 4/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=359, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.659 total time= 5.4s
[CV 1/5; 5/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=389, light_gbm__num_leaves=20, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=215, light_gbm__subsample=0.7981160065359487
[CV 1/5; 5/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=389, light_gbm__num_leaves=20, light_gbm__reg_alpha=10,

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light_gbm__reg_lambda=215, light_gbm__subsample=0.7981160065359487;, score=0.694
total time= 6.3s
[CV 2/5; 5/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=389, light_gbm__num_leaves=20, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=215, light_gbm__subsample=0.7981160065359487
[CV 2/5; 5/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=389, light_gbm__num_leaves=20, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=215, light_gbm__subsample=0.7981160065359487;, score=0.684
total time= 6.4s
[CV 3/5; 5/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=389, light_gbm__num_leaves=20, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=215, light_gbm__subsample=0.7981160065359487
[CV 3/5; 5/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=389, light_gbm__num_leaves=20, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=215, light_gbm__subsample=0.7981160065359487;, score=0.675
total time= 6.2s
[CV 4/5; 5/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=389, light_gbm__num_leaves=20, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=215, light_gbm__subsample=0.7981160065359487
[CV 4/5; 5/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=389, light_gbm__num_leaves=20, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=215, light_gbm__subsample=0.7981160065359487;, score=0.691
total time= 6.1s
[CV 5/5; 5/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=389, light_gbm__num_leaves=20, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=215, light_gbm__subsample=0.7981160065359487
[CV 5/5; 5/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=389, light_gbm__num_leaves=20, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=215, light_gbm__subsample=0.7981160065359487;, score=0.673
total time= 6.1s
[CV 1/5; 6/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 1/5; 6/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.690 total time= 24.7s
[CV 2/5; 6/100] START light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=170, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 2/5; 6/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;;
score=0.687 total time= 6.1s
[CV 3/5; 6/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 3/5; 6/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;;
score=0.682 total time= 6.0s
[CV 4/5; 6/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 4/5; 6/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;;
score=0.687 total time= 6.0s
[CV 5/5; 6/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 5/5; 6/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;;
score=0.670 total time= 6.1s
[CV 1/5; 7/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=231,
light_gbm__num_leaves=14, light_gbm__reg_alpha=129, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 7/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=231,
light_gbm__num_leaves=14, light_gbm__reg_alpha=129, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487;; score=0.681 total time= 5.3s
[CV 2/5; 7/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=231,

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light_gbm__num_leaves=14, light_gbm__reg_alpha=129, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 7/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=231,
light_gbm__num_leaves=14, light_gbm__reg_alpha=129, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487;, score=0.685 total time= 5.5s
[CV 3/5; 7/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=231,
light_gbm__num_leaves=14, light_gbm__reg_alpha=129, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 7/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=231,
light_gbm__num_leaves=14, light_gbm__reg_alpha=129, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487;, score=0.674 total time= 5.5s
[CV 4/5; 7/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=231,
light_gbm__num_leaves=14, light_gbm__reg_alpha=129, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 7/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=231,
light_gbm__num_leaves=14, light_gbm__reg_alpha=129, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487;, score=0.684 total time= 5.4s
[CV 5/5; 7/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=231,
light_gbm__num_leaves=14, light_gbm__reg_alpha=129, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 7/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=231,
light_gbm__num_leaves=14, light_gbm__reg_alpha=129, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487;, score=0.665 total time= 5.5s
[CV 1/5; 8/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=160, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=11,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 8/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=160, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=11,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487;, score=0.677 total time= 5.2s
[CV 2/5; 8/100] START light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=160, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=11,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 8/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=160, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=11,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487; , score=0.654 total time= 5.1s
[CV 3/5; 8/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=160, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=11,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 8/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=160, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=11,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487; , score=0.629 total time= 5.1s
[CV 4/5; 8/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=160, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=11,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 8/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=160, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=11,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487; , score=0.671 total time= 5.1s
[CV 5/5; 8/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=160, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=11,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 8/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=160, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=11,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487; , score=0.623 total time= 5.1s
[CV 1/5; 9/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 1/5; 9/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487; , score=0.691
total time= 6.0s

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[CV 2/5; 9/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 2/5; 9/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487;; score=0.681
total time= 6.3s
[CV 3/5; 9/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 3/5; 9/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487;; score=0.678
total time= 6.1s
[CV 4/5; 9/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 4/5; 9/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487;; score=0.688
total time= 6.3s
[CV 5/5; 9/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 5/5; 9/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487;; score=0.672
total time= 6.3s
[CV 1/5; 10/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=294,
light_gbm__num_leaves=17, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 10/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=294,
light_gbm__num_leaves=17, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487;; score=0.685 total time= 6.4s
[CV 2/5; 10/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,

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light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=294,
light_gbm__num_leaves=17, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 10/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=294,
light_gbm__num_leaves=17, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487; , score=0.682 total time= 6.3s
[CV 3/5; 10/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=294,
light_gbm__num_leaves=17, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 10/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=294,
light_gbm__num_leaves=17, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487; , score=0.681 total time= 6.0s
[CV 4/5; 10/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=294,
light_gbm__num_leaves=17, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 10/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=294,
light_gbm__num_leaves=17, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487; , score=0.691 total time= 6.4s
[CV 5/5; 10/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=294,
light_gbm__num_leaves=17, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 10/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=294,
light_gbm__num_leaves=17, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487; , score=0.677 total time= 6.0s
[CV 1/5; 11/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 1/5; 11/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487; , score=0.676
total time= 5.0s
[CV 2/5; 11/100] START light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=89, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 2/5; 11/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.677
total time= 5.1s
[CV 3/5; 11/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 3/5; 11/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.671
total time= 5.0s
[CV 4/5; 11/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 4/5; 11/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.670
total time= 5.1s
[CV 5/5; 11/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 5/5; 11/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.649
total time= 5.0s
[CV 1/5; 12/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=468, light_gbm__num_leaves=20, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 1/5; 12/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=468, light_gbm__num_leaves=20, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.693
total time= 5.8s
[CV 2/5; 12/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=468, light_gbm__num_leaves=20, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487

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[CV 2/5; 12/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=468, light_gbm__num_leaves=20, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.682
total time= 6.0s
[CV 3/5; 12/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=468, light_gbm__num_leaves=20, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 3/5; 12/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=468, light_gbm__num_leaves=20, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.678
total time= 5.8s
[CV 4/5; 12/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=468, light_gbm__num_leaves=20, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 4/5; 12/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=468, light_gbm__num_leaves=20, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.692
total time= 6.0s
[CV 5/5; 12/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=468, light_gbm__num_leaves=20, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 5/5; 12/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=468, light_gbm__num_leaves=20, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.672
total time= 5.8s
[CV 1/5; 13/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=373, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 1/5; 13/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=373, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;; score=0.690
total time= 6.5s
[CV 2/5; 13/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=373, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 2/5; 13/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=373, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,

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light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;; score=0.690
total time= 6.9s
[CV 3/5; 13/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=373, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 3/5; 13/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=373, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;; score=0.681
total time= 6.5s
[CV 4/5; 13/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=373, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 4/5; 13/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=373, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;; score=0.694
total time= 6.4s
[CV 5/5; 13/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=373, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 5/5; 13/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=373, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;; score=0.680
total time= 6.3s
[CV 1/5; 14/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 1/5; 14/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.682
total time= 5.4s
[CV 2/5; 14/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 2/5; 14/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.705
total time= 5.2s
[CV 3/5; 14/100] START light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=133, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 3/5; 14/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.679
total time= 5.2s
[CV 4/5; 14/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 4/5; 14/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.667
total time= 5.2s
[CV 5/5; 14/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 5/5; 14/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.695
total time= 5.2s
[CV 1/5; 15/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=200, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 1/5; 15/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=200, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.689
total time= 5.4s
[CV 2/5; 15/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=200, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 2/5; 15/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=200, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.685
total time= 5.4s
[CV 3/5; 15/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=200, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487

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[CV 3/5; 15/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=200, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;; score=0.684
total time= 5.4s

[CV 4/5; 15/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=200, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487

[CV 4/5; 15/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=200, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;; score=0.694
total time= 5.4s

[CV 5/5; 15/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=200, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487

[CV 5/5; 15/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=200, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;; score=0.675
total time= 5.4s

[CV 1/5; 16/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=389, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487

[CV 1/5; 16/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=389, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487;; score=0.690
total time= 6.0s

[CV 2/5; 16/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=389, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487

[CV 2/5; 16/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=389, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487;; score=0.684
total time= 5.7s

[CV 3/5; 16/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=389, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487

[CV 3/5; 16/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=389, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,

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light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487;, score=0.681
total time= 5.8s
[CV 4/5; 16/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=389, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 4/5; 16/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=389, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487;, score=0.690
total time= 5.9s
[CV 5/5; 16/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=389, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 5/5; 16/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=389, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487;, score=0.677
total time= 5.7s
[CV 1/5; 17/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=231,
light_gbm__num_leaves=18, light_gbm__reg_alpha=215, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 17/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=231,
light_gbm__num_leaves=18, light_gbm__reg_alpha=215, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.678 total time= 5.2s
[CV 2/5; 17/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=231,
light_gbm__num_leaves=18, light_gbm__reg_alpha=215, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 17/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=231,
light_gbm__num_leaves=18, light_gbm__reg_alpha=215, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.680 total time= 5.2s
[CV 3/5; 17/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=231,
light_gbm__num_leaves=18, light_gbm__reg_alpha=215, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 17/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=231,

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light_gbm__num_leaves=18, light_gbm__reg_alpha=215, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.671 total time= 5.2s
[CV 4/5; 17/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=231,
light_gbm__num_leaves=18, light_gbm__reg_alpha=215, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 17/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=231,
light_gbm__num_leaves=18, light_gbm__reg_alpha=215, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.681 total time= 5.3s
[CV 5/5; 17/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=231,
light_gbm__num_leaves=18, light_gbm__reg_alpha=215, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 17/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=231,
light_gbm__num_leaves=18, light_gbm__reg_alpha=215, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.661 total time= 5.2s
[CV 1/5; 18/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=247,
light_gbm__num_leaves=10, light_gbm__reg_alpha=16, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 18/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=247,
light_gbm__num_leaves=10, light_gbm__reg_alpha=16, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.686 total time= 5.8s
[CV 2/5; 18/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=247,
light_gbm__num_leaves=10, light_gbm__reg_alpha=16, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 18/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=247,
light_gbm__num_leaves=10, light_gbm__reg_alpha=16, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.683 total time= 5.7s
[CV 3/5; 18/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=247,
light_gbm__num_leaves=10, light_gbm__reg_alpha=16, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 18/100] END light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=247,
light_gbm__num_leaves=10, light_gbm__reg_alpha=16, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.683 total time= 5.8s
[CV 4/5; 18/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=247,
light_gbm__num_leaves=10, light_gbm__reg_alpha=16, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 18/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=247,
light_gbm__num_leaves=10, light_gbm__reg_alpha=16, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.693 total time= 5.8s
[CV 5/5; 18/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=247,
light_gbm__num_leaves=10, light_gbm__reg_alpha=16, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 18/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=247,
light_gbm__num_leaves=10, light_gbm__reg_alpha=16, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.674 total time= 5.8s
[CV 1/5; 19/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 1/5; 19/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.672
total time= 5.2s
[CV 2/5; 19/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 2/5; 19/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.679
total time= 5.2s
[CV 3/5; 19/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 3/5; 19/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=100.0,

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light_gbm__n_estimators=294, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.665
total time= 5.1s
[CV 4/5; 19/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 4/5; 19/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.667
total time= 5.1s
[CV 5/5; 19/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 5/5; 19/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.655
total time= 5.1s
[CV 1/5; 20/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 1/5; 20/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;,
score=0.689 total time= 6.6s
[CV 2/5; 20/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 2/5; 20/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;,
score=0.681 total time= 7.1s
[CV 3/5; 20/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 3/5; 20/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;,
score=0.680 total time= 6.8s

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[CV 4/5; 20/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 4/5; 20/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.688 total time= 7.2s
[CV 5/5; 20/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 5/5; 20/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.672 total time= 7.2s
[CV 1/5; 21/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=20, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 1/5; 21/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=20, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;;
score=0.678 total time= 6.4s
[CV 2/5; 21/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=20, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 2/5; 21/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=20, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;;
score=0.677 total time= 6.1s
[CV 3/5; 21/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=20, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 3/5; 21/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=20, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;;
score=0.670 total time= 6.0s
[CV 4/5; 21/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=20, light_gbm__reg_alpha=215,

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light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 4/5; 21/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=20, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.677 total time= 6.3s
[CV 5/5; 21/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=20, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 5/5; 21/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=20, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.662 total time= 6.4s
[CV 1/5; 22/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=10, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 1/5; 22/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=10, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.673
total time= 5.2s
[CV 2/5; 22/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=10, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 2/5; 22/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=10, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.672
total time= 5.2s
[CV 3/5; 22/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=10, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 3/5; 22/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=10, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.668
total time= 5.3s
[CV 4/5; 22/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=10, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 4/5; 22/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,

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light_gbm__n_estimators=294, light_gbm__num_leaves=10, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.665
total time= 5.1s
[CV 5/5; 22/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=10, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 5/5; 22/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=10, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.657
total time= 5.1s
[CV 1/5; 23/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=278, light_gbm__num_leaves=11, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 1/5; 23/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=278, light_gbm__num_leaves=11, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.690
total time= 5.4s
[CV 2/5; 23/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=278, light_gbm__num_leaves=11, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 2/5; 23/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=278, light_gbm__num_leaves=11, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.682
total time= 5.4s
[CV 3/5; 23/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=278, light_gbm__num_leaves=11, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 3/5; 23/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=278, light_gbm__num_leaves=11, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.679
total time= 5.4s
[CV 4/5; 23/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=278, light_gbm__num_leaves=11, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 4/5; 23/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=278, light_gbm__num_leaves=11, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.690
total time= 5.4s

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[CV 5/5; 23/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=278, light_gbm__num_leaves=11, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 5/5; 23/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=278, light_gbm__num_leaves=11, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;; score=0.677
total time= 5.4s
[CV 1/5; 24/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=215, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 1/5; 24/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=215, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.684
total time= 5.2s
[CV 2/5; 24/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=215, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 2/5; 24/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=215, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.682
total time= 5.2s
[CV 3/5; 24/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=215, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 3/5; 24/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=215, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.677
total time= 5.1s
[CV 4/5; 24/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=215, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 4/5; 24/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=215, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.681
total time= 5.1s
[CV 5/5; 24/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=215, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,

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light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 5/5; 24/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=215, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.662
total time= 5.2s
[CV 1/5; 25/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 1/5; 25/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;;
score=0.677 total time= 5.7s
[CV 2/5; 25/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 2/5; 25/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;;
score=0.681 total time= 5.6s
[CV 3/5; 25/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 3/5; 25/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;;
score=0.673 total time= 5.5s
[CV 4/5; 25/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 4/5; 25/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;;
score=0.679 total time= 5.7s
[CV 5/5; 25/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 5/5; 25/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=100.0,

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light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.663 total time= 5.6s
[CV 1/5; 26/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=77, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 26/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=77, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.681 total time= 6.2s
[CV 2/5; 26/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=77, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 26/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=77, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.682 total time= 6.1s
[CV 3/5; 26/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=77, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 26/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=77, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.677 total time= 6.3s
[CV 4/5; 26/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=77, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 26/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=77, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.681 total time= 6.1s
[CV 5/5; 26/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=77, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487

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[CV 5/5; 26/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=77, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.662 total time= 6.1s
[CV 1/5; 27/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 27/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.659 total time= 5.3s
[CV 2/5; 27/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 27/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.615 total time= 5.3s
[CV 3/5; 27/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 27/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.611 total time= 5.3s
[CV 4/5; 27/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 27/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.583 total time= 5.2s
[CV 5/5; 27/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=12,

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light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 27/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487; , score=0.656 total time= 5.3s
[CV 1/5; 28/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=200, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 28/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=200, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487; , score=0.688 total time= 5.1s
[CV 2/5; 28/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=200, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 28/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=200, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487; , score=0.687 total time= 5.2s
[CV 3/5; 28/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=200, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 28/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=200, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487; , score=0.627 total time= 5.0s
[CV 4/5; 28/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=200, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 28/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=200, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487; , score=0.646 total time= 5.1s
[CV 5/5; 28/100] START light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=97, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=200, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 28/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=200, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487; , score=0.658 total time= 5.1s
[CV 1/5; 29/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 29/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487; , score=0.687 total time= 6.1s
[CV 2/5; 29/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 29/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487; , score=0.684 total time= 6.3s
[CV 3/5; 29/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 29/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487; , score=0.677 total time= 6.2s
[CV 4/5; 29/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 29/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10000,

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light_gbm__subsample=0.7981160065359487;, score=0.685 total time= 6.4s
[CV 5/5; 29/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 29/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.662 total time= 6.5s
[CV 1/5; 30/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 1/5; 30/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.692
total time= 6.4s
[CV 2/5; 30/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 2/5; 30/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.684
total time= 6.5s
[CV 3/5; 30/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 3/5; 30/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.677
total time= 6.2s
[CV 4/5; 30/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 4/5; 30/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.691
total time= 6.4s
[CV 5/5; 30/100] START light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=185, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 5/5; 30/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.676
total time= 6.4s
[CV 1/5; 31/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=468,
light_gbm__num_leaves=20, light_gbm__reg_alpha=599, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 31/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=468,
light_gbm__num_leaves=20, light_gbm__reg_alpha=599, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.671 total time= 5.3s
[CV 2/5; 31/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=468,
light_gbm__num_leaves=20, light_gbm__reg_alpha=599, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 31/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=468,
light_gbm__num_leaves=20, light_gbm__reg_alpha=599, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.691 total time= 5.4s
[CV 3/5; 31/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=468,
light_gbm__num_leaves=20, light_gbm__reg_alpha=599, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 31/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=468,
light_gbm__num_leaves=20, light_gbm__reg_alpha=599, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.662 total time= 5.3s
[CV 4/5; 31/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=468,
light_gbm__num_leaves=20, light_gbm__reg_alpha=599, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 31/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=468,
light_gbm__num_leaves=20, light_gbm__reg_alpha=599, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.665 total time= 5.4s

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[CV 5/5; 31/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=468,
light_gbm__num_leaves=20, light_gbm__reg_alpha=599, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 31/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=468,
light_gbm__num_leaves=20, light_gbm__reg_alpha=599, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487; , score=0.653 total time= 5.3s
[CV 1/5; 32/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=357,
light_gbm__num_leaves=14, light_gbm__reg_alpha=27, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 32/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=357,
light_gbm__num_leaves=14, light_gbm__reg_alpha=27, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487; , score=0.688 total time= 6.2s
[CV 2/5; 32/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=357,
light_gbm__num_leaves=14, light_gbm__reg_alpha=27, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 32/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=357,
light_gbm__num_leaves=14, light_gbm__reg_alpha=27, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487; , score=0.682 total time= 6.3s
[CV 3/5; 32/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=357,
light_gbm__num_leaves=14, light_gbm__reg_alpha=27, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 32/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=357,
light_gbm__num_leaves=14, light_gbm__reg_alpha=27, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487; , score=0.679 total time= 6.2s
[CV 4/5; 32/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=357,
light_gbm__num_leaves=14, light_gbm__reg_alpha=27, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 32/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=357,

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light_gbm__num_leaves=14, light_gbm__reg_alpha=27, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;, score=0.689 total time= 6.2s
[CV 5/5; 32/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=357,
light_gbm__num_leaves=14, light_gbm__reg_alpha=27, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 32/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=357,
light_gbm__num_leaves=14, light_gbm__reg_alpha=27, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;, score=0.671 total time= 6.5s
[CV 1/5; 33/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 33/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.685 total time= 6.2s
[CV 2/5; 33/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 33/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.684 total time= 6.2s
[CV 3/5; 33/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 33/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.678 total time= 6.7s
[CV 4/5; 33/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 33/100] END light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=119,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.683 total time= 6.6s
[CV 5/5; 33/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 33/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.663 total time= 6.3s
[CV 1/5; 34/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=373,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 34/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=373,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;, score=0.692 total time= 6.2s
[CV 2/5; 34/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=373,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 34/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=373,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;, score=0.684 total time= 6.3s
[CV 3/5; 34/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=373,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 34/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=373,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;, score=0.678 total time= 5.9s
[CV 4/5; 34/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=373,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=1000,

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light_gbm__subsample=0.7981160065359487
[CV 4/5; 34/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=373,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;; score=0.692 total time= 6.3s
[CV 5/5; 34/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=373,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 34/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=373,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;; score=0.674 total time= 6.0s
[CV 1/5; 35/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=357,
light_gbm__num_leaves=12, light_gbm__reg_alpha=599, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 35/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=357,
light_gbm__num_leaves=12, light_gbm__reg_alpha=599, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;; score=0.668 total time= 5.3s
[CV 2/5; 35/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=357,
light_gbm__num_leaves=12, light_gbm__reg_alpha=599, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 35/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=357,
light_gbm__num_leaves=12, light_gbm__reg_alpha=599, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;; score=0.667 total time= 5.3s
[CV 3/5; 35/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=357,
light_gbm__num_leaves=12, light_gbm__reg_alpha=599, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 35/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=357,
light_gbm__num_leaves=12, light_gbm__reg_alpha=599, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;; score=0.670 total time= 5.2s
[CV 4/5; 35/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,

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light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=357,
light_gbm__num_leaves=12, light_gbm__reg_alpha=599, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 35/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=357,
light_gbm__num_leaves=12, light_gbm__reg_alpha=599, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;; score=0.667 total time= 5.1s
[CV 5/5; 35/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=357,
light_gbm__num_leaves=12, light_gbm__reg_alpha=599, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 35/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=357,
light_gbm__num_leaves=12, light_gbm__reg_alpha=599, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;; score=0.651 total time= 5.2s
[CV 1/5; 36/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 1/5; 36/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.668
total time= 5.0s
[CV 2/5; 36/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 2/5; 36/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.683
total time= 5.2s
[CV 3/5; 36/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 3/5; 36/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.670
total time= 5.1s
[CV 4/5; 36/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,

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light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 4/5; 36/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.669
total time= 5.1s
[CV 5/5; 36/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 5/5; 36/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.669
total time= 5.1s
[CV 1/5; 37/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=158, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 1/5; 37/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=158, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;;
score=0.684 total time= 6.0s
[CV 2/5; 37/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=158, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 2/5; 37/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=158, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;;
score=0.685 total time= 5.9s
[CV 3/5; 37/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=158, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 3/5; 37/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=158, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;;
score=0.682 total time= 6.0s
[CV 4/5; 37/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=158, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 4/5; 37/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=158, light_gbm__min_child_weight=1000.0,

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light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.685 total time= 6.0s
[CV 5/5; 37/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=158, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 5/5; 37/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=158, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.672 total time= 5.9s
[CV 1/5; 38/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=357, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 1/5; 38/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=357, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.688
total time= 6.4s
[CV 2/5; 38/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=357, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 2/5; 38/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=357, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.682
total time= 6.3s
[CV 3/5; 38/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=357, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 3/5; 38/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=357, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.680
total time= 6.4s
[CV 4/5; 38/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=357, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 4/5; 38/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=357, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.694
total time= 6.4s

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[CV 5/5; 38/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=357, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 5/5; 38/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=357, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.676
total time= 6.3s
[CV 1/5; 39/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 1/5; 39/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.687 total time= 5.9s
[CV 2/5; 39/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 2/5; 39/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.686 total time= 6.0s
[CV 3/5; 39/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 3/5; 39/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.681 total time= 6.2s
[CV 4/5; 39/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 4/5; 39/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.682 total time= 6.2s
[CV 5/5; 39/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=129,

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light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 5/5; 39/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.676 total time= 6.4s
[CV 1/5; 40/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 1/5; 40/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;; score=0.695
total time= 6.2s
[CV 2/5; 40/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 2/5; 40/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;; score=0.684
total time= 6.1s
[CV 3/5; 40/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 3/5; 40/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;; score=0.679
total time= 6.1s
[CV 4/5; 40/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 4/5; 40/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;; score=0.694
total time= 6.3s
[CV 5/5; 40/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 5/5; 40/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=774.263682681127,

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light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.675
total time= 6.3s
[CV 1/5; 41/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 1/5; 41/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.691
total time= 5.7s
[CV 2/5; 41/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 2/5; 41/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.682
total time= 5.9s
[CV 3/5; 41/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 3/5; 41/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.679
total time= 5.6s
[CV 4/5; 41/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 4/5; 41/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.692
total time= 5.6s
[CV 5/5; 41/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 5/5; 41/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.673
total time= 5.9s

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[CV 1/5; 42/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=263, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 1/5; 42/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=263, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;;
score=0.669 total time= 5.0s
[CV 2/5; 42/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=263, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 2/5; 42/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=263, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;;
score=0.675 total time= 5.3s
[CV 3/5; 42/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=263, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 3/5; 42/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=263, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;;
score=0.657 total time= 5.2s
[CV 4/5; 42/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=263, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 4/5; 42/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=263, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;;
score=0.654 total time= 5.2s
[CV 5/5; 42/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=263, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 5/5; 42/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=263, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;;
score=0.648 total time= 5.0s
[CV 1/5; 43/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=92, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,

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light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 1/5; 43/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=92, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.687 total time= 5.9s
[CV 2/5; 43/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=92, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 2/5; 43/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=92, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.680 total time= 6.0s
[CV 3/5; 43/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=92, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 3/5; 43/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=92, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.677 total time= 6.4s
[CV 4/5; 43/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=92, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 4/5; 43/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=92, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.688 total time= 5.8s
[CV 5/5; 43/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=92, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 5/5; 43/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=92, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.666 total time= 5.9s
[CV 1/5; 44/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=500,
light_gbm__num_leaves=18, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 44/100] END light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=170,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=500,
light_gbm__num_leaves=18, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.675 total time= 5.5s
[CV 2/5; 44/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=500,
light_gbm__num_leaves=18, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 44/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=500,
light_gbm__num_leaves=18, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.685 total time= 5.6s
[CV 3/5; 44/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=500,
light_gbm__num_leaves=18, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 44/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=500,
light_gbm__num_leaves=18, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.673 total time= 5.6s
[CV 4/5; 44/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=500,
light_gbm__num_leaves=18, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 44/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=500,
light_gbm__num_leaves=18, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.673 total time= 5.5s
[CV 5/5; 44/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=500,
light_gbm__num_leaves=18, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 44/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=500,
light_gbm__num_leaves=18, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.666 total time= 5.4s
[CV 1/5; 45/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=200, light_gbm__num_leaves=10,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,

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light_gbm__subsample=0.7981160065359487
[CV 1/5; 45/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=200, light_gbm__num_leaves=10,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487; , score=0.722 total time= 5.0s
[CV 2/5; 45/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=200, light_gbm__num_leaves=10,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 45/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=200, light_gbm__num_leaves=10,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487; , score=0.715 total time= 5.0s
[CV 3/5; 45/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=200, light_gbm__num_leaves=10,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 45/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=200, light_gbm__num_leaves=10,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487; , score=0.678 total time= 4.9s
[CV 4/5; 45/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=200, light_gbm__num_leaves=10,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 45/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=200, light_gbm__num_leaves=10,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487; , score=0.663 total time= 4.9s
[CV 5/5; 45/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=200, light_gbm__num_leaves=10,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 45/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=200, light_gbm__num_leaves=10,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487; , score=0.607 total time= 5.0s
[CV 1/5; 46/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,

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light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=263,
light_gbm__num_leaves=14, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 46/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=263,
light_gbm__num_leaves=14, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.676 total time= 5.2s
[CV 2/5; 46/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=263,
light_gbm__num_leaves=14, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 46/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=263,
light_gbm__num_leaves=14, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.683 total time= 5.1s
[CV 3/5; 46/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=263,
light_gbm__num_leaves=14, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 46/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=263,
light_gbm__num_leaves=14, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.675 total time= 5.0s
[CV 4/5; 46/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=263,
light_gbm__num_leaves=14, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 46/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=263,
light_gbm__num_leaves=14, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.674 total time= 5.0s
[CV 5/5; 46/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=263,
light_gbm__num_leaves=14, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 46/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=263,
light_gbm__num_leaves=14, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.669 total time= 5.1s

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[CV 1/5; 47/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 1/5; 47/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.690 total time= 6.1s
[CV 2/5; 47/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 2/5; 47/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.686 total time= 5.9s
[CV 3/5; 47/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 3/5; 47/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.680 total time= 6.1s
[CV 4/5; 47/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 4/5; 47/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.687 total time= 6.0s
[CV 5/5; 47/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 5/5; 47/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.667 total time= 6.1s
[CV 1/5; 48/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=294, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,

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light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 1/5; 48/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=294, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.689 total time= 5.6s
[CV 2/5; 48/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=294, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 2/5; 48/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=294, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.685 total time= 5.6s
[CV 3/5; 48/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=294, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 3/5; 48/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=294, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.679 total time= 5.7s
[CV 4/5; 48/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=294, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 4/5; 48/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=294, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.689 total time= 5.6s
[CV 5/5; 48/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=294, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 5/5; 48/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=294, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.668 total time= 5.0s
[CV 1/5; 49/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=215,
light_gbm__num_leaves=10, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 49/100] END light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=190,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=215,
light_gbm__num_leaves=10, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.682 total time= 4.5s
[CV 2/5; 49/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=215,
light_gbm__num_leaves=10, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 49/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=215,
light_gbm__num_leaves=10, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.680 total time= 4.5s
[CV 3/5; 49/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=215,
light_gbm__num_leaves=10, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 49/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=215,
light_gbm__num_leaves=10, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.674 total time= 4.5s
[CV 4/5; 49/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=215,
light_gbm__num_leaves=10, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 49/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=215,
light_gbm__num_leaves=10, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.678 total time= 4.5s
[CV 5/5; 49/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=215,
light_gbm__num_leaves=10, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 49/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=215,
light_gbm__num_leaves=10, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.667 total time= 4.4s
[CV 1/5; 50/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=215.44346900318845,
light_gbm__n_estimators=373, light_gbm__num_leaves=10, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487

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[CV 1/5; 50/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=215.44346900318845,
light_gbm__n_estimators=373, light_gbm__num_leaves=10, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.690 total time= 4.9s
[CV 2/5; 50/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=215.44346900318845,
light_gbm__n_estimators=373, light_gbm__num_leaves=10, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 2/5; 50/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=215.44346900318845,
light_gbm__n_estimators=373, light_gbm__num_leaves=10, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.688 total time= 5.0s
[CV 3/5; 50/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=215.44346900318845,
light_gbm__n_estimators=373, light_gbm__num_leaves=10, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 3/5; 50/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=215.44346900318845,
light_gbm__n_estimators=373, light_gbm__num_leaves=10, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.679 total time= 5.0s
[CV 4/5; 50/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=215.44346900318845,
light_gbm__n_estimators=373, light_gbm__num_leaves=10, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 4/5; 50/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=215.44346900318845,
light_gbm__n_estimators=373, light_gbm__num_leaves=10, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.688 total time= 5.1s
[CV 5/5; 50/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=215.44346900318845,
light_gbm__n_estimators=373, light_gbm__num_leaves=10, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 5/5; 50/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=215.44346900318845,
light_gbm__n_estimators=373, light_gbm__num_leaves=10, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.669 total time= 5.1s
[CV 1/5; 51/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=310,
light_gbm__num_leaves=15, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 51/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,

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light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=310,
light_gbm__num_leaves=15, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.648 total time= 4.3s
[CV 2/5; 51/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=310,
light_gbm__num_leaves=15, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 51/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=310,
light_gbm__num_leaves=15, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.655 total time= 4.3s
[CV 3/5; 51/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=310,
light_gbm__num_leaves=15, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 51/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=310,
light_gbm__num_leaves=15, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.630 total time= 4.2s
[CV 4/5; 51/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=310,
light_gbm__num_leaves=15, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 51/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=310,
light_gbm__num_leaves=15, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.625 total time= 4.3s
[CV 5/5; 51/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=310,
light_gbm__num_leaves=15, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 51/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=310,
light_gbm__num_leaves=15, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.627 total time= 4.4s
[CV 1/5; 52/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=389,
light_gbm__num_leaves=10, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487

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[CV 1/5; 52/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=389,
light_gbm__num_leaves=10, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487;, score=0.690 total time= 4.5s
[CV 2/5; 52/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=389,
light_gbm__num_leaves=10, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 52/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=389,
light_gbm__num_leaves=10, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487;, score=0.685 total time= 4.5s
[CV 3/5; 52/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=389,
light_gbm__num_leaves=10, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 52/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=389,
light_gbm__num_leaves=10, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487;, score=0.674 total time= 4.5s
[CV 4/5; 52/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=389,
light_gbm__num_leaves=10, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 52/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=389,
light_gbm__num_leaves=10, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487;, score=0.687 total time= 4.5s
[CV 5/5; 52/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=389,
light_gbm__num_leaves=10, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 52/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=389,
light_gbm__num_leaves=10, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487;, score=0.665 total time= 4.4s
[CV 1/5; 53/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=599,

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light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 1/5; 53/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.690
total time= 4.1s
[CV 2/5; 53/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 2/5; 53/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.690
total time= 4.2s
[CV 3/5; 53/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 3/5; 53/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.671
total time= 4.2s
[CV 4/5; 53/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 4/5; 53/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.681
total time= 4.1s
[CV 5/5; 53/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 5/5; 53/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.651
total time= 4.1s
[CV 1/5; 54/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=263, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 1/5; 54/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=1000.0,

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light_gbm__n_estimators=263, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.691
total time= 4.5s
[CV 2/5; 54/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=263, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 2/5; 54/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=263, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.680
total time= 4.5s
[CV 3/5; 54/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=263, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 3/5; 54/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=263, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.677
total time= 4.5s
[CV 4/5; 54/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=263, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 4/5; 54/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=263, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.690
total time= 4.5s
[CV 5/5; 54/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=263, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 5/5; 54/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=263, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.677
total time= 4.6s
[CV 1/5; 55/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=326,
light_gbm__num_leaves=15, light_gbm__reg_alpha=10, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 55/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=326,
light_gbm__num_leaves=15, light_gbm__reg_alpha=10, light_gbm__reg_lambda=215,

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light_gbm__subsample=0.7981160065359487;, score=0.695 total time= 5.0s
[CV 2/5; 55/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=326,
light_gbm__num_leaves=15, light_gbm__reg_alpha=10, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 55/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=326,
light_gbm__num_leaves=15, light_gbm__reg_alpha=10, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.683 total time= 5.0s
[CV 3/5; 55/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=326,
light_gbm__num_leaves=15, light_gbm__reg_alpha=10, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 55/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=326,
light_gbm__num_leaves=15, light_gbm__reg_alpha=10, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.682 total time= 5.4s
[CV 4/5; 55/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=326,
light_gbm__num_leaves=15, light_gbm__reg_alpha=10, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 55/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=326,
light_gbm__num_leaves=15, light_gbm__reg_alpha=10, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.692 total time= 5.1s
[CV 5/5; 55/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=326,
light_gbm__num_leaves=15, light_gbm__reg_alpha=10, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 55/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=326,
light_gbm__num_leaves=15, light_gbm__reg_alpha=10, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.678 total time= 5.1s
[CV 1/5; 56/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=14, light_gbm__reg_alpha=215, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 56/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,

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light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=14, light_gbm__reg_alpha=215, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487;, score=0.678 total time= 4.4s
[CV 2/5; 56/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=14, light_gbm__reg_alpha=215, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 56/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=14, light_gbm__reg_alpha=215, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487;, score=0.684 total time= 4.4s
[CV 3/5; 56/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=14, light_gbm__reg_alpha=215, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 56/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=14, light_gbm__reg_alpha=215, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487;, score=0.669 total time= 4.4s
[CV 4/5; 56/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=14, light_gbm__reg_alpha=215, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 56/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=14, light_gbm__reg_alpha=215, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487;, score=0.675 total time= 4.4s
[CV 5/5; 56/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=14, light_gbm__reg_alpha=215, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 56/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=14, light_gbm__reg_alpha=215, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487;, score=0.669 total time= 4.4s
[CV 1/5; 57/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=278,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487

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[CV 1/5; 57/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=278,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;, score=0.692 total time= 4.8s
[CV 2/5; 57/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=278,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 57/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=278,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;, score=0.685 total time= 4.8s
[CV 3/5; 57/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=278,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 57/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=278,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;, score=0.681 total time= 4.8s
[CV 4/5; 57/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=278,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 57/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=278,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;, score=0.690 total time= 4.9s
[CV 5/5; 57/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=278,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 57/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=278,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;, score=0.672 total time= 4.9s
[CV 1/5; 58/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=17, light_gbm__reg_alpha=27,

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light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 1/5; 58/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=17, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.687 total time= 5.8s
[CV 2/5; 58/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=17, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 2/5; 58/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=17, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.685 total time= 6.3s
[CV 3/5; 58/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=17, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 3/5; 58/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=17, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.680 total time= 5.9s
[CV 4/5; 58/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=17, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 4/5; 58/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=17, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.689 total time= 5.9s
[CV 5/5; 58/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=17, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 5/5; 58/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=17, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.673 total time= 5.9s
[CV 1/5; 59/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=500, light_gbm__num_leaves=14, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 1/5; 59/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=599.4842503189409,

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light_gbm__n_estimators=500, light_gbm__num_leaves=14, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.687
total time= 4.6s
[CV 2/5; 59/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=500, light_gbm__num_leaves=14, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 2/5; 59/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=500, light_gbm__num_leaves=14, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.682
total time= 4.6s
[CV 3/5; 59/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=500, light_gbm__num_leaves=14, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 3/5; 59/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=500, light_gbm__num_leaves=14, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.676
total time= 4.5s
[CV 4/5; 59/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=500, light_gbm__num_leaves=14, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 4/5; 59/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=500, light_gbm__num_leaves=14, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.686
total time= 4.5s
[CV 5/5; 59/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=500, light_gbm__num_leaves=14, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 5/5; 59/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=500, light_gbm__num_leaves=14, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.670
total time= 4.7s
[CV 1/5; 60/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=106, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=215, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 1/5; 60/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=106, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=215, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.686 total time= 4.5s

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[CV 2/5; 60/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=106, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=215, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 2/5; 60/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=106, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=215, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.687 total time= 4.6s
[CV 3/5; 60/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=106, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=215, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 3/5; 60/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=106, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=215, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.677 total time= 4.6s
[CV 4/5; 60/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=106, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=215, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 4/5; 60/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=106, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=215, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.690 total time= 4.6s
[CV 5/5; 60/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=106, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=215, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 5/5; 60/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=106, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=215, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.670 total time= 4.5s
[CV 1/5; 61/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=278, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 1/5; 61/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=278, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.680
total time= 4.2s
[CV 2/5; 61/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=278, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,

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light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 2/5; 61/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=278, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.694
total time= 4.2s
[CV 3/5; 61/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=278, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 3/5; 61/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=278, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.683
total time= 4.3s
[CV 4/5; 61/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=278, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 4/5; 61/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=278, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.678
total time= 4.3s
[CV 5/5; 61/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=278, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 5/5; 61/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=278, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.668
total time= 4.2s
[CV 1/5; 62/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=373, light_gbm__num_leaves=18, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 1/5; 62/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=373, light_gbm__num_leaves=18, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;; score=0.691
total time= 5.2s
[CV 2/5; 62/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=373, light_gbm__num_leaves=18, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 2/5; 62/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=278.2559402207126,

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light_gbm__n_estimators=373, light_gbm__num_leaves=18, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.681
total time= 5.3s
[CV 3/5; 62/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=373, light_gbm__num_leaves=18, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 3/5; 62/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=373, light_gbm__num_leaves=18, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.677
total time= 5.7s
[CV 4/5; 62/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=373, light_gbm__num_leaves=18, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 4/5; 62/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=373, light_gbm__num_leaves=18, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.690
total time= 5.8s
[CV 5/5; 62/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=373, light_gbm__num_leaves=18, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 5/5; 62/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=373, light_gbm__num_leaves=18, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.681
total time= 5.5s
[CV 1/5; 63/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=151,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=278,
light_gbm__num_leaves=18, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 63/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=151,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=278,
light_gbm__num_leaves=18, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487;, score=0.683 total time= 4.6s
[CV 2/5; 63/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=151,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=278,
light_gbm__num_leaves=18, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 63/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=151,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=278,

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light_gbm__num_leaves=18, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487;, score=0.685 total time= 4.4s
[CV 3/5; 63/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=151,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=278,
light_gbm__num_leaves=18, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 63/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=151,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=278,
light_gbm__num_leaves=18, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487;, score=0.677 total time= 4.5s
[CV 4/5; 63/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=151,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=278,
light_gbm__num_leaves=18, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 63/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=151,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=278,
light_gbm__num_leaves=18, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487;, score=0.682 total time= 4.6s
[CV 5/5; 63/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=151,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=278,
light_gbm__num_leaves=18, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 63/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=151,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=278,
light_gbm__num_leaves=18, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487;, score=0.661 total time= 4.4s
[CV 1/5; 64/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=326,
light_gbm__num_leaves=16, light_gbm__reg_alpha=27, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 64/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=326,
light_gbm__num_leaves=16, light_gbm__reg_alpha=27, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487;, score=0.683 total time= 5.2s
[CV 2/5; 64/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=326,
light_gbm__num_leaves=16, light_gbm__reg_alpha=27, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 64/100] END light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=326,
light_gbm__num_leaves=16, light_gbm__reg_alpha=27, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487;, score=0.681 total time= 5.4s
[CV 3/5; 64/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=326,
light_gbm__num_leaves=16, light_gbm__reg_alpha=27, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 64/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=326,
light_gbm__num_leaves=16, light_gbm__reg_alpha=27, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487;, score=0.677 total time= 5.3s
[CV 4/5; 64/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=326,
light_gbm__num_leaves=16, light_gbm__reg_alpha=27, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 64/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=326,
light_gbm__num_leaves=16, light_gbm__reg_alpha=27, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487;, score=0.691 total time= 5.3s
[CV 5/5; 64/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=326,
light_gbm__num_leaves=16, light_gbm__reg_alpha=27, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 64/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=326,
light_gbm__num_leaves=16, light_gbm__reg_alpha=27, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487;, score=0.679 total time= 5.4s
[CV 1/5; 65/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=153, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=16, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 1/5; 65/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=153, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=16, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.676 total time= 4.6s
[CV 2/5; 65/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=153, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=16, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 2/5; 65/100] END light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=153, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=16, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.684 total time= 4.4s
[CV 3/5; 65/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=153, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=16, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 3/5; 65/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=153, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=16, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.674 total time= 4.5s
[CV 4/5; 65/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=153, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=16, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 4/5; 65/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=153, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=16, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.671 total time= 4.6s
[CV 5/5; 65/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=153, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=16, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 5/5; 65/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=153, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=16, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.666 total time= 4.4s
[CV 1/5; 66/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=310,
light_gbm__num_leaves=14, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 66/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=310,
light_gbm__num_leaves=14, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487;, score=0.688 total time= 5.1s
[CV 2/5; 66/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=310,
light_gbm__num_leaves=14, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 66/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102,

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light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=310,
light_gbm__num_leaves=14, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487;, score=0.684 total time= 5.2s
[CV 3/5; 66/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=310,
light_gbm__num_leaves=14, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 66/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=310,
light_gbm__num_leaves=14, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487;, score=0.678 total time= 5.2s
[CV 4/5; 66/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=310,
light_gbm__num_leaves=14, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 66/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=310,
light_gbm__num_leaves=14, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487;, score=0.688 total time= 5.1s
[CV 5/5; 66/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=310,
light_gbm__num_leaves=14, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 66/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=310,
light_gbm__num_leaves=14, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487;, score=0.682 total time= 5.1s
[CV 1/5; 67/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=500,
light_gbm__num_leaves=11, light_gbm__reg_alpha=77, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 67/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=500,
light_gbm__num_leaves=11, light_gbm__reg_alpha=77, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487;, score=0.690 total time= 5.4s
[CV 2/5; 67/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=500,
light_gbm__num_leaves=11, light_gbm__reg_alpha=77, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487

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[CV 2/5; 67/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=500,
light_gbm__num_leaves=11, light_gbm__reg_alpha=77, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487;, score=0.681 total time= 5.7s
[CV 3/5; 67/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=500,
light_gbm__num_leaves=11, light_gbm__reg_alpha=77, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 67/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=500,
light_gbm__num_leaves=11, light_gbm__reg_alpha=77, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487;, score=0.677 total time= 5.7s
[CV 4/5; 67/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=500,
light_gbm__num_leaves=11, light_gbm__reg_alpha=77, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 67/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=500,
light_gbm__num_leaves=11, light_gbm__reg_alpha=77, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487;, score=0.688 total time= 5.7s
[CV 5/5; 67/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=500,
light_gbm__num_leaves=11, light_gbm__reg_alpha=77, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 67/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=500,
light_gbm__num_leaves=11, light_gbm__reg_alpha=77, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487;, score=0.667 total time= 5.4s
[CV 1/5; 68/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 1/5; 68/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.686
total time= 4.6s
[CV 2/5; 68/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487

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[CV 2/5; 68/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.685
total time= 4.6s
[CV 3/5; 68/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 3/5; 68/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.683
total time= 4.5s
[CV 4/5; 68/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 4/5; 68/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.691
total time= 4.5s
[CV 5/5; 68/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 5/5; 68/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.668
total time= 4.6s
[CV 1/5; 69/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 1/5; 69/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;; score=0.684
total time= 4.3s
[CV 2/5; 69/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 2/5; 69/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,

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light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.685
total time= 4.3s
[CV 3/5; 69/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 3/5; 69/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.681
total time= 4.3s
[CV 4/5; 69/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 4/5; 69/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.688
total time= 4.3s
[CV 5/5; 69/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 5/5; 69/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.670
total time= 4.3s
[CV 1/5; 70/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=436,
light_gbm__num_leaves=13, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 70/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=436,
light_gbm__num_leaves=13, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487;, score=0.682 total time= 4.6s
[CV 2/5; 70/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=436,
light_gbm__num_leaves=13, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 70/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=436,
light_gbm__num_leaves=13, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,

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light_gbm__subsample=0.7981160065359487;, score=0.685 total time= 4.6s
[CV 3/5; 70/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=436,
light_gbm__num_leaves=13, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 70/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=436,
light_gbm__num_leaves=13, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487;, score=0.675 total time= 4.5s
[CV 4/5; 70/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=436,
light_gbm__num_leaves=13, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 70/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=436,
light_gbm__num_leaves=13, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487;, score=0.684 total time= 4.7s
[CV 5/5; 70/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=436,
light_gbm__num_leaves=13, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 70/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=436,
light_gbm__num_leaves=13, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487;, score=0.659 total time= 4.6s
[CV 1/5; 71/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=12, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 71/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=12, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487;, score=0.689 total time= 4.6s
[CV 2/5; 71/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=12, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 71/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,

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light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=12, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487;, score=0.684 total time= 4.6s
[CV 3/5; 71/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=12, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 71/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=12, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487;, score=0.686 total time= 4.6s
[CV 4/5; 71/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=12, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 71/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=12, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487;, score=0.691 total time= 4.6s
[CV 5/5; 71/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=12, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 71/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=12, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487;, score=0.677 total time= 4.6s
[CV 1/5; 72/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=17, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 1/5; 72/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=17, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.689 total time= 4.6s
[CV 2/5; 72/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=17, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 2/5; 72/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=1000.0,

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light_gbm__n_estimators=421, light_gbm__num_leaves=17, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.682 total time= 4.7s
[CV 3/5; 72/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=17, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 3/5; 72/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=17, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.678 total time= 4.7s
[CV 4/5; 72/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=17, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 4/5; 72/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=17, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.685 total time= 4.7s
[CV 5/5; 72/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=17, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 5/5; 72/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=17, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.673 total time= 4.7s
[CV 1/5; 73/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=357, light_gbm__num_leaves=11, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 1/5; 73/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=357, light_gbm__num_leaves=11, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.693
total time= 4.7s
[CV 2/5; 73/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=357, light_gbm__num_leaves=11, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 2/5; 73/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=357, light_gbm__num_leaves=11, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.682
total time= 4.9s

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[CV 3/5; 73/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=357, light_gbm__num_leaves=11, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 3/5; 73/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=357, light_gbm__num_leaves=11, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.683
total time= 4.9s

[CV 4/5; 73/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=357, light_gbm__num_leaves=11, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 4/5; 73/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=357, light_gbm__num_leaves=11, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.694
total time= 4.7s

[CV 5/5; 73/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=357, light_gbm__num_leaves=11, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 5/5; 73/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=357, light_gbm__num_leaves=11, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.674
total time= 4.8s

[CV 1/5; 74/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=310, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 1/5; 74/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=310, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;;
score=0.685 total time= 4.5s

[CV 2/5; 74/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=310, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 2/5; 74/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=310, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;;
score=0.687 total time= 4.6s

[CV 3/5; 74/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=310, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,

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light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 3/5; 74/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=310, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.682 total time= 4.5s
[CV 4/5; 74/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=310, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 4/5; 74/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=310, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.682 total time= 4.5s
[CV 5/5; 74/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=310, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 5/5; 74/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=310, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.666 total time= 4.5s
[CV 1/5; 75/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 1/5; 75/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.684
total time= 4.5s
[CV 2/5; 75/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 2/5; 75/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.688
total time= 4.5s
[CV 3/5; 75/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 3/5; 75/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,

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light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.683
total time= 4.5s
[CV 4/5; 75/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 4/5; 75/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.684
total time= 4.5s
[CV 5/5; 75/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 5/5; 75/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.668
total time= 4.5s
[CV 1/5; 76/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=405,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 76/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=405,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;, score=0.692 total time= 5.3s
[CV 2/5; 76/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=405,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 76/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=405,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;, score=0.684 total time= 5.4s
[CV 3/5; 76/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=405,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 76/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,

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light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=405,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;, score=0.681 total time= 5.2s
[CV 4/5; 76/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=405,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 76/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=405,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;, score=0.691 total time= 5.4s
[CV 5/5; 76/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=405,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 76/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=405,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;, score=0.676 total time= 5.4s
[CV 1/5; 77/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 1/5; 77/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.683
total time= 6.0s
[CV 2/5; 77/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 2/5; 77/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.678
total time= 6.0s
[CV 3/5; 77/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 3/5; 77/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=10,

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light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.676
total time= 5.8s
[CV 4/5; 77/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 4/5; 77/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.695
total time= 6.0s
[CV 5/5; 77/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 5/5; 77/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.682
total time= 5.9s
[CV 1/5; 78/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=15, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 1/5; 78/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=15, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487;, score=0.688
total time= 4.9s
[CV 2/5; 78/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=15, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 2/5; 78/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=15, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487;, score=0.683
total time= 4.9s
[CV 3/5; 78/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=15, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 3/5; 78/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=15, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487;, score=0.683
total time= 4.9s
[CV 4/5; 78/100] START light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=15, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 4/5; 78/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=15, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487;, score=0.693
total time= 4.7s
[CV 5/5; 78/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=15, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 5/5; 78/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=15, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487;, score=0.676
total time= 4.9s
[CV 1/5; 79/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=389, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 1/5; 79/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=389, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.694 total time= 5.0s
[CV 2/5; 79/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=389, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 2/5; 79/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=389, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.684 total time= 5.0s
[CV 3/5; 79/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=389, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 3/5; 79/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=389, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.680 total time= 4.9s
[CV 4/5; 79/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=389, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487

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[CV 4/5; 79/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=389, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.694 total time= 5.0s
[CV 5/5; 79/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=389, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 5/5; 79/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=389, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.668 total time= 5.0s
[CV 1/5; 80/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 1/5; 80/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.690 total time= 4.3s
[CV 2/5; 80/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 2/5; 80/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.692 total time= 4.3s
[CV 3/5; 80/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 3/5; 80/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.684 total time= 4.2s
[CV 4/5; 80/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 4/5; 80/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,

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light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.689 total time= 4.2s
[CV 5/5; 80/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 5/5; 80/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.670 total time= 4.3s
[CV 1/5; 81/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=357,
light_gbm__num_leaves=15, light_gbm__reg_alpha=129, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 81/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=357,
light_gbm__num_leaves=15, light_gbm__reg_alpha=129, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;, score=0.680 total time= 4.6s
[CV 2/5; 81/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=357,
light_gbm__num_leaves=15, light_gbm__reg_alpha=129, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 81/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=357,
light_gbm__num_leaves=15, light_gbm__reg_alpha=129, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;, score=0.685 total time= 4.6s
[CV 3/5; 81/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=357,
light_gbm__num_leaves=15, light_gbm__reg_alpha=129, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 81/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=357,
light_gbm__num_leaves=15, light_gbm__reg_alpha=129, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;, score=0.674 total time= 4.5s
[CV 4/5; 81/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=357,
light_gbm__num_leaves=15, light_gbm__reg_alpha=129, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 81/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,

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light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=357,
light_gbm__num_leaves=15, light_gbm__reg_alpha=129, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;, score=0.686 total time= 4.6s
[CV 5/5; 81/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=357,
light_gbm__num_leaves=15, light_gbm__reg_alpha=129, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 81/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=357,
light_gbm__num_leaves=15, light_gbm__reg_alpha=129, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;, score=0.659 total time= 4.6s
[CV 1/5; 82/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=405, light_gbm__num_leaves=14, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 1/5; 82/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=405, light_gbm__num_leaves=14, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.691
total time= 5.0s
[CV 2/5; 82/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=405, light_gbm__num_leaves=14, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 2/5; 82/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=405, light_gbm__num_leaves=14, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.681
total time= 5.2s
[CV 3/5; 82/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=405, light_gbm__num_leaves=14, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 3/5; 82/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=405, light_gbm__num_leaves=14, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.676
total time= 5.2s
[CV 4/5; 82/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=405, light_gbm__num_leaves=14, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 4/5; 82/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=405, light_gbm__num_leaves=14, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.691

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total time= 5.1s
[CV 5/5; 82/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=405, light_gbm__num_leaves=14, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 5/5; 82/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=405, light_gbm__num_leaves=14, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.675
total time= 5.0s
[CV 1/5; 83/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=16, light_gbm__reg_alpha=10, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 83/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=16, light_gbm__reg_alpha=10, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;; score=0.690 total time= 5.4s
[CV 2/5; 83/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=16, light_gbm__reg_alpha=10, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 83/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=16, light_gbm__reg_alpha=10, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;; score=0.677 total time= 5.4s
[CV 3/5; 83/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=16, light_gbm__reg_alpha=10, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 83/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=16, light_gbm__reg_alpha=10, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;; score=0.679 total time= 5.6s
[CV 4/5; 83/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=16, light_gbm__reg_alpha=10, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 83/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,

```



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light_gbm__num_leaves=16, light_gbm__reg_alpha=10, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.687 total time= 5.6s
[CV 5/5; 83/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=16, light_gbm__reg_alpha=10, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 83/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=16, light_gbm__reg_alpha=10, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.679 total time= 5.6s
[CV 1/5; 84/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=326, light_gbm__num_leaves=18, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 1/5; 84/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=326, light_gbm__num_leaves=18, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.687
total time= 5.3s
[CV 2/5; 84/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=326, light_gbm__num_leaves=18, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 2/5; 84/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=326, light_gbm__num_leaves=18, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.679
total time= 5.3s
[CV 3/5; 84/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=326, light_gbm__num_leaves=18, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 3/5; 84/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=326, light_gbm__num_leaves=18, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.678
total time= 5.3s
[CV 4/5; 84/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=326, light_gbm__num_leaves=18, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 4/5; 84/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=326, light_gbm__num_leaves=18, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.689
total time= 5.3s

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[CV 5/5; 84/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=326, light_gbm__num_leaves=18, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 5/5; 84/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=326, light_gbm__num_leaves=18, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;; score=0.683
total time= 5.5s

[CV 1/5; 85/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=17, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 1/5; 85/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=17, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;; score=0.667
total time= 4.4s

[CV 2/5; 85/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=17, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 2/5; 85/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=17, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;; score=0.677
total time= 4.5s

[CV 3/5; 85/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=17, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 3/5; 85/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=17, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;; score=0.676
total time= 4.5s

[CV 4/5; 85/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=17, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 4/5; 85/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=17, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;; score=0.659
total time= 4.4s

[CV 5/5; 85/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=17, light_gbm__reg_alpha=599,

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light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 5/5; 85/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=17, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.645
total time= 4.5s
[CV 1/5; 86/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=200,
light_gbm__num_leaves=13, light_gbm__reg_alpha=599, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 86/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=200,
light_gbm__num_leaves=13, light_gbm__reg_alpha=599, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.659 total time= 4.1s
[CV 2/5; 86/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=200,
light_gbm__num_leaves=13, light_gbm__reg_alpha=599, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 86/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=200,
light_gbm__num_leaves=13, light_gbm__reg_alpha=599, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.667 total time= 4.2s
[CV 3/5; 86/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=200,
light_gbm__num_leaves=13, light_gbm__reg_alpha=599, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 86/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=200,
light_gbm__num_leaves=13, light_gbm__reg_alpha=599, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.672 total time= 4.1s
[CV 4/5; 86/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=200,
light_gbm__num_leaves=13, light_gbm__reg_alpha=599, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 86/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=200,
light_gbm__num_leaves=13, light_gbm__reg_alpha=599, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.674 total time= 4.1s
[CV 5/5; 86/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,

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light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=200,
light_gbm__num_leaves=13, light_gbm__reg_alpha=599, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 86/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=200,
light_gbm__num_leaves=13, light_gbm__reg_alpha=599, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;; score=0.657 total time= 4.1s
[CV 1/5; 87/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=421,
light_gbm__num_leaves=17, light_gbm__reg_alpha=27, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 87/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=421,
light_gbm__num_leaves=17, light_gbm__reg_alpha=27, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;; score=0.684 total time= 5.0s
[CV 2/5; 87/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=421,
light_gbm__num_leaves=17, light_gbm__reg_alpha=27, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 87/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=421,
light_gbm__num_leaves=17, light_gbm__reg_alpha=27, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;; score=0.685 total time= 5.0s
[CV 3/5; 87/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=421,
light_gbm__num_leaves=17, light_gbm__reg_alpha=27, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 87/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=421,
light_gbm__num_leaves=17, light_gbm__reg_alpha=27, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;; score=0.676 total time= 4.8s
[CV 4/5; 87/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=421,
light_gbm__num_leaves=17, light_gbm__reg_alpha=27, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 87/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=421,
light_gbm__num_leaves=17, light_gbm__reg_alpha=27, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;; score=0.683 total time= 5.1s

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[CV 5/5; 87/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=421,
light_gbm__num_leaves=17, light_gbm__reg_alpha=27, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 87/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=421,
light_gbm__num_leaves=17, light_gbm__reg_alpha=27, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487; , score=0.663 total time= 5.1s
[CV 1/5; 88/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=215, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 1/5; 88/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=215, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487; , score=0.696
total time= 4.5s
[CV 2/5; 88/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=215, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 2/5; 88/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=215, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487; , score=0.681
total time= 4.5s
[CV 3/5; 88/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=215, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 3/5; 88/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=215, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487; , score=0.683
total time= 4.4s
[CV 4/5; 88/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=215, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 4/5; 88/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=215, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487; , score=0.691
total time= 4.5s
[CV 5/5; 88/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=599.4842503189409,

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light_gbm__n_estimators=215, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 5/5; 88/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=215, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.672
total time= 4.5s
[CV 1/5; 89/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=177, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 1/5; 89/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=177, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.694
total time= 4.6s
[CV 2/5; 89/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=177, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 2/5; 89/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=177, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.690
total time= 4.5s
[CV 3/5; 89/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=177, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 3/5; 89/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=177, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.679
total time= 4.5s
[CV 4/5; 89/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=177, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 4/5; 89/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=177, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.690
total time= 4.5s
[CV 5/5; 89/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=177, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 5/5; 89/100] END light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=177, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.670
total time= 4.6s
[CV 1/5; 90/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=357, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 90/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=357, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.684 total time= 4.3s
[CV 2/5; 90/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=357, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 90/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=357, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.687 total time= 4.4s
[CV 3/5; 90/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=357, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 90/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=357, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.627 total time= 4.4s
[CV 4/5; 90/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=357, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 90/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=357, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.646 total time= 4.3s
[CV 5/5; 90/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=357, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,

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light_gbm__subsample=0.7981160065359487
[CV 5/5; 90/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=357, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;; score=0.633 total time= 4.4s
[CV 1/5; 91/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=342, light_gbm__num_leaves=11, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 1/5; 91/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=342, light_gbm__num_leaves=11, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.690 total time= 5.0s
[CV 2/5; 91/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=342, light_gbm__num_leaves=11, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 2/5; 91/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=342, light_gbm__num_leaves=11, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.686 total time= 5.0s
[CV 3/5; 91/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=342, light_gbm__num_leaves=11, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 3/5; 91/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=342, light_gbm__num_leaves=11, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.678 total time= 5.1s
[CV 4/5; 91/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=342, light_gbm__num_leaves=11, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 4/5; 91/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=342, light_gbm__num_leaves=11, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.692 total time= 5.2s
[CV 5/5; 91/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=342, light_gbm__num_leaves=11, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 5/5; 91/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182, light_gbm__min_child_weight=278.2559402207126,

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light_gbm__n_estimators=342, light_gbm__num_leaves=11, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.673 total time= 5.1s
[CV 1/5; 92/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=192, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 1/5; 92/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=192, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.676
total time= 4.4s
[CV 2/5; 92/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=192, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 2/5; 92/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=192, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.686
total time= 4.5s
[CV 3/5; 92/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=192, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 3/5; 92/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=192, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.682
total time= 4.4s
[CV 4/5; 92/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=192, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 4/5; 92/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=192, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.667
total time= 4.3s
[CV 5/5; 92/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=192, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 5/5; 92/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=192, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.676
total time= 4.5s

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[CV 1/5; 93/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=17,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 93/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=17,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487; , score=0.722 total time= 4.5s
[CV 2/5; 93/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=17,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 93/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=17,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487; , score=0.694 total time= 4.4s
[CV 3/5; 93/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=17,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 93/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=17,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487; , score=0.610 total time= 4.5s
[CV 4/5; 93/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=17,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 93/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=17,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487; , score=0.664 total time= 4.4s
[CV 5/5; 93/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=17,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 93/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=17,

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light_gbm__reg_alpha=1000, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487;, score=0.619 total time= 4.6s
[CV 1/5; 94/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=421, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 1/5; 94/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=421, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.684 total time= 4.8s
[CV 2/5; 94/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=421, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 2/5; 94/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=421, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.687 total time= 4.9s
[CV 3/5; 94/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=421, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 3/5; 94/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=421, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.673 total time= 5.1s
[CV 4/5; 94/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=421, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 4/5; 94/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=421, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.684 total time= 5.0s
[CV 5/5; 94/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=421, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 5/5; 94/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=421, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.668 total time= 5.1s
[CV 1/5; 95/100] START light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=168, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=342, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 1/5; 95/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=342, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;;
score=0.670 total time= 4.5s
[CV 2/5; 95/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=342, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 2/5; 95/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=342, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;;
score=0.672 total time= 4.3s
[CV 3/5; 95/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=342, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 3/5; 95/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=342, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;;
score=0.660 total time= 4.3s
[CV 4/5; 95/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=342, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 4/5; 95/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=342, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;;
score=0.665 total time= 4.3s
[CV 5/5; 95/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=342, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 5/5; 95/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=342, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;;
score=0.644 total time= 4.3s
[CV 1/5; 96/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=468,
light_gbm__num_leaves=17, light_gbm__reg_alpha=129, light_gbm__reg_lambda=10000,

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light_gbm__subsample=0.7981160065359487
[CV 1/5; 96/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=468,
light_gbm__num_leaves=17, light_gbm__reg_alpha=129, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;; score=0.684 total time= 5.4s
[CV 2/5; 96/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=468,
light_gbm__num_leaves=17, light_gbm__reg_alpha=129, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 96/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=468,
light_gbm__num_leaves=17, light_gbm__reg_alpha=129, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;; score=0.684 total time= 5.2s
[CV 3/5; 96/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=468,
light_gbm__num_leaves=17, light_gbm__reg_alpha=129, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 96/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=468,
light_gbm__num_leaves=17, light_gbm__reg_alpha=129, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;; score=0.675 total time= 5.2s
[CV 4/5; 96/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=468,
light_gbm__num_leaves=17, light_gbm__reg_alpha=129, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 96/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=468,
light_gbm__num_leaves=17, light_gbm__reg_alpha=129, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;; score=0.684 total time= 5.4s
[CV 5/5; 96/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=468,
light_gbm__num_leaves=17, light_gbm__reg_alpha=129, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 96/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=468,
light_gbm__num_leaves=17, light_gbm__reg_alpha=129, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;; score=0.664 total time= 5.4s
[CV 1/5; 97/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=138,

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light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=405,
light_gbm__num_leaves=12, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 97/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=138,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=405,
light_gbm__num_leaves=12, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487; , score=0.682 total time= 4.3s
[CV 2/5; 97/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=138,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=405,
light_gbm__num_leaves=12, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 97/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=138,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=405,
light_gbm__num_leaves=12, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487; , score=0.655 total time= 4.4s
[CV 3/5; 97/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=138,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=405,
light_gbm__num_leaves=12, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 97/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=138,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=405,
light_gbm__num_leaves=12, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487; , score=0.624 total time= 4.3s
[CV 4/5; 97/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=138,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=405,
light_gbm__num_leaves=12, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 97/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=138,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=405,
light_gbm__num_leaves=12, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487; , score=0.634 total time= 4.3s
[CV 5/5; 97/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=138,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=405,
light_gbm__num_leaves=12, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 97/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=138,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=405,
light_gbm__num_leaves=12, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487; , score=0.652 total time= 4.4s

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[CV 1/5; 98/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=278,
light_gbm__num_leaves=17, light_gbm__reg_alpha=359, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 98/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=278,
light_gbm__num_leaves=17, light_gbm__reg_alpha=359, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487; , score=0.675 total time= 4.4s
[CV 2/5; 98/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=278,
light_gbm__num_leaves=17, light_gbm__reg_alpha=359, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 98/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=278,
light_gbm__num_leaves=17, light_gbm__reg_alpha=359, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487; , score=0.683 total time= 4.4s
[CV 3/5; 98/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=278,
light_gbm__num_leaves=17, light_gbm__reg_alpha=359, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 98/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=278,
light_gbm__num_leaves=17, light_gbm__reg_alpha=359, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487; , score=0.670 total time= 4.3s
[CV 4/5; 98/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=278,
light_gbm__num_leaves=17, light_gbm__reg_alpha=359, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 98/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=278,
light_gbm__num_leaves=17, light_gbm__reg_alpha=359, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487; , score=0.672 total time= 4.5s
[CV 5/5; 98/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=278,
light_gbm__num_leaves=17, light_gbm__reg_alpha=359, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 98/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=278,

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light_gbm__num_leaves=17, light_gbm__reg_alpha=359, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487;, score=0.667 total time= 4.4s
[CV 1/5; 99/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=484, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 1/5; 99/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=484, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.686
total time= 5.3s
[CV 2/5; 99/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=484, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 2/5; 99/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=484, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.683
total time= 5.6s
[CV 3/5; 99/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=484, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 3/5; 99/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=484, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.681
total time= 5.7s
[CV 4/5; 99/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=484, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 4/5; 99/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=484, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.691
total time= 5.7s
[CV 5/5; 99/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=484, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 5/5; 99/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=484, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.677
total time= 6.1s
[CV 1/5; 100/100] START light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=175,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=310,
light_gbm__num_leaves=13, light_gbm__reg_alpha=16, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 100/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=175,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=310,
light_gbm__num_leaves=13, light_gbm__reg_alpha=16, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487; , score=0.690 total time= 4.9s
[CV 2/5; 100/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=175,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=310,
light_gbm__num_leaves=13, light_gbm__reg_alpha=16, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 100/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=175,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=310,
light_gbm__num_leaves=13, light_gbm__reg_alpha=16, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487; , score=0.681 total time= 5.0s
[CV 3/5; 100/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=175,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=310,
light_gbm__num_leaves=13, light_gbm__reg_alpha=16, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 100/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=175,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=310,
light_gbm__num_leaves=13, light_gbm__reg_alpha=16, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487; , score=0.685 total time= 4.9s
[CV 4/5; 100/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=175,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=310,
light_gbm__num_leaves=13, light_gbm__reg_alpha=16, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 100/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=175,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=310,
light_gbm__num_leaves=13, light_gbm__reg_alpha=16, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487; , score=0.694 total time= 4.9s
[CV 5/5; 100/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=175,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=310,
light_gbm__num_leaves=13, light_gbm__reg_alpha=16, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 100/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=175,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=310,
light_gbm__num_leaves=13, light_gbm__reg_alpha=16, light_gbm__reg_lambda=215,

```

```
light_gbm__subsample=0.7981160065359487;; score=0.676 total time= 5.0s
{'light_gbm__subsample': 0.7981160065359487, 'light_gbm__reg_lambda': 21,
'light_gbm__reg_alpha': 16, 'light_gbm__num_leaves': 12,
'light_gbm__n_estimators': 373, 'light_gbm__min_child_weight': 100.0,
'light_gbm__min_child_samples': 80, 'light_gbm__colsample_bytree':
0.8736655622105718}
```

```
[ ]: best_model = random_search.best_estimator_
model_eval(best_model, X_test, y_test)
```

```
[[39385 17169]
 [ 1559  3390]]
      precision    recall  f1-score   support

     0       0.96      0.70      0.81     56554
     1       0.16      0.68      0.27      4949

 accuracy                   0.70     61503
 macro avg       0.56      0.69      0.54     61503
weighted avg       0.90      0.70      0.76     61503
```

```
'model_eval': successfully processed in 0h00m17.575815s.
```

```
[ ]: best_model['light_gbm'].get_params()
```

```
[ ]: {'boosting_type': 'gbdt',
      'class_weight': None,
      'colsample_bytree': 0.8736655622105718,
      'importance_type': 'split',
      'learning_rate': 0.1,
      'max_depth': -1,
      'min_child_samples': 80,
      'min_child_weight': 100.0,
      'min_split_gain': 0.0,
      'n_estimators': 373,
      'n_jobs': -1,
      'num_leaves': 12,
      'objective': None,
      'random_state': 42,
      'reg_alpha': 16,
      'reg_lambda': 21,
      'silent': True,
      'subsample': 0.7981160065359487,
      'subsample_for_bin': 200000,
      'subsample_freq': 0}
```

```
[ ]: random_search = RandomizedSearchCV(baseline_model, params, n_iter=n_iter,
                                       scoring='recall', cv=5, verbose=10)
random_search.fit(X_train, y_train)
print(random_search.best_params_)
```

```
Fitting 5 folds for each of 100 candidates, totalling 500 fits
[CV 1/5; 1/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=124,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=452,
light_gbm__num_leaves=12, light_gbm__reg_alpha=46, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 1/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=124,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=452,
light_gbm__num_leaves=12, light_gbm__reg_alpha=46, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487; , score=0.690 total time= 20.2s
[CV 2/5; 1/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=124,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=452,
light_gbm__num_leaves=12, light_gbm__reg_alpha=46, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 1/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=124,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=452,
light_gbm__num_leaves=12, light_gbm__reg_alpha=46, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487; , score=0.684 total time= 6.3s
[CV 3/5; 1/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=124,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=452,
light_gbm__num_leaves=12, light_gbm__reg_alpha=46, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 1/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=124,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=452,
light_gbm__num_leaves=12, light_gbm__reg_alpha=46, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487; , score=0.681 total time= 6.7s
[CV 4/5; 1/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=124,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=452,
light_gbm__num_leaves=12, light_gbm__reg_alpha=46, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 1/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=124,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=452,
light_gbm__num_leaves=12, light_gbm__reg_alpha=46, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487; , score=0.694 total time= 6.3s
[CV 5/5; 1/100] START light_gbm__colsample_bytree=0.8736655622105718,
```

```

light_gbm__min_child_samples=124,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=452,
light_gbm__num_leaves=12, light_gbm__reg_alpha=46, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 1/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=124,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=452,
light_gbm__num_leaves=12, light_gbm__reg_alpha=46, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487; , score=0.670 total time= 6.2s
[CV 1/5; 2/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=389,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 2/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=389,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487; , score=0.689 total time= 6.7s
[CV 2/5; 2/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=389,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 2/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=389,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487; , score=0.681 total time= 6.7s
[CV 3/5; 2/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=389,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 2/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=389,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487; , score=0.677 total time= 6.9s
[CV 4/5; 2/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=389,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 2/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=389,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=1000,

```

```

light_gbm__subsample=0.7981160065359487;, score=0.690 total time= 6.8s
[CV 5/5; 2/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=389,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 2/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=389,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;, score=0.672 total time= 6.8s
[CV 1/5; 3/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 1/5; 3/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;,
score=0.682 total time= 5.8s
[CV 2/5; 3/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 2/5; 3/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;,
score=0.687 total time= 5.8s
[CV 3/5; 3/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 3/5; 3/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;,
score=0.678 total time= 5.9s
[CV 4/5; 3/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 4/5; 3/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;,
score=0.686 total time= 5.4s
[CV 5/5; 3/100] START light_gbm__colsample_bytree=0.8736655622105718,

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```

light_gbm__min_child_samples=143, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 5/5; 3/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;,
score=0.673 total time= 5.8s
[CV 1/5; 4/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=359, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 4/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=359, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.675 total time= 5.8s
[CV 2/5; 4/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=359, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 4/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=359, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.684 total time= 5.4s
[CV 3/5; 4/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=359, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 4/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=359, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.669 total time= 5.8s
[CV 4/5; 4/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=359, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 4/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=359, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.664 total time= 5.8s

```

```

[CV 5/5; 4/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=359, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 4/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=359, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;; score=0.659 total time= 5.4s
[CV 1/5; 5/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=389, light_gbm__num_leaves=20, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=215, light_gbm__subsample=0.7981160065359487
[CV 1/5; 5/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=389, light_gbm__num_leaves=20, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=215, light_gbm__subsample=0.7981160065359487;; score=0.694
total time= 6.3s
[CV 2/5; 5/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=389, light_gbm__num_leaves=20, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=215, light_gbm__subsample=0.7981160065359487
[CV 2/5; 5/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=389, light_gbm__num_leaves=20, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=215, light_gbm__subsample=0.7981160065359487;; score=0.684
total time= 6.4s
[CV 3/5; 5/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=389, light_gbm__num_leaves=20, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=215, light_gbm__subsample=0.7981160065359487
[CV 3/5; 5/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=389, light_gbm__num_leaves=20, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=215, light_gbm__subsample=0.7981160065359487;; score=0.675
total time= 6.2s
[CV 4/5; 5/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=389, light_gbm__num_leaves=20, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=215, light_gbm__subsample=0.7981160065359487
[CV 4/5; 5/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=389, light_gbm__num_leaves=20, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=215, light_gbm__subsample=0.7981160065359487;; score=0.691
total time= 6.1s
[CV 5/5; 5/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=774.263682681127,

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light_gbm__n_estimators=389, light_gbm__num_leaves=20, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=215, light_gbm__subsample=0.7981160065359487
[CV 5/5; 5/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=389, light_gbm__num_leaves=20, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=215, light_gbm__subsample=0.7981160065359487;; score=0.673
total time= 6.1s
[CV 1/5; 6/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 1/5; 6/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;;
score=0.690 total time= 24.7s
[CV 2/5; 6/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 2/5; 6/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;;
score=0.687 total time= 6.1s
[CV 3/5; 6/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 3/5; 6/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;;
score=0.682 total time= 6.0s
[CV 4/5; 6/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 4/5; 6/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;;
score=0.687 total time= 6.0s
[CV 5/5; 6/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 5/5; 6/100] END light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=170, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.670 total time= 6.1s
[CV 1/5; 7/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=231,
light_gbm__num_leaves=14, light_gbm__reg_alpha=129, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 7/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=231,
light_gbm__num_leaves=14, light_gbm__reg_alpha=129, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487;, score=0.681 total time= 5.3s
[CV 2/5; 7/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=231,
light_gbm__num_leaves=14, light_gbm__reg_alpha=129, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 7/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=231,
light_gbm__num_leaves=14, light_gbm__reg_alpha=129, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487;, score=0.685 total time= 5.5s
[CV 3/5; 7/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=231,
light_gbm__num_leaves=14, light_gbm__reg_alpha=129, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 7/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=231,
light_gbm__num_leaves=14, light_gbm__reg_alpha=129, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487;, score=0.674 total time= 5.5s
[CV 4/5; 7/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=231,
light_gbm__num_leaves=14, light_gbm__reg_alpha=129, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 7/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=231,
light_gbm__num_leaves=14, light_gbm__reg_alpha=129, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487;, score=0.684 total time= 5.4s
[CV 5/5; 7/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=231,
light_gbm__num_leaves=14, light_gbm__reg_alpha=129, light_gbm__reg_lambda=21,

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light_gbm__subsample=0.7981160065359487
[CV 5/5; 7/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=231,
light_gbm__num_leaves=14, light_gbm__reg_alpha=129, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487;; score=0.665 total time= 5.5s
[CV 1/5; 8/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=160, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=11,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 8/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=160, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=11,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487;; score=0.677 total time= 5.2s
[CV 2/5; 8/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=160, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=11,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 8/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=160, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=11,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487;; score=0.654 total time= 5.1s
[CV 3/5; 8/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=160, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=11,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 8/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=160, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=11,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487;; score=0.629 total time= 5.1s
[CV 4/5; 8/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=160, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=11,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 8/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=160, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=11,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487;; score=0.671 total time= 5.1s
[CV 5/5; 8/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=160, light_gbm__min_child_weight=100.0,

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light_gbm__n_estimators=294, light_gbm__num_leaves=11,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 8/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=160, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=11,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487; , score=0.623 total time= 5.1s
[CV 1/5; 9/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 1/5; 9/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487; , score=0.691
total time= 6.0s
[CV 2/5; 9/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 2/5; 9/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487; , score=0.681
total time= 6.3s
[CV 3/5; 9/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 3/5; 9/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487; , score=0.678
total time= 6.1s
[CV 4/5; 9/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 4/5; 9/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487; , score=0.688
total time= 6.3s
[CV 5/5; 9/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487

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[CV 5/5; 9/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487;, score=0.672
total time= 6.3s
[CV 1/5; 10/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=294,
light_gbm__num_leaves=17, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 10/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=294,
light_gbm__num_leaves=17, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487;, score=0.685 total time= 6.4s
[CV 2/5; 10/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=294,
light_gbm__num_leaves=17, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 10/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=294,
light_gbm__num_leaves=17, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487;, score=0.682 total time= 6.3s
[CV 3/5; 10/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=294,
light_gbm__num_leaves=17, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 10/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=294,
light_gbm__num_leaves=17, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487;, score=0.681 total time= 6.0s
[CV 4/5; 10/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=294,
light_gbm__num_leaves=17, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 10/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=294,
light_gbm__num_leaves=17, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487;, score=0.691 total time= 6.4s
[CV 5/5; 10/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=294,

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light_gbm__num_leaves=17, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 10/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=294,
light_gbm__num_leaves=17, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487; , score=0.677 total time= 6.0s
[CV 1/5; 11/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 1/5; 11/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487; , score=0.676
total time= 5.0s
[CV 2/5; 11/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 2/5; 11/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487; , score=0.677
total time= 5.1s
[CV 3/5; 11/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 3/5; 11/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487; , score=0.671
total time= 5.0s
[CV 4/5; 11/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 4/5; 11/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487; , score=0.670
total time= 5.1s
[CV 5/5; 11/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 5/5; 11/100] END light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=89, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.649
total time= 5.0s
[CV 1/5; 12/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=468, light_gbm__num_leaves=20, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 1/5; 12/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=468, light_gbm__num_leaves=20, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.693
total time= 5.8s
[CV 2/5; 12/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=468, light_gbm__num_leaves=20, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 2/5; 12/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=468, light_gbm__num_leaves=20, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.682
total time= 6.0s
[CV 3/5; 12/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=468, light_gbm__num_leaves=20, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 3/5; 12/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=468, light_gbm__num_leaves=20, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.678
total time= 5.8s
[CV 4/5; 12/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=468, light_gbm__num_leaves=20, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 4/5; 12/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=468, light_gbm__num_leaves=20, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.692
total time= 6.0s
[CV 5/5; 12/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=468, light_gbm__num_leaves=20, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 5/5; 12/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=468, light_gbm__num_leaves=20, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.672

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total time= 5.8s
[CV 1/5; 13/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=373, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 1/5; 13/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=373, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;; score=0.690
total time= 6.5s
[CV 2/5; 13/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=373, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 2/5; 13/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=373, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;; score=0.690
total time= 6.9s
[CV 3/5; 13/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=373, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 3/5; 13/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=373, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;; score=0.681
total time= 6.5s
[CV 4/5; 13/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=373, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 4/5; 13/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=373, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;; score=0.694
total time= 6.4s
[CV 5/5; 13/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=373, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 5/5; 13/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=373, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;; score=0.680
total time= 6.3s
[CV 1/5; 14/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=774.263682681127,

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light_gbm__n_estimators=436, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 1/5; 14/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.682
total time= 5.4s
[CV 2/5; 14/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 2/5; 14/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.705
total time= 5.2s
[CV 3/5; 14/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 3/5; 14/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.679
total time= 5.2s
[CV 4/5; 14/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 4/5; 14/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.667
total time= 5.2s
[CV 5/5; 14/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 5/5; 14/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.695
total time= 5.2s
[CV 1/5; 15/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=200, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 1/5; 15/100] END light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=102, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=200, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.689
total time= 5.4s
[CV 2/5; 15/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=200, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 2/5; 15/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=200, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.685
total time= 5.4s
[CV 3/5; 15/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=200, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 3/5; 15/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=200, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.684
total time= 5.4s
[CV 4/5; 15/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=200, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 4/5; 15/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=200, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.694
total time= 5.4s
[CV 5/5; 15/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=200, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 5/5; 15/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=200, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.675
total time= 5.4s
[CV 1/5; 16/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=389, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 1/5; 16/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=389, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487;, score=0.690

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total time= 6.0s
[CV 2/5; 16/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=389, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 2/5; 16/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=389, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487;; score=0.684
total time= 5.7s
[CV 3/5; 16/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=389, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 3/5; 16/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=389, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487;; score=0.681
total time= 5.8s
[CV 4/5; 16/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=389, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 4/5; 16/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=389, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487;; score=0.690
total time= 5.9s
[CV 5/5; 16/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=389, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 5/5; 16/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=389, light_gbm__num_leaves=18, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487;; score=0.677
total time= 5.7s
[CV 1/5; 17/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=231,
light_gbm__num_leaves=18, light_gbm__reg_alpha=215, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 17/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=231,
light_gbm__num_leaves=18, light_gbm__reg_alpha=215, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;; score=0.678 total time= 5.2s
[CV 2/5; 17/100] START light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=104,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=231,
light_gbm__num_leaves=18, light_gbm__reg_alpha=215, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 17/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=231,
light_gbm__num_leaves=18, light_gbm__reg_alpha=215, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487; , score=0.680 total time= 5.2s
[CV 3/5; 17/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=231,
light_gbm__num_leaves=18, light_gbm__reg_alpha=215, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 17/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=231,
light_gbm__num_leaves=18, light_gbm__reg_alpha=215, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487; , score=0.671 total time= 5.2s
[CV 4/5; 17/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=231,
light_gbm__num_leaves=18, light_gbm__reg_alpha=215, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 17/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=231,
light_gbm__num_leaves=18, light_gbm__reg_alpha=215, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487; , score=0.681 total time= 5.3s
[CV 5/5; 17/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=231,
light_gbm__num_leaves=18, light_gbm__reg_alpha=215, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 17/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=231,
light_gbm__num_leaves=18, light_gbm__reg_alpha=215, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487; , score=0.661 total time= 5.2s
[CV 1/5; 18/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=247,
light_gbm__num_leaves=10, light_gbm__reg_alpha=16, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 18/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=247,
light_gbm__num_leaves=10, light_gbm__reg_alpha=16, light_gbm__reg_lambda=100,

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light_gbm__subsample=0.7981160065359487;, score=0.686 total time= 5.8s
[CV 2/5; 18/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=247,
light_gbm__num_leaves=10, light_gbm__reg_alpha=16, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 18/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=247,
light_gbm__num_leaves=10, light_gbm__reg_alpha=16, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.683 total time= 5.7s
[CV 3/5; 18/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=247,
light_gbm__num_leaves=10, light_gbm__reg_alpha=16, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 18/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=247,
light_gbm__num_leaves=10, light_gbm__reg_alpha=16, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.683 total time= 5.8s
[CV 4/5; 18/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=247,
light_gbm__num_leaves=10, light_gbm__reg_alpha=16, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 18/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=247,
light_gbm__num_leaves=10, light_gbm__reg_alpha=16, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.693 total time= 5.8s
[CV 5/5; 18/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=247,
light_gbm__num_leaves=10, light_gbm__reg_alpha=16, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 18/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=247,
light_gbm__num_leaves=10, light_gbm__reg_alpha=16, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.674 total time= 5.8s
[CV 1/5; 19/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 1/5; 19/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,

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light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.672
total time= 5.2s
[CV 2/5; 19/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 2/5; 19/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.679
total time= 5.2s
[CV 3/5; 19/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 3/5; 19/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.665
total time= 5.1s
[CV 4/5; 19/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 4/5; 19/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.667
total time= 5.1s
[CV 5/5; 19/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 5/5; 19/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.655
total time= 5.1s
[CV 1/5; 20/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 1/5; 20/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;,
score=0.689 total time= 6.6s
[CV 2/5; 20/100] START light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=102, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 2/5; 20/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.681 total time= 7.1s
[CV 3/5; 20/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 3/5; 20/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.680 total time= 6.8s
[CV 4/5; 20/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 4/5; 20/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.688 total time= 7.2s
[CV 5/5; 20/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 5/5; 20/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.672 total time= 7.2s
[CV 1/5; 21/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=20, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 1/5; 21/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=20, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;;
score=0.678 total time= 6.4s
[CV 2/5; 21/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=20, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487

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[CV 2/5; 21/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=20, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.677 total time= 6.1s
[CV 3/5; 21/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=20, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 3/5; 21/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=20, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.670 total time= 6.0s
[CV 4/5; 21/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=20, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 4/5; 21/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=20, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.677 total time= 6.3s
[CV 5/5; 21/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=20, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 5/5; 21/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=20, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.662 total time= 6.4s
[CV 1/5; 22/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=10, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 1/5; 22/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=10, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.673
total time= 5.2s
[CV 2/5; 22/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=10, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 2/5; 22/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=10, light_gbm__reg_alpha=359,

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light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.672
total time= 5.2s
[CV 3/5; 22/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=10, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 3/5; 22/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=10, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.668
total time= 5.3s
[CV 4/5; 22/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=10, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 4/5; 22/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=10, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.665
total time= 5.1s
[CV 5/5; 22/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=10, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 5/5; 22/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=294, light_gbm__num_leaves=10, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.657
total time= 5.1s
[CV 1/5; 23/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=278, light_gbm__num_leaves=11, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 1/5; 23/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=278, light_gbm__num_leaves=11, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.690
total time= 5.4s
[CV 2/5; 23/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=278, light_gbm__num_leaves=11, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 2/5; 23/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=278, light_gbm__num_leaves=11, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.682
total time= 5.4s
[CV 3/5; 23/100] START light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=278, light_gbm__num_leaves=11, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 3/5; 23/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=278, light_gbm__num_leaves=11, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.679
total time= 5.4s
[CV 4/5; 23/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=278, light_gbm__num_leaves=11, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 4/5; 23/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=278, light_gbm__num_leaves=11, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.690
total time= 5.4s
[CV 5/5; 23/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=278, light_gbm__num_leaves=11, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 5/5; 23/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=278, light_gbm__num_leaves=11, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.677
total time= 5.4s
[CV 1/5; 24/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=215, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 1/5; 24/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=215, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.684
total time= 5.2s
[CV 2/5; 24/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=215, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 2/5; 24/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=215, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.682
total time= 5.2s
[CV 3/5; 24/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=215, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487

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[CV 3/5; 24/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=215, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.677
total time= 5.1s
[CV 4/5; 24/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=215, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 4/5; 24/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=215, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.681
total time= 5.1s
[CV 5/5; 24/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=215, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 5/5; 24/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=104, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=215, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.662
total time= 5.2s
[CV 1/5; 25/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 1/5; 25/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;;
score=0.677 total time= 5.7s
[CV 2/5; 25/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 2/5; 25/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;;
score=0.681 total time= 5.6s
[CV 3/5; 25/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 3/5; 25/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=46,

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light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.673 total time= 5.5s
[CV 4/5; 25/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 4/5; 25/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.679 total time= 5.7s
[CV 5/5; 25/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 5/5; 25/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.663 total time= 5.6s
[CV 1/5; 26/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=77, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 26/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=77, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.681 total time= 6.2s
[CV 2/5; 26/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=77, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 26/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=77, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.682 total time= 6.1s
[CV 3/5; 26/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=77, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 26/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,

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light_gbm__num_leaves=10, light_gbm__reg_alpha=77, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.677 total time= 6.3s
[CV 4/5; 26/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=77, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 26/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=77, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.681 total time= 6.1s
[CV 5/5; 26/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=77, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 26/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=10, light_gbm__reg_alpha=77, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.662 total time= 6.1s
[CV 1/5; 27/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 27/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.659 total time= 5.3s
[CV 2/5; 27/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 27/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.615 total time= 5.3s
[CV 3/5; 27/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 27/100] END light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=185, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.611 total time= 5.3s
[CV 4/5; 27/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 27/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.583 total time= 5.2s
[CV 5/5; 27/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 27/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.656 total time= 5.3s
[CV 1/5; 28/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=200, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 28/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=200, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.688 total time= 5.1s
[CV 2/5; 28/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=200, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 28/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=200, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.687 total time= 5.2s
[CV 3/5; 28/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=200, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,

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light_gbm__subsample=0.7981160065359487
[CV 3/5; 28/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=200, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487; , score=0.627 total time= 5.0s
[CV 4/5; 28/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=200, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 28/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=200, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487; , score=0.646 total time= 5.1s
[CV 5/5; 28/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=200, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 28/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=200, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487; , score=0.658 total time= 5.1s
[CV 1/5; 29/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 29/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487; , score=0.687 total time= 6.1s
[CV 2/5; 29/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 29/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487; , score=0.684 total time= 6.3s
[CV 3/5; 29/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,

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light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 29/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487; , score=0.677 total time= 6.2s
[CV 4/5; 29/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 29/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487; , score=0.685 total time= 6.4s
[CV 5/5; 29/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 29/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=14, light_gbm__reg_alpha=16, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487; , score=0.662 total time= 6.5s
[CV 1/5; 30/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 1/5; 30/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487; , score=0.692
total time= 6.4s
[CV 2/5; 30/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 2/5; 30/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487; , score=0.684
total time= 6.5s
[CV 3/5; 30/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=774.263682681127,

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light_gbm__n_estimators=452, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 3/5; 30/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.677
total time= 6.2s
[CV 4/5; 30/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 4/5; 30/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.691
total time= 6.4s
[CV 5/5; 30/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 5/5; 30/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=185, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.676
total time= 6.4s
[CV 1/5; 31/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=468,
light_gbm__num_leaves=20, light_gbm__reg_alpha=599, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 31/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=468,
light_gbm__num_leaves=20, light_gbm__reg_alpha=599, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.671 total time= 5.3s
[CV 2/5; 31/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=468,
light_gbm__num_leaves=20, light_gbm__reg_alpha=599, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 31/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=468,
light_gbm__num_leaves=20, light_gbm__reg_alpha=599, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.691 total time= 5.4s
[CV 3/5; 31/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=468,

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light_gbm__num_leaves=20, light_gbm__reg_alpha=599, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 31/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=468,
light_gbm__num_leaves=20, light_gbm__reg_alpha=599, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;; score=0.662 total time= 5.3s
[CV 4/5; 31/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=468,
light_gbm__num_leaves=20, light_gbm__reg_alpha=599, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 31/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=468,
light_gbm__num_leaves=20, light_gbm__reg_alpha=599, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;; score=0.665 total time= 5.4s
[CV 5/5; 31/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=468,
light_gbm__num_leaves=20, light_gbm__reg_alpha=599, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 31/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=468,
light_gbm__num_leaves=20, light_gbm__reg_alpha=599, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;; score=0.653 total time= 5.3s
[CV 1/5; 32/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=357,
light_gbm__num_leaves=14, light_gbm__reg_alpha=27, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 32/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=357,
light_gbm__num_leaves=14, light_gbm__reg_alpha=27, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;; score=0.688 total time= 6.2s
[CV 2/5; 32/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=357,
light_gbm__num_leaves=14, light_gbm__reg_alpha=27, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 32/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=357,
light_gbm__num_leaves=14, light_gbm__reg_alpha=27, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;; score=0.682 total time= 6.3s
[CV 3/5; 32/100] START light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=148,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=357,
light_gbm__num_leaves=14, light_gbm__reg_alpha=27, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 32/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=357,
light_gbm__num_leaves=14, light_gbm__reg_alpha=27, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487; , score=0.679 total time= 6.2s
[CV 4/5; 32/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=357,
light_gbm__num_leaves=14, light_gbm__reg_alpha=27, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 32/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=357,
light_gbm__num_leaves=14, light_gbm__reg_alpha=27, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487; , score=0.689 total time= 6.2s
[CV 5/5; 32/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=357,
light_gbm__num_leaves=14, light_gbm__reg_alpha=27, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 32/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=357,
light_gbm__num_leaves=14, light_gbm__reg_alpha=27, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487; , score=0.671 total time= 6.5s
[CV 1/5; 33/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 33/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487; , score=0.685 total time= 6.2s
[CV 2/5; 33/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 33/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=10000,

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light_gbm__subsample=0.7981160065359487;, score=0.684 total time= 6.2s
[CV 3/5; 33/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 33/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.678 total time= 6.7s
[CV 4/5; 33/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 33/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.683 total time= 6.6s
[CV 5/5; 33/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 33/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=484,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.663 total time= 6.3s
[CV 1/5; 34/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=373,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 34/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=373,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;, score=0.692 total time= 6.2s
[CV 2/5; 34/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=373,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 34/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,

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light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=373,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;, score=0.684 total time= 6.3s
[CV 3/5; 34/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=373,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 34/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=373,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;, score=0.678 total time= 5.9s
[CV 4/5; 34/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=373,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 34/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=373,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;, score=0.692 total time= 6.3s
[CV 5/5; 34/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=373,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 34/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=116,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=373,
light_gbm__num_leaves=15, light_gbm__reg_alpha=46, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;, score=0.674 total time= 6.0s
[CV 1/5; 35/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=357,
light_gbm__num_leaves=12, light_gbm__reg_alpha=599, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 35/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=357,
light_gbm__num_leaves=12, light_gbm__reg_alpha=599, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;, score=0.668 total time= 5.3s
[CV 2/5; 35/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=357,
light_gbm__num_leaves=12, light_gbm__reg_alpha=599, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487

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[CV 2/5; 35/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=357,
light_gbm__num_leaves=12, light_gbm__reg_alpha=599, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;, score=0.667 total time= 5.3s
[CV 3/5; 35/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=357,
light_gbm__num_leaves=12, light_gbm__reg_alpha=599, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 35/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=357,
light_gbm__num_leaves=12, light_gbm__reg_alpha=599, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;, score=0.670 total time= 5.2s
[CV 4/5; 35/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=357,
light_gbm__num_leaves=12, light_gbm__reg_alpha=599, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 35/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=357,
light_gbm__num_leaves=12, light_gbm__reg_alpha=599, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;, score=0.667 total time= 5.1s
[CV 5/5; 35/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=357,
light_gbm__num_leaves=12, light_gbm__reg_alpha=599, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 35/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=357,
light_gbm__num_leaves=12, light_gbm__reg_alpha=599, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;, score=0.651 total time= 5.2s
[CV 1/5; 36/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 1/5; 36/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.668
total time= 5.0s
[CV 2/5; 36/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487

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[CV 2/5; 36/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.683
total time= 5.2s
[CV 3/5; 36/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 3/5; 36/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.670
total time= 5.1s
[CV 4/5; 36/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 4/5; 36/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.669
total time= 5.1s
[CV 5/5; 36/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 5/5; 36/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=231, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.669
total time= 5.1s
[CV 1/5; 37/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=158, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 1/5; 37/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=158, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;;
score=0.684 total time= 6.0s
[CV 2/5; 37/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=158, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 2/5; 37/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=158, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,

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light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.685 total time= 5.9s
[CV 3/5; 37/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=158, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 3/5; 37/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=158, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.682 total time= 6.0s
[CV 4/5; 37/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=158, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 4/5; 37/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=158, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.685 total time= 6.0s
[CV 5/5; 37/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=158, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 5/5; 37/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=158, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.672 total time= 5.9s
[CV 1/5; 38/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=357, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 1/5; 38/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=357, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.688
total time= 6.4s
[CV 2/5; 38/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=357, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 2/5; 38/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=357, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.682
total time= 6.3s
[CV 3/5; 38/100] START light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=357, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 3/5; 38/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=357, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.680
total time= 6.4s
[CV 4/5; 38/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=357, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 4/5; 38/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=357, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.694
total time= 6.4s
[CV 5/5; 38/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=357, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 5/5; 38/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=80, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=357, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.676
total time= 6.3s
[CV 1/5; 39/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 1/5; 39/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;,
score=0.687 total time= 5.9s
[CV 2/5; 39/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 2/5; 39/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;,
score=0.686 total time= 6.0s
[CV 3/5; 39/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487

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[CV 3/5; 39/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;,
score=0.681 total time= 6.2s
[CV 4/5; 39/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 4/5; 39/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;,
score=0.682 total time= 6.2s
[CV 5/5; 39/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 5/5; 39/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;,
score=0.676 total time= 6.4s
[CV 1/5; 40/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 1/5; 40/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.695
total time= 6.2s
[CV 2/5; 40/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 2/5; 40/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.684
total time= 6.1s
[CV 3/5; 40/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 3/5; 40/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,

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light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.679
total time= 6.1s
[CV 4/5; 40/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 4/5; 40/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.694
total time= 6.3s
[CV 5/5; 40/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 5/5; 40/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.675
total time= 6.3s
[CV 1/5; 41/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 1/5; 41/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.691
total time= 5.7s
[CV 2/5; 41/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 2/5; 41/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.682
total time= 5.9s
[CV 3/5; 41/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 3/5; 41/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.679
total time= 5.6s
[CV 4/5; 41/100] START light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=94, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 4/5; 41/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.692
total time= 5.6s
[CV 5/5; 41/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 5/5; 41/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=94, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.673
total time= 5.9s
[CV 1/5; 42/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=263, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 1/5; 42/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=263, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.669 total time= 5.0s
[CV 2/5; 42/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=263, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 2/5; 42/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=263, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.675 total time= 5.3s
[CV 3/5; 42/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=263, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 3/5; 42/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=263, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.657 total time= 5.2s
[CV 4/5; 42/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=263, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487

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[CV 4/5; 42/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=263, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;;
score=0.654 total time= 5.2s
[CV 5/5; 42/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=263, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 5/5; 42/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=263, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;;
score=0.648 total time= 5.0s
[CV 1/5; 43/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=92, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 1/5; 43/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=92, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.687 total time= 5.9s
[CV 2/5; 43/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=92, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 2/5; 43/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=92, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.680 total time= 6.0s
[CV 3/5; 43/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=92, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 3/5; 43/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=92, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.677 total time= 6.4s
[CV 4/5; 43/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=92, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 4/5; 43/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=92, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,

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light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.688 total time= 5.8s
[CV 5/5; 43/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=92, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 5/5; 43/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=92, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.666 total time= 5.9s
[CV 1/5; 44/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=500,
light_gbm__num_leaves=18, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 44/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=500,
light_gbm__num_leaves=18, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.675 total time= 5.5s
[CV 2/5; 44/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=500,
light_gbm__num_leaves=18, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 44/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=500,
light_gbm__num_leaves=18, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.685 total time= 5.6s
[CV 3/5; 44/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=500,
light_gbm__num_leaves=18, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 44/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=500,
light_gbm__num_leaves=18, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.673 total time= 5.6s
[CV 4/5; 44/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=500,
light_gbm__num_leaves=18, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 44/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,

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light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=500,
light_gbm__num_leaves=18, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.673 total time= 5.5s
[CV 5/5; 44/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=500,
light_gbm__num_leaves=18, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 44/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=170,
light_gbm__min_child_weight=359.38136638046257, light_gbm__n_estimators=500,
light_gbm__num_leaves=18, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.666 total time= 5.4s
[CV 1/5; 45/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=200, light_gbm__num_leaves=10,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 45/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=200, light_gbm__num_leaves=10,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.722 total time= 5.0s
[CV 2/5; 45/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=200, light_gbm__num_leaves=10,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 45/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=200, light_gbm__num_leaves=10,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.715 total time= 5.0s
[CV 3/5; 45/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=200, light_gbm__num_leaves=10,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 45/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=200, light_gbm__num_leaves=10,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.678 total time= 4.9s
[CV 4/5; 45/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=200, light_gbm__num_leaves=10,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487

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[CV 4/5; 45/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=200, light_gbm__num_leaves=10,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.663 total time= 4.9s
[CV 5/5; 45/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=200, light_gbm__num_leaves=10,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 45/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=200, light_gbm__num_leaves=10,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.607 total time= 5.0s
[CV 1/5; 46/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=263,
light_gbm__num_leaves=14, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 46/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=263,
light_gbm__num_leaves=14, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.676 total time= 5.2s
[CV 2/5; 46/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=263,
light_gbm__num_leaves=14, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 46/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=263,
light_gbm__num_leaves=14, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.683 total time= 5.1s
[CV 3/5; 46/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=263,
light_gbm__num_leaves=14, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 46/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=263,
light_gbm__num_leaves=14, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.675 total time= 5.0s
[CV 4/5; 46/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=263,

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light_gbm__num_leaves=14, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 46/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=263,
light_gbm__num_leaves=14, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;; score=0.674 total time= 5.0s
[CV 5/5; 46/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=263,
light_gbm__num_leaves=14, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 46/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=263,
light_gbm__num_leaves=14, light_gbm__reg_alpha=359, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;; score=0.669 total time= 5.1s
[CV 1/5; 47/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 1/5; 47/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.690 total time= 6.1s
[CV 2/5; 47/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 2/5; 47/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.686 total time= 5.9s
[CV 3/5; 47/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 3/5; 47/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.680 total time= 6.1s
[CV 4/5; 47/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487

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[CV 4/5; 47/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.687 total time= 6.0s
[CV 5/5; 47/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 5/5; 47/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=326, light_gbm__num_leaves=14, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.667 total time= 6.1s
[CV 1/5; 48/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=294, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 1/5; 48/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=294, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.689 total time= 5.6s
[CV 2/5; 48/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=294, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 2/5; 48/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=294, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.685 total time= 5.6s
[CV 3/5; 48/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=294, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 3/5; 48/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=294, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.679 total time= 5.7s
[CV 4/5; 48/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=294, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 4/5; 48/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=294, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,

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light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;,
score=0.689 total time= 5.6s
[CV 5/5; 48/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=294, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 5/5; 48/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=359.38136638046257,
light_gbm__n_estimators=294, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;,
score=0.668 total time= 5.0s
[CV 1/5; 49/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=215,
light_gbm__num_leaves=10, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 49/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=215,
light_gbm__num_leaves=10, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.682 total time= 4.5s
[CV 2/5; 49/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=215,
light_gbm__num_leaves=10, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 49/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=215,
light_gbm__num_leaves=10, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.680 total time= 4.5s
[CV 3/5; 49/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=215,
light_gbm__num_leaves=10, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 49/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=215,
light_gbm__num_leaves=10, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.674 total time= 4.5s
[CV 4/5; 49/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=215,
light_gbm__num_leaves=10, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 49/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190,

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light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=215,
light_gbm__num_leaves=10, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.678 total time= 4.5s
[CV 5/5; 49/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=215,
light_gbm__num_leaves=10, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 49/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=215,
light_gbm__num_leaves=10, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.667 total time= 4.4s
[CV 1/5; 50/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=215.44346900318845,
light_gbm__n_estimators=373, light_gbm__num_leaves=10, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 1/5; 50/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=215.44346900318845,
light_gbm__n_estimators=373, light_gbm__num_leaves=10, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;,
score=0.690 total time= 4.9s
[CV 2/5; 50/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=215.44346900318845,
light_gbm__n_estimators=373, light_gbm__num_leaves=10, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 2/5; 50/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=215.44346900318845,
light_gbm__n_estimators=373, light_gbm__num_leaves=10, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;,
score=0.688 total time= 5.0s
[CV 3/5; 50/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=215.44346900318845,
light_gbm__n_estimators=373, light_gbm__num_leaves=10, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 3/5; 50/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=215.44346900318845,
light_gbm__n_estimators=373, light_gbm__num_leaves=10, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;,
score=0.679 total time= 5.0s
[CV 4/5; 50/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=215.44346900318845,
light_gbm__n_estimators=373, light_gbm__num_leaves=10, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 4/5; 50/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=215.44346900318845,
light_gbm__n_estimators=373, light_gbm__num_leaves=10, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;,

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score=0.688 total time= 5.1s
[CV 5/5; 50/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=215.44346900318845,
light_gbm__n_estimators=373, light_gbm__num_leaves=10, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487
[CV 5/5; 50/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=99, light_gbm__min_child_weight=215.44346900318845,
light_gbm__n_estimators=373, light_gbm__num_leaves=10, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=4641, light_gbm__subsample=0.7981160065359487;;
score=0.669 total time= 5.1s
[CV 1/5; 51/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=310,
light_gbm__num_leaves=15, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 51/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=310,
light_gbm__num_leaves=15, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;; score=0.648 total time= 4.3s
[CV 2/5; 51/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=310,
light_gbm__num_leaves=15, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 51/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=310,
light_gbm__num_leaves=15, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;; score=0.655 total time= 4.3s
[CV 3/5; 51/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=310,
light_gbm__num_leaves=15, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 51/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=310,
light_gbm__num_leaves=15, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;; score=0.630 total time= 4.2s
[CV 4/5; 51/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=310,
light_gbm__num_leaves=15, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 51/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=310,

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light_gbm__num_leaves=15, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.625 total time= 4.3s
[CV 5/5; 51/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=310,
light_gbm__num_leaves=15, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 51/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=310,
light_gbm__num_leaves=15, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.627 total time= 4.4s
[CV 1/5; 52/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=389,
light_gbm__num_leaves=10, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 52/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=389,
light_gbm__num_leaves=10, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487;, score=0.690 total time= 4.5s
[CV 2/5; 52/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=389,
light_gbm__num_leaves=10, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 52/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=389,
light_gbm__num_leaves=10, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487;, score=0.685 total time= 4.5s
[CV 3/5; 52/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=389,
light_gbm__num_leaves=10, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 52/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=389,
light_gbm__num_leaves=10, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487;, score=0.674 total time= 4.5s
[CV 4/5; 52/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=389,
light_gbm__num_leaves=10, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 52/100] END light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=109,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=389,
light_gbm__num_leaves=10, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487;, score=0.687 total time= 4.5s
[CV 5/5; 52/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=389,
light_gbm__num_leaves=10, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 52/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=389,
light_gbm__num_leaves=10, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487;, score=0.665 total time= 4.4s
[CV 1/5; 53/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 1/5; 53/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.690
total time= 4.1s
[CV 2/5; 53/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 2/5; 53/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.690
total time= 4.2s
[CV 3/5; 53/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 3/5; 53/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.671
total time= 4.2s
[CV 4/5; 53/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 4/5; 53/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=599,

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light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.681
total time= 4.1s
[CV 5/5; 53/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 5/5; 53/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=231, light_gbm__num_leaves=16, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.651
total time= 4.1s
[CV 1/5; 54/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=263, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 1/5; 54/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=263, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.691
total time= 4.5s
[CV 2/5; 54/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=263, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 2/5; 54/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=263, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.680
total time= 4.5s
[CV 3/5; 54/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=263, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 3/5; 54/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=263, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.677
total time= 4.5s
[CV 4/5; 54/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=263, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 4/5; 54/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=263, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.690
total time= 4.5s
[CV 5/5; 54/100] START light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=187, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=263, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 5/5; 54/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=263, light_gbm__num_leaves=12, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.677
total time= 4.6s
[CV 1/5; 55/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=326,
light_gbm__num_leaves=15, light_gbm__reg_alpha=10, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 55/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=326,
light_gbm__num_leaves=15, light_gbm__reg_alpha=10, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.695 total time= 5.0s
[CV 2/5; 55/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=326,
light_gbm__num_leaves=15, light_gbm__reg_alpha=10, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 55/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=326,
light_gbm__num_leaves=15, light_gbm__reg_alpha=10, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.683 total time= 5.0s
[CV 3/5; 55/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=326,
light_gbm__num_leaves=15, light_gbm__reg_alpha=10, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 55/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=326,
light_gbm__num_leaves=15, light_gbm__reg_alpha=10, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.682 total time= 5.4s
[CV 4/5; 55/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=326,
light_gbm__num_leaves=15, light_gbm__reg_alpha=10, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 55/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=326,
light_gbm__num_leaves=15, light_gbm__reg_alpha=10, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.692 total time= 5.1s

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[CV 5/5; 55/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=326,
light_gbm__num_leaves=15, light_gbm__reg_alpha=10, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 55/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=143,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=326,
light_gbm__num_leaves=15, light_gbm__reg_alpha=10, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487; , score=0.678 total time= 5.1s
[CV 1/5; 56/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=14, light_gbm__reg_alpha=215, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 56/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=14, light_gbm__reg_alpha=215, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487; , score=0.678 total time= 4.4s
[CV 2/5; 56/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=14, light_gbm__reg_alpha=215, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 56/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=14, light_gbm__reg_alpha=215, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487; , score=0.684 total time= 4.4s
[CV 3/5; 56/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=14, light_gbm__reg_alpha=215, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 56/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=14, light_gbm__reg_alpha=215, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487; , score=0.669 total time= 4.4s
[CV 4/5; 56/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=14, light_gbm__reg_alpha=215, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 56/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,

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light_gbm__num_leaves=14, light_gbm__reg_alpha=215, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487;, score=0.675 total time= 4.4s
[CV 5/5; 56/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=14, light_gbm__reg_alpha=215, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 56/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=14, light_gbm__reg_alpha=215, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487;, score=0.669 total time= 4.4s
[CV 1/5; 57/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=278,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 57/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=278,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;, score=0.692 total time= 4.8s
[CV 2/5; 57/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=278,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 57/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=278,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;, score=0.685 total time= 4.8s
[CV 3/5; 57/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=278,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 57/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=278,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;, score=0.681 total time= 4.8s
[CV 4/5; 57/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=278,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 57/100] END light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=146,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=278,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;, score=0.690 total time= 4.9s
[CV 5/5; 57/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=278,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 57/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=278,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;, score=0.672 total time= 4.9s
[CV 1/5; 58/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=17, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 1/5; 58/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=17, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.687 total time= 5.8s
[CV 2/5; 58/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=17, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 2/5; 58/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=17, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.685 total time= 6.3s
[CV 3/5; 58/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=17, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 3/5; 58/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=17, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.680 total time= 5.9s
[CV 4/5; 58/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=17, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 4/5; 58/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=17, light_gbm__reg_alpha=27,

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light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.689 total time= 5.9s
[CV 5/5; 58/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=17, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 5/5; 58/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=484, light_gbm__num_leaves=17, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.673 total time= 5.9s
[CV 1/5; 59/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=500, light_gbm__num_leaves=14, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 1/5; 59/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=500, light_gbm__num_leaves=14, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.687
total time= 4.6s
[CV 2/5; 59/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=500, light_gbm__num_leaves=14, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 2/5; 59/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=500, light_gbm__num_leaves=14, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.682
total time= 4.6s
[CV 3/5; 59/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=500, light_gbm__num_leaves=14, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 3/5; 59/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=500, light_gbm__num_leaves=14, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.676
total time= 4.5s
[CV 4/5; 59/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=500, light_gbm__num_leaves=14, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 4/5; 59/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=500, light_gbm__num_leaves=14, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.686
total time= 4.5s
[CV 5/5; 59/100] START light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=84, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=500, light_gbm__num_leaves=14, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 5/5; 59/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=84, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=500, light_gbm__num_leaves=14, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;; score=0.670
total time= 4.7s
[CV 1/5; 60/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=106, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=215, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 1/5; 60/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=106, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=215, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.686 total time= 4.5s
[CV 2/5; 60/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=106, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=215, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 2/5; 60/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=106, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=215, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.687 total time= 4.6s
[CV 3/5; 60/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=106, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=215, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 3/5; 60/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=106, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=215, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.677 total time= 4.6s
[CV 4/5; 60/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=106, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=215, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 4/5; 60/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=106, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=215, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.690 total time= 4.6s
[CV 5/5; 60/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=106, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=215, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487

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[CV 5/5; 60/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=106, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=215, light_gbm__num_leaves=10, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.670 total time= 4.5s
[CV 1/5; 61/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=278, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 1/5; 61/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=278, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.680
total time= 4.2s
[CV 2/5; 61/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=278, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 2/5; 61/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=278, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.694
total time= 4.2s
[CV 3/5; 61/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=278, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 3/5; 61/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=278, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.683
total time= 4.3s
[CV 4/5; 61/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=278, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 4/5; 61/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=278, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.678
total time= 4.3s
[CV 5/5; 61/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=278, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 5/5; 61/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=278, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,

```

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light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.668
total time= 4.2s
[CV 1/5; 62/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=373, light_gbm__num_leaves=18, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 1/5; 62/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=373, light_gbm__num_leaves=18, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;; score=0.691
total time= 5.2s
[CV 2/5; 62/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=373, light_gbm__num_leaves=18, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 2/5; 62/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=373, light_gbm__num_leaves=18, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;; score=0.681
total time= 5.3s
[CV 3/5; 62/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=373, light_gbm__num_leaves=18, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 3/5; 62/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=373, light_gbm__num_leaves=18, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;; score=0.677
total time= 5.7s
[CV 4/5; 62/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=373, light_gbm__num_leaves=18, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 4/5; 62/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=373, light_gbm__num_leaves=18, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;; score=0.690
total time= 5.8s
[CV 5/5; 62/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=373, light_gbm__num_leaves=18, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 5/5; 62/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=109, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=373, light_gbm__num_leaves=18, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;; score=0.681
total time= 5.5s
[CV 1/5; 63/100] START light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=151,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=278,
light_gbm__num_leaves=18, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 63/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=151,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=278,
light_gbm__num_leaves=18, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487; , score=0.683 total time= 4.6s
[CV 2/5; 63/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=151,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=278,
light_gbm__num_leaves=18, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 63/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=151,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=278,
light_gbm__num_leaves=18, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487; , score=0.685 total time= 4.4s
[CV 3/5; 63/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=151,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=278,
light_gbm__num_leaves=18, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 63/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=151,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=278,
light_gbm__num_leaves=18, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487; , score=0.677 total time= 4.5s
[CV 4/5; 63/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=151,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=278,
light_gbm__num_leaves=18, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 63/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=151,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=278,
light_gbm__num_leaves=18, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487; , score=0.682 total time= 4.6s
[CV 5/5; 63/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=151,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=278,
light_gbm__num_leaves=18, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 63/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=151,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=278,
light_gbm__num_leaves=18, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,

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light_gbm__subsample=0.7981160065359487;, score=0.661 total time= 4.4s
[CV 1/5; 64/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=326,
light_gbm__num_leaves=16, light_gbm__reg_alpha=27, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 64/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=326,
light_gbm__num_leaves=16, light_gbm__reg_alpha=27, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487;, score=0.683 total time= 5.2s
[CV 2/5; 64/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=326,
light_gbm__num_leaves=16, light_gbm__reg_alpha=27, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 64/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=326,
light_gbm__num_leaves=16, light_gbm__reg_alpha=27, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487;, score=0.681 total time= 5.4s
[CV 3/5; 64/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=326,
light_gbm__num_leaves=16, light_gbm__reg_alpha=27, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 64/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=326,
light_gbm__num_leaves=16, light_gbm__reg_alpha=27, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487;, score=0.677 total time= 5.3s
[CV 4/5; 64/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=326,
light_gbm__num_leaves=16, light_gbm__reg_alpha=27, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 64/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=326,
light_gbm__num_leaves=16, light_gbm__reg_alpha=27, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487;, score=0.691 total time= 5.3s
[CV 5/5; 64/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=326,
light_gbm__num_leaves=16, light_gbm__reg_alpha=27, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 64/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133,

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light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=326,
light_gbm__num_leaves=16, light_gbm__reg_alpha=27, light_gbm__reg_lambda=21,
light_gbm__subsample=0.7981160065359487;, score=0.679 total time= 5.4s
[CV 1/5; 65/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=153, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=16, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 1/5; 65/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=153, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=16, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.676 total time= 4.6s
[CV 2/5; 65/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=153, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=16, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 2/5; 65/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=153, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=16, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.684 total time= 4.4s
[CV 3/5; 65/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=153, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=16, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 3/5; 65/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=153, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=16, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.674 total time= 4.5s
[CV 4/5; 65/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=153, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=16, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 4/5; 65/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=153, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=16, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.671 total time= 4.6s
[CV 5/5; 65/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=153, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=16, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 5/5; 65/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=153, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=16, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.666 total time= 4.4s

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[CV 1/5; 66/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=310,
light_gbm__num_leaves=14, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 66/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=310,
light_gbm__num_leaves=14, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487; , score=0.688 total time= 5.1s
[CV 2/5; 66/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=310,
light_gbm__num_leaves=14, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 66/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=310,
light_gbm__num_leaves=14, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487; , score=0.684 total time= 5.2s
[CV 3/5; 66/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=310,
light_gbm__num_leaves=14, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 66/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=310,
light_gbm__num_leaves=14, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487; , score=0.678 total time= 5.2s
[CV 4/5; 66/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=310,
light_gbm__num_leaves=14, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 66/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=310,
light_gbm__num_leaves=14, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487; , score=0.688 total time= 5.1s
[CV 5/5; 66/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=310,
light_gbm__num_leaves=14, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 66/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=102,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=310,

```

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light_gbm__num_leaves=14, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487;, score=0.682 total time= 5.1s
[CV 1/5; 67/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=500,
light_gbm__num_leaves=11, light_gbm__reg_alpha=77, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 67/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=500,
light_gbm__num_leaves=11, light_gbm__reg_alpha=77, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487;, score=0.690 total time= 5.4s
[CV 2/5; 67/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=500,
light_gbm__num_leaves=11, light_gbm__reg_alpha=77, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 67/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=500,
light_gbm__num_leaves=11, light_gbm__reg_alpha=77, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487;, score=0.681 total time= 5.7s
[CV 3/5; 67/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=500,
light_gbm__num_leaves=11, light_gbm__reg_alpha=77, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 67/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=500,
light_gbm__num_leaves=11, light_gbm__reg_alpha=77, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487;, score=0.677 total time= 5.7s
[CV 4/5; 67/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=500,
light_gbm__num_leaves=11, light_gbm__reg_alpha=77, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 67/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=500,
light_gbm__num_leaves=11, light_gbm__reg_alpha=77, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487;, score=0.688 total time= 5.7s
[CV 5/5; 67/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=119,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=500,
light_gbm__num_leaves=11, light_gbm__reg_alpha=77, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 67/100] END light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=119,
light_gbm__min_child_weight=166.81005372000593, light_gbm__n_estimators=500,
light_gbm__num_leaves=11, light_gbm__reg_alpha=77, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487;; score=0.667 total time= 5.4s
[CV 1/5; 68/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 1/5; 68/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.686
total time= 4.6s
[CV 2/5; 68/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 2/5; 68/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.685
total time= 4.6s
[CV 3/5; 68/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 3/5; 68/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.683
total time= 4.5s
[CV 4/5; 68/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 4/5; 68/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.691
total time= 4.5s
[CV 5/5; 68/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 5/5; 68/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=166.81005372000593,
light_gbm__n_estimators=342, light_gbm__num_leaves=15, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.668

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total time= 4.6s
[CV 1/5; 69/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 1/5; 69/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;; score=0.684
total time= 4.3s
[CV 2/5; 69/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 2/5; 69/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;; score=0.685
total time= 4.3s
[CV 3/5; 69/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 3/5; 69/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;; score=0.681
total time= 4.3s
[CV 4/5; 69/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 4/5; 69/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;; score=0.688
total time= 4.3s
[CV 5/5; 69/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 5/5; 69/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=247, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;; score=0.670
total time= 4.3s
[CV 1/5; 70/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111,

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light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=436,
light_gbm__num_leaves=13, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 70/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=436,
light_gbm__num_leaves=13, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487;; score=0.682 total time= 4.6s
[CV 2/5; 70/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=436,
light_gbm__num_leaves=13, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 70/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=436,
light_gbm__num_leaves=13, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487;; score=0.685 total time= 4.6s
[CV 3/5; 70/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=436,
light_gbm__num_leaves=13, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 70/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=436,
light_gbm__num_leaves=13, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487;; score=0.675 total time= 4.5s
[CV 4/5; 70/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=436,
light_gbm__num_leaves=13, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 70/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=436,
light_gbm__num_leaves=13, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487;; score=0.684 total time= 4.7s
[CV 5/5; 70/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=436,
light_gbm__num_leaves=13, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 70/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=436,
light_gbm__num_leaves=13, light_gbm__reg_alpha=129, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487;; score=0.659 total time= 4.6s

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[CV 1/5; 71/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=12, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 71/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=12, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487; , score=0.689 total time= 4.6s
[CV 2/5; 71/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=12, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 71/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=12, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487; , score=0.684 total time= 4.6s
[CV 3/5; 71/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=12, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 71/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=12, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487; , score=0.686 total time= 4.6s
[CV 4/5; 71/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=12, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 71/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=12, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487; , score=0.691 total time= 4.6s
[CV 5/5; 71/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,
light_gbm__num_leaves=12, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 71/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=155,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=200,

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light_gbm__num_leaves=12, light_gbm__reg_alpha=10, light_gbm__reg_lambda=10,
light_gbm__subsample=0.7981160065359487;, score=0.677 total time= 4.6s
[CV 1/5; 72/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=17, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 1/5; 72/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=17, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.689 total time= 4.6s
[CV 2/5; 72/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=17, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 2/5; 72/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=17, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.682 total time= 4.7s
[CV 3/5; 72/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=17, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 3/5; 72/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=17, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.678 total time= 4.7s
[CV 4/5; 72/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=17, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 4/5; 72/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=17, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.685 total time= 4.7s
[CV 5/5; 72/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=17, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 5/5; 72/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=421, light_gbm__num_leaves=17, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.673 total time= 4.7s
[CV 1/5; 73/100] START light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=357, light_gbm__num_leaves=11, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 1/5; 73/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=357, light_gbm__num_leaves=11, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.693
total time= 4.7s
[CV 2/5; 73/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=357, light_gbm__num_leaves=11, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 2/5; 73/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=357, light_gbm__num_leaves=11, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.682
total time= 4.9s
[CV 3/5; 73/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=357, light_gbm__num_leaves=11, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 3/5; 73/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=357, light_gbm__num_leaves=11, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.683
total time= 4.9s
[CV 4/5; 73/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=357, light_gbm__num_leaves=11, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 4/5; 73/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=357, light_gbm__num_leaves=11, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.694
total time= 4.7s
[CV 5/5; 73/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=357, light_gbm__num_leaves=11, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 5/5; 73/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=131, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=357, light_gbm__num_leaves=11, light_gbm__reg_alpha=46,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;, score=0.674
total time= 4.8s
[CV 1/5; 74/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=310, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487

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[CV 1/5; 74/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=310, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.685 total time= 4.5s
[CV 2/5; 74/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=310, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 2/5; 74/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=310, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.687 total time= 4.6s
[CV 3/5; 74/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=310, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 3/5; 74/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=310, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.682 total time= 4.5s
[CV 4/5; 74/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=310, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 4/5; 74/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=310, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.682 total time= 4.5s
[CV 5/5; 74/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=310, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 5/5; 74/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=310, light_gbm__num_leaves=11, light_gbm__reg_alpha=129,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.666 total time= 4.5s
[CV 1/5; 75/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 1/5; 75/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,

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light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.684
total time= 4.5s
[CV 2/5; 75/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 2/5; 75/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.688
total time= 4.5s
[CV 3/5; 75/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 3/5; 75/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.683
total time= 4.5s
[CV 4/5; 75/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 4/5; 75/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.684
total time= 4.5s
[CV 5/5; 75/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 5/5; 75/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=97, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=484, light_gbm__num_leaves=12, light_gbm__reg_alpha=215,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.668
total time= 4.5s
[CV 1/5; 76/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=405,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 76/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=405,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487;, score=0.692 total time= 5.3s

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[CV 2/5; 76/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=405,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 76/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=405,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487; , score=0.684 total time= 5.4s
[CV 3/5; 76/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=405,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 76/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=405,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487; , score=0.681 total time= 5.2s
[CV 4/5; 76/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=405,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 76/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=405,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487; , score=0.691 total time= 5.4s
[CV 5/5; 76/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=405,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 76/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=405,
light_gbm__num_leaves=11, light_gbm__reg_alpha=27, light_gbm__reg_lambda=46,
light_gbm__subsample=0.7981160065359487; , score=0.676 total time= 5.4s
[CV 1/5; 77/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 1/5; 77/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487; , score=0.683

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total time= 6.0s
[CV 2/5; 77/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 2/5; 77/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;; score=0.678
total time= 6.0s
[CV 3/5; 77/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 3/5; 77/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;; score=0.676
total time= 5.8s
[CV 4/5; 77/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 4/5; 77/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;; score=0.695
total time= 6.0s
[CV 5/5; 77/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 5/5; 77/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=190, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=452, light_gbm__num_leaves=15, light_gbm__reg_alpha=10,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;; score=0.682
total time= 5.9s
[CV 1/5; 78/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=15, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 1/5; 78/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=15, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487;; score=0.688
total time= 4.9s
[CV 2/5; 78/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,

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light_gbm__n_estimators=247, light_gbm__num_leaves=15, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 2/5; 78/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=15, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487;; score=0.683
total time= 4.9s
[CV 3/5; 78/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=15, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 3/5; 78/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=15, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487;; score=0.683
total time= 4.9s
[CV 4/5; 78/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=15, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 4/5; 78/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=15, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487;; score=0.693
total time= 4.7s
[CV 5/5; 78/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=15, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487
[CV 5/5; 78/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=247, light_gbm__num_leaves=15, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=46, light_gbm__subsample=0.7981160065359487;; score=0.676
total time= 4.9s
[CV 1/5; 79/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=389, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 1/5; 79/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=389, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;;
score=0.694 total time= 5.0s
[CV 2/5; 79/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=389, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 2/5; 79/100] END light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=82, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=389, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.684 total time= 5.0s
[CV 3/5; 79/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=389, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 3/5; 79/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=389, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.680 total time= 4.9s
[CV 4/5; 79/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=389, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 4/5; 79/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=389, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.694 total time= 5.0s
[CV 5/5; 79/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=389, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 5/5; 79/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=82, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=389, light_gbm__num_leaves=10, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.668 total time= 5.0s
[CV 1/5; 80/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 1/5; 80/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.690 total time= 4.3s
[CV 2/5; 80/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 2/5; 80/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,

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score=0.692 total time= 4.3s
[CV 3/5; 80/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 3/5; 80/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.684 total time= 4.2s
[CV 4/5; 80/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 4/5; 80/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.689 total time= 4.2s
[CV 5/5; 80/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 5/5; 80/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=231, light_gbm__num_leaves=15, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;;
score=0.670 total time= 4.3s
[CV 1/5; 81/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=357,
light_gbm__num_leaves=15, light_gbm__reg_alpha=129, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 81/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=357,
light_gbm__num_leaves=15, light_gbm__reg_alpha=129, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;; score=0.680 total time= 4.6s
[CV 2/5; 81/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=357,
light_gbm__num_leaves=15, light_gbm__reg_alpha=129, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 81/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=357,
light_gbm__num_leaves=15, light_gbm__reg_alpha=129, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;; score=0.685 total time= 4.6s

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[CV 3/5; 81/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=357,
light_gbm__num_leaves=15, light_gbm__reg_alpha=129, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 81/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=357,
light_gbm__num_leaves=15, light_gbm__reg_alpha=129, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;; score=0.674 total time= 4.5s
[CV 4/5; 81/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=357,
light_gbm__num_leaves=15, light_gbm__reg_alpha=129, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 81/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=357,
light_gbm__num_leaves=15, light_gbm__reg_alpha=129, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;; score=0.686 total time= 4.6s
[CV 5/5; 81/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=357,
light_gbm__num_leaves=15, light_gbm__reg_alpha=129, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 81/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=357,
light_gbm__num_leaves=15, light_gbm__reg_alpha=129, light_gbm__reg_lambda=1000,
light_gbm__subsample=0.7981160065359487;; score=0.659 total time= 4.6s
[CV 1/5; 82/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=405, light_gbm__num_leaves=14, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 1/5; 82/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=405, light_gbm__num_leaves=14, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.691
total time= 5.0s
[CV 2/5; 82/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=405, light_gbm__num_leaves=14, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 2/5; 82/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=405, light_gbm__num_leaves=14, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.681
total time= 5.2s

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[CV 3/5; 82/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=405, light_gbm__num_leaves=14, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 3/5; 82/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=405, light_gbm__num_leaves=14, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.676
total time= 5.2s
[CV 4/5; 82/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=405, light_gbm__num_leaves=14, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 4/5; 82/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=405, light_gbm__num_leaves=14, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.691
total time= 5.1s
[CV 5/5; 82/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=405, light_gbm__num_leaves=14, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 5/5; 82/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=148, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=405, light_gbm__num_leaves=14, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.675
total time= 5.0s
[CV 1/5; 83/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=16, light_gbm__reg_alpha=10, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 83/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=16, light_gbm__reg_alpha=10, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;; score=0.690 total time= 5.4s
[CV 2/5; 83/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=16, light_gbm__reg_alpha=10, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 83/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=16, light_gbm__reg_alpha=10, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;; score=0.677 total time= 5.4s
[CV 3/5; 83/100] START light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=16, light_gbm__reg_alpha=10, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 83/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=16, light_gbm__reg_alpha=10, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487; , score=0.679 total time= 5.6s
[CV 4/5; 83/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=16, light_gbm__reg_alpha=10, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 83/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=16, light_gbm__reg_alpha=10, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487; , score=0.687 total time= 5.6s
[CV 5/5; 83/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=16, light_gbm__reg_alpha=10, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 83/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=436,
light_gbm__num_leaves=16, light_gbm__reg_alpha=10, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487; , score=0.679 total time= 5.6s
[CV 1/5; 84/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=326, light_gbm__num_leaves=18, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 1/5; 84/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=326, light_gbm__num_leaves=18, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487; , score=0.687
total time= 5.3s
[CV 2/5; 84/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=326, light_gbm__num_leaves=18, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 2/5; 84/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=326, light_gbm__num_leaves=18, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487; , score=0.679
total time= 5.3s
[CV 3/5; 84/100] START light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=89, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=326, light_gbm__num_leaves=18, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 3/5; 84/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=326, light_gbm__num_leaves=18, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.678
total time= 5.3s
[CV 4/5; 84/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=326, light_gbm__num_leaves=18, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 4/5; 84/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=326, light_gbm__num_leaves=18, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.689
total time= 5.3s
[CV 5/5; 84/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=326, light_gbm__num_leaves=18, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487
[CV 5/5; 84/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=89, light_gbm__min_child_weight=129.1549665014884,
light_gbm__n_estimators=326, light_gbm__num_leaves=18, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=21, light_gbm__subsample=0.7981160065359487;, score=0.683
total time= 5.5s
[CV 1/5; 85/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=17, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 1/5; 85/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=17, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.667
total time= 4.4s
[CV 2/5; 85/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=17, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 2/5; 85/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=17, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.677
total time= 4.5s
[CV 3/5; 85/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=17, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487

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[CV 3/5; 85/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=17, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.676
total time= 4.5s
[CV 4/5; 85/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=17, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 4/5; 85/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=17, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.659
total time= 4.4s
[CV 5/5; 85/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=17, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 5/5; 85/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=774.263682681127,
light_gbm__n_estimators=452, light_gbm__num_leaves=17, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.645
total time= 4.5s
[CV 1/5; 86/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=200,
light_gbm__num_leaves=13, light_gbm__reg_alpha=599, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 86/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=200,
light_gbm__num_leaves=13, light_gbm__reg_alpha=599, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.659 total time= 4.1s
[CV 2/5; 86/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=200,
light_gbm__num_leaves=13, light_gbm__reg_alpha=599, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 86/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=200,
light_gbm__num_leaves=13, light_gbm__reg_alpha=599, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.667 total time= 4.2s
[CV 3/5; 86/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=200,
light_gbm__num_leaves=13, light_gbm__reg_alpha=599, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487

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[CV 3/5; 86/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=200,
light_gbm__num_leaves=13, light_gbm__reg_alpha=599, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.672 total time= 4.1s
[CV 4/5; 86/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=200,
light_gbm__num_leaves=13, light_gbm__reg_alpha=599, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 86/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=200,
light_gbm__num_leaves=13, light_gbm__reg_alpha=599, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.674 total time= 4.1s
[CV 5/5; 86/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=200,
light_gbm__num_leaves=13, light_gbm__reg_alpha=599, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 86/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=197,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=200,
light_gbm__num_leaves=13, light_gbm__reg_alpha=599, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.657 total time= 4.1s
[CV 1/5; 87/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=421,
light_gbm__num_leaves=17, light_gbm__reg_alpha=27, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 87/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=421,
light_gbm__num_leaves=17, light_gbm__reg_alpha=27, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.684 total time= 5.0s
[CV 2/5; 87/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=421,
light_gbm__num_leaves=17, light_gbm__reg_alpha=27, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 87/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=421,
light_gbm__num_leaves=17, light_gbm__reg_alpha=27, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.685 total time= 5.0s
[CV 3/5; 87/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=421,

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light_gbm__num_leaves=17, light_gbm__reg_alpha=27, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 87/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=421,
light_gbm__num_leaves=17, light_gbm__reg_alpha=27, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;; score=0.676 total time= 4.8s
[CV 4/5; 87/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=421,
light_gbm__num_leaves=17, light_gbm__reg_alpha=27, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 87/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=421,
light_gbm__num_leaves=17, light_gbm__reg_alpha=27, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;; score=0.683 total time= 5.1s
[CV 5/5; 87/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=421,
light_gbm__num_leaves=17, light_gbm__reg_alpha=27, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 87/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=195,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=421,
light_gbm__num_leaves=17, light_gbm__reg_alpha=27, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;; score=0.663 total time= 5.1s
[CV 1/5; 88/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=215, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 1/5; 88/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=215, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.696
total time= 4.5s
[CV 2/5; 88/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=215, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 2/5; 88/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=215, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.681
total time= 4.5s
[CV 3/5; 88/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=215, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,

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light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 3/5; 88/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=215, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.683
total time= 4.4s
[CV 4/5; 88/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=215, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 4/5; 88/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=215, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.691
total time= 4.5s
[CV 5/5; 88/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=215, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487
[CV 5/5; 88/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=141, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=215, light_gbm__num_leaves=13, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=10, light_gbm__subsample=0.7981160065359487;; score=0.672
total time= 4.5s
[CV 1/5; 89/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=177, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 1/5; 89/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=177, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;; score=0.694
total time= 4.6s
[CV 2/5; 89/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=177, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 2/5; 89/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=177, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;; score=0.690
total time= 4.5s
[CV 3/5; 89/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=177, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 3/5; 89/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=177, light_gbm__min_child_weight=599.4842503189409,

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light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.679
total time= 4.5s
[CV 4/5; 89/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=177, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 4/5; 89/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=177, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.690
total time= 4.5s
[CV 5/5; 89/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=177, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 5/5; 89/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=177, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=310, light_gbm__num_leaves=18, light_gbm__reg_alpha=77,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.670
total time= 4.6s
[CV 1/5; 90/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=357, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 90/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=357, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.684 total time= 4.3s
[CV 2/5; 90/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=357, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 90/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=357, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.687 total time= 4.4s
[CV 3/5; 90/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=357, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 90/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=464.15888336127773,

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light_gbm__n_estimators=357, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.627 total time= 4.4s
[CV 4/5; 90/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=357, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 90/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=357, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.646 total time= 4.3s
[CV 5/5; 90/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=357, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 90/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=87, light_gbm__min_child_weight=464.15888336127773,
light_gbm__n_estimators=357, light_gbm__num_leaves=12,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.633 total time= 4.4s
[CV 1/5; 91/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=342, light_gbm__num_leaves=11, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 1/5; 91/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=342, light_gbm__num_leaves=11, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.690 total time= 5.0s
[CV 2/5; 91/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=342, light_gbm__num_leaves=11, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 2/5; 91/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=342, light_gbm__num_leaves=11, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.686 total time= 5.0s
[CV 3/5; 91/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=342, light_gbm__num_leaves=11, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 3/5; 91/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=342, light_gbm__num_leaves=11, light_gbm__reg_alpha=27,

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light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.678 total time= 5.1s
[CV 4/5; 91/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=342, light_gbm__num_leaves=11, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 4/5; 91/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=342, light_gbm__num_leaves=11, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.692 total time= 5.2s
[CV 5/5; 91/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=342, light_gbm__num_leaves=11, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487
[CV 5/5; 91/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=182, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=342, light_gbm__num_leaves=11, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=1000, light_gbm__subsample=0.7981160065359487;,
score=0.673 total time= 5.1s
[CV 1/5; 92/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=192, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 1/5; 92/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=192, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.676
total time= 4.4s
[CV 2/5; 92/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=192, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 2/5; 92/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=192, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.686
total time= 4.5s
[CV 3/5; 92/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=192, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 3/5; 92/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=192, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487;, score=0.682
total time= 4.4s
[CV 4/5; 92/100] START light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=192, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 4/5; 92/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=192, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487; , score=0.667
total time= 4.3s
[CV 5/5; 92/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=192, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487
[CV 5/5; 92/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=192, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=436, light_gbm__num_leaves=14, light_gbm__reg_alpha=359,
light_gbm__reg_lambda=100, light_gbm__subsample=0.7981160065359487; , score=0.676
total time= 4.5s
[CV 1/5; 93/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=17,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 93/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=17,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487; , score=0.722 total time= 4.5s
[CV 2/5; 93/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=17,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 93/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=17,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487; , score=0.694 total time= 4.4s
[CV 3/5; 93/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=17,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 93/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=17,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487; , score=0.610 total time= 4.5s
[CV 4/5; 93/100] START light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=17,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 93/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=17,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487; , score=0.664 total time= 4.4s
[CV 5/5; 93/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=17,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 93/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=133, light_gbm__min_child_weight=1000.0,
light_gbm__n_estimators=500, light_gbm__num_leaves=17,
light_gbm__reg_alpha=1000, light_gbm__reg_lambda=464,
light_gbm__subsample=0.7981160065359487; , score=0.619 total time= 4.6s
[CV 1/5; 94/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=421, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 1/5; 94/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=421, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487; ,
score=0.684 total time= 4.8s
[CV 2/5; 94/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=421, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 2/5; 94/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=421, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487; ,
score=0.687 total time= 4.9s
[CV 3/5; 94/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=421, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 3/5; 94/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=421, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487; ,
score=0.673 total time= 5.1s
[CV 4/5; 94/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165, light_gbm__min_child_weight=599.4842503189409,

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light_gbm__n_estimators=421, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 4/5; 94/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=421, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.684 total time= 5.0s
[CV 5/5; 94/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=421, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487
[CV 5/5; 94/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=165, light_gbm__min_child_weight=599.4842503189409,
light_gbm__n_estimators=421, light_gbm__num_leaves=12, light_gbm__reg_alpha=16,
light_gbm__reg_lambda=10000, light_gbm__subsample=0.7981160065359487;,
score=0.668 total time= 5.1s
[CV 1/5; 95/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=342, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 1/5; 95/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=342, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.670 total time= 4.5s
[CV 2/5; 95/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=342, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 2/5; 95/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=342, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.672 total time= 4.3s
[CV 3/5; 95/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=342, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 3/5; 95/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=342, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.660 total time= 4.3s
[CV 4/5; 95/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=342, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 4/5; 95/100] END light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=168, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=342, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.665 total time= 4.3s
[CV 5/5; 95/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=342, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487
[CV 5/5; 95/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=168, light_gbm__min_child_weight=100.0,
light_gbm__n_estimators=342, light_gbm__num_leaves=20, light_gbm__reg_alpha=599,
light_gbm__reg_lambda=2154, light_gbm__subsample=0.7981160065359487;,
score=0.644 total time= 4.3s
[CV 1/5; 96/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=468,
light_gbm__num_leaves=17, light_gbm__reg_alpha=129, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 96/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=468,
light_gbm__num_leaves=17, light_gbm__reg_alpha=129, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.684 total time= 5.4s
[CV 2/5; 96/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=468,
light_gbm__num_leaves=17, light_gbm__reg_alpha=129, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 96/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=468,
light_gbm__num_leaves=17, light_gbm__reg_alpha=129, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.684 total time= 5.2s
[CV 3/5; 96/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=468,
light_gbm__num_leaves=17, light_gbm__reg_alpha=129, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 96/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=468,
light_gbm__num_leaves=17, light_gbm__reg_alpha=129, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.675 total time= 5.2s
[CV 4/5; 96/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=468,
light_gbm__num_leaves=17, light_gbm__reg_alpha=129, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487

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[CV 4/5; 96/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=468,
light_gbm__num_leaves=17, light_gbm__reg_alpha=129, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.684 total time= 5.4s
[CV 5/5; 96/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=468,
light_gbm__num_leaves=17, light_gbm__reg_alpha=129, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 96/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=187,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=468,
light_gbm__num_leaves=17, light_gbm__reg_alpha=129, light_gbm__reg_lambda=10000,
light_gbm__subsample=0.7981160065359487;, score=0.664 total time= 5.4s
[CV 1/5; 97/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=138,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=405,
light_gbm__num_leaves=12, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 97/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=138,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=405,
light_gbm__num_leaves=12, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.682 total time= 4.3s
[CV 2/5; 97/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=138,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=405,
light_gbm__num_leaves=12, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 97/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=138,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=405,
light_gbm__num_leaves=12, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.655 total time= 4.4s
[CV 3/5; 97/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=138,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=405,
light_gbm__num_leaves=12, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 97/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=138,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=405,
light_gbm__num_leaves=12, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;, score=0.624 total time= 4.3s
[CV 4/5; 97/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=138,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=405,

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light_gbm__num_leaves=12, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 97/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=138,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=405,
light_gbm__num_leaves=12, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;; score=0.634 total time= 4.3s
[CV 5/5; 97/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=138,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=405,
light_gbm__num_leaves=12, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 97/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=138,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=405,
light_gbm__num_leaves=12, light_gbm__reg_alpha=1000, light_gbm__reg_lambda=100,
light_gbm__subsample=0.7981160065359487;; score=0.652 total time= 4.4s
[CV 1/5; 98/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=278,
light_gbm__num_leaves=17, light_gbm__reg_alpha=359, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 98/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=278,
light_gbm__num_leaves=17, light_gbm__reg_alpha=359, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487;; score=0.675 total time= 4.4s
[CV 2/5; 98/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=278,
light_gbm__num_leaves=17, light_gbm__reg_alpha=359, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 98/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=278,
light_gbm__num_leaves=17, light_gbm__reg_alpha=359, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487;; score=0.683 total time= 4.4s
[CV 3/5; 98/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=278,
light_gbm__num_leaves=17, light_gbm__reg_alpha=359, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 98/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=278,
light_gbm__num_leaves=17, light_gbm__reg_alpha=359, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487;; score=0.670 total time= 4.3s
[CV 4/5; 98/100] START light_gbm__colsample_bytree=0.8736655622105718,

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light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=278,
light_gbm__num_leaves=17, light_gbm__reg_alpha=359, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 98/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=278,
light_gbm__num_leaves=17, light_gbm__reg_alpha=359, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487; , score=0.672 total time= 4.5s
[CV 5/5; 98/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=278,
light_gbm__num_leaves=17, light_gbm__reg_alpha=359, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 98/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=146,
light_gbm__min_child_weight=215.44346900318845, light_gbm__n_estimators=278,
light_gbm__num_leaves=17, light_gbm__reg_alpha=359, light_gbm__reg_lambda=4641,
light_gbm__subsample=0.7981160065359487; , score=0.667 total time= 4.4s
[CV 1/5; 99/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=484, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 1/5; 99/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=484, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487; , score=0.686
total time= 5.3s
[CV 2/5; 99/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=484, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 2/5; 99/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=484, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487; , score=0.683
total time= 5.6s
[CV 3/5; 99/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=484, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 3/5; 99/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=484, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487; , score=0.681
total time= 5.7s
[CV 4/5; 99/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=278.2559402207126,

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light_gbm__n_estimators=484, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 4/5; 99/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=484, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.691
total time= 5.7s
[CV 5/5; 99/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=484, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487
[CV 5/5; 99/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=111, light_gbm__min_child_weight=278.2559402207126,
light_gbm__n_estimators=484, light_gbm__num_leaves=18, light_gbm__reg_alpha=27,
light_gbm__reg_lambda=464, light_gbm__subsample=0.7981160065359487;, score=0.677
total time= 6.1s
[CV 1/5; 100/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=175,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=310,
light_gbm__num_leaves=13, light_gbm__reg_alpha=16, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 1/5; 100/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=175,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=310,
light_gbm__num_leaves=13, light_gbm__reg_alpha=16, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.690 total time= 4.9s
[CV 2/5; 100/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=175,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=310,
light_gbm__num_leaves=13, light_gbm__reg_alpha=16, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 2/5; 100/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=175,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=310,
light_gbm__num_leaves=13, light_gbm__reg_alpha=16, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.681 total time= 5.0s
[CV 3/5; 100/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=175,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=310,
light_gbm__num_leaves=13, light_gbm__reg_alpha=16, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 3/5; 100/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=175,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=310,
light_gbm__num_leaves=13, light_gbm__reg_alpha=16, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.685 total time= 4.9s
[CV 4/5; 100/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=175,

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light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=310,
light_gbm__num_leaves=13, light_gbm__reg_alpha=16, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 4/5; 100/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=175,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=310,
light_gbm__num_leaves=13, light_gbm__reg_alpha=16, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.694 total time= 4.9s
[CV 5/5; 100/100] START light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=175,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=310,
light_gbm__num_leaves=13, light_gbm__reg_alpha=16, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487
[CV 5/5; 100/100] END light_gbm__colsample_bytree=0.8736655622105718,
light_gbm__min_child_samples=175,
light_gbm__min_child_weight=464.15888336127773, light_gbm__n_estimators=310,
light_gbm__num_leaves=13, light_gbm__reg_alpha=16, light_gbm__reg_lambda=215,
light_gbm__subsample=0.7981160065359487;, score=0.676 total time= 5.0s
{'light_gbm__subsample': 0.7981160065359487, 'light_gbm__reg_lambda': 21,
'light_gbm__reg_alpha': 16, 'light_gbm__num_leaves': 12,
'light_gbm__n_estimators': 373, 'light_gbm__min_child_weight': 100.0,
'light_gbm__min_child_samples': 80, 'light_gbm__colsample_bytree':
0.8736655622105718}

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9.1 Courbe precision / recall

```

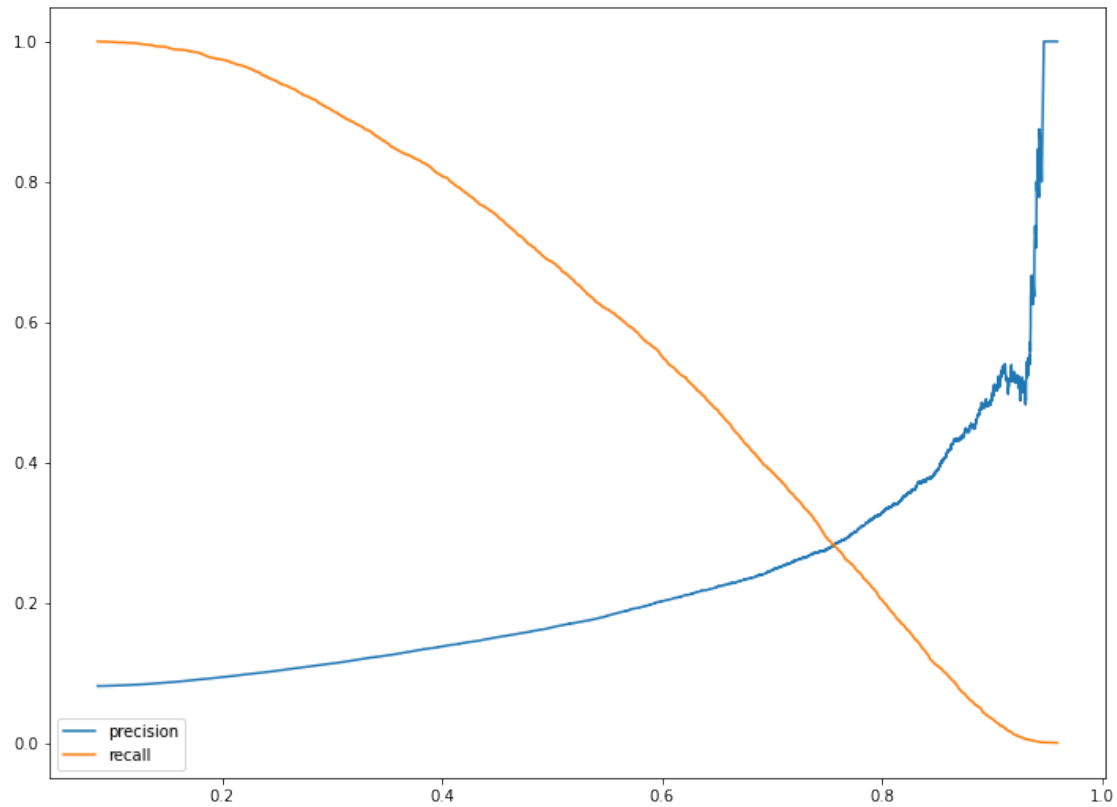
[ ]: from sklearn.metrics import precision_recall_curve
from sklearn.metrics import roc_auc_score, average_precision_score

y_pred = best_model.predict(X_test)
y_pred_proba = best_model.predict_proba(X_test)
auc = roc_auc_score(y_test, y_pred)
print('ROC AUC score: {:.2f}'.format(auc))
print('AVG Precision: {:.2f}'.format(
    average_precision_score(y_test, y_pred_proba[:,1])))
precision, recall, threshold = precision_recall_curve(y_test, y_pred_proba[:,1])

fig, ax = plt.subplots(figsize=(12,9))
ax.plot(threshold, precision[:-1], label='precision')
ax.plot(threshold, recall[:-1], label='recall')
ax.legend()
plt.show()

```

ROC AUC score: 0.69
AVG Precision: 0.24



```
[ ]: print(precision[np.argmin(np.abs(precision - recall))])
      print(recall[np.argmin(np.abs(precision - recall))])
```

```
0.28187512628813904
0.28187512628813904
```

10 2021-10-05 : Définition du seuil précision / recall adéquat

Le seuil précision recall adéquat pour notre modèle est celui qui maximise le profit de l'organisme de crédit

En premier lieu il faut définir une métrique qui approxime le profit potentiel sur chaque demande de crédit. On placera cette métrique dans une colonne `PROFIT`. Cette métrique profit : * sera égale à 0 pour tous les prêts qui présentent un défaut de paiement (`TARGET = 1`) * sera égale à aux intérêts (`AMT_INTEREST`) perçus pour les crédits biens remboursés (`TARGET = 0`) * la somme des intérêts est égale à la valeur du crédit moins la valeur du bien (`AMT_CREDIT - AMT_GOODS_PRICE`) * pour les cas où `AMT_GOODS_PRICE >= AMT_CREDIT`, `AMT_INTEREST` sera égal à `AMT_CREDIT` multiplié par le taux d'intérêt médian.

```
[ ]: # Importations
      import sys
      sys.path.append('...')
```

```

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

# Prétraitements
from preprocessing import preprocessor
from imblearn.pipeline import Pipeline
from imblearn.under_sampling import RandomUnderSampler
from sklearn.model_selection import train_test_split

# Machine Learning
from lightgbm import LGBMClassifier
from modelling_funcs import model_eval
from sklearn.metrics import recall_score, precision_score

from styles import *

```

```

[ ]: # Initialisation
train = pd.read_csv('../02_data/application_train.csv', index_col=0)
#test = pd.read_csv('../02_data/application_test.csv')

print('Training set dimensions :', train.shape)
df = train.copy()

cls_size = df.TARGET.value_counts()
cls_freq = df.TARGET.value_counts(normalize=True)
print(pd.DataFrame({'size': cls_size,
                    'freq': cls_freq.apply(lambda x: '%.2f' % x)}))

```

Training set dimensions : (307511, 121)

	size	freq
0	282686	0.92
1	24825	0.08

```

[ ]: # Définition du meilleur modèle trouvé jusqu'à présent
r = 42
undersampler = RandomUnderSampler(random_state=r)

best_model_params = {'boosting_type': 'gbdt',
                     'class_weight': None,
                     'colsample_bytree': 0.8736655622105718,
                     'importance_type': 'split',
                     'learning_rate': 0.1,
                     'max_depth': -1,

```

```

'min_child_samples': 80,
'min_child_weight': 100.0,
'min_split_gain': 0.0,
'n_estimators': 373,
'n_jobs': -1,
'num_leaves': 12,
'objective': None,
'random_state': r,
'reg_alpha': 16,
'reg_lambda': 21,
'silent': True,
'subsample': 0.7981160065359487,
'subsample_for_bin': 200000,
'subsample_freq': 0}

best_model = Pipeline([('u', undersampler),
                       ('p', preprocessor),
                       ('m', LGBMClassifier(**best_model_params))])

```

```

[ ]: # Séparation du jeu de données entre entraînement et évaluation

X_train, X_test, y_train, y_test = train_test_split(df.iloc[:,1:], df.iloc[:,0],
                                                    test_size=.2,
                                                    random_state=r)

```

```

[ ]: # 1ère évaluation du modèle

model_eval(best_model.fit(X_train, y_train), X_test, y_test)

```

```

[[39385 17169]
 [ 1559  3390]]

```

	precision	recall	f1-score	support
0	0.96	0.70	0.81	56554
1	0.16	0.68	0.27	4949
accuracy			0.70	61503
macro avg	0.56	0.69	0.54	61503
weighted avg	0.90	0.70	0.76	61503

'model_eval': successfully processed in 0h00m03.465432s.

```

[ ]: # Courbe precision recall indépendamment du profit
from sklearn.metrics import precision_recall_curve
from sklearn.metrics import roc_auc_score, average_precision_score

y_pred = best_model.predict(X_test)
y_pred_proba = best_model.predict_proba(X_test)

```



```

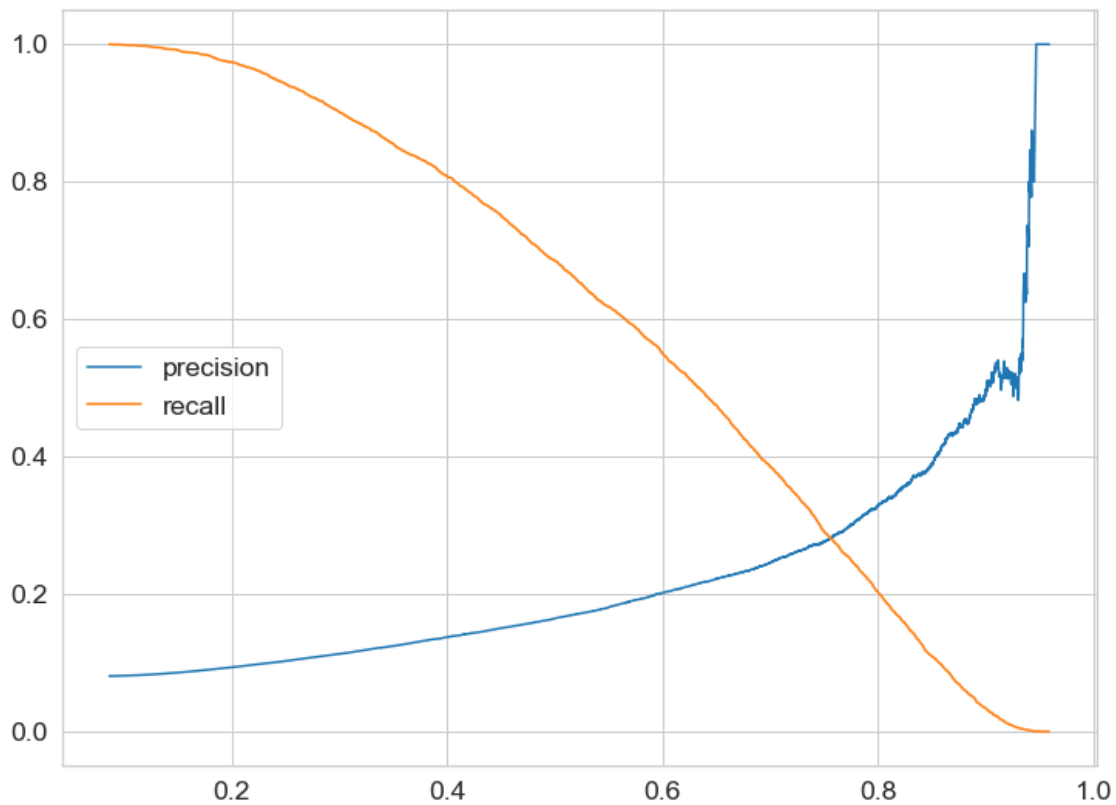
auc = roc_auc_score(y_test, y_pred)
print('ROC AUC score: {:.2f}'.format(auc))
print('AVG Precision: {:.2f}'.format(
    average_precision_score(y_test, y_pred_proba[:,1])))
precision, recall, threshold = precision_recall_curve(y_test, y_pred_proba[:,1])

fig, ax = plt.subplots(figsize=(12,9))
ax.plot(threshold, precision[:-1], label='precision')
ax.plot(threshold, recall[:-1], label='recall')
ax.legend()
plt.show()

```

ROC AUC score: 0.69

AVG Precision: 0.24



```
[ ]: # Définition des métriques d'intérêts et de taux d'intérêt
```

```

# Imputation des variables relatifs au crédit
from preprocessing import CreditInfosImputer
df = CreditInfosImputer().fit_transform(df)

```

```

# Définition d'une variable qui approxime le montant des intérêts des crédits
# Pour ceux dont la valeur du crédit est supérieure à la valeur du bien de conso
df.loc[df.AMT_CREDIT > df.AMT_GOODS_PRICE, 'AMT_INTEREST'] = \
df.loc[df.AMT_CREDIT > df.AMT_GOODS_PRICE, 'AMT_CREDIT'] - \
df.loc[df.AMT_CREDIT > df.AMT_GOODS_PRICE, 'AMT_GOODS_PRICE']

# Définition d'une variable qui approxime le taux d'intérêt des crédits
# Pour ceux dont la valeur du crédit est supérieure à la valeur du bien de conso
df.loc[df.AMT_CREDIT > df.AMT_GOODS_PRICE, 'INTEREST_RATE'] = \
df.loc[df.AMT_CREDIT > df.AMT_GOODS_PRICE, 'AMT_INTEREST'] / \
df.loc[df.AMT_CREDIT > df.AMT_GOODS_PRICE, 'AMT_CREDIT']

# Imputation du taux d'intérêt et de la somme des intérêts des crédits
# pour tous les autres cas
df.INTEREST_RATE.fillna(df.INTEREST_RATE.median(), inplace=True)
df.AMT_INTEREST.fillna(round(df.AMT_CREDIT * df.INTEREST_RATE, 0), inplace=True)

```

```

[ ]: print(df.shape)
      print(df.AMT_INTEREST.describe())
      print(df.INTEREST_RATE.describe())

```

```

(307511, 123)
count      307511.000000
mean       87418.058130
std        62937.759157
min         2970.000000
25%        36920.000000
50%        71991.000000
75%       123066.000000
max       553798.000000
Name: AMT_INTEREST, dtype: float64
count      307511.000000
mean         0.148195
std         0.053540
min         0.023208
25%         0.126790
50%         0.136740
75%         0.165275
max         0.833333
Name: INTEREST_RATE, dtype: float64

```

```

[ ]: df_test = df.loc[y_test.index]
      df_test.loc[:, 'PREDICT'] = y_pred
      df_test

```

```

[ ]: TARGET NAME_CONTRACT_TYPE CODE_GENDER FLAG_OWN_CAR \
      SK_ID_CURR

```

384575	0	Cash loans	M	Y
214010	0	Cash loans	F	Y
142232	0	Cash loans	F	Y
389171	0	Cash loans	F	N
283617	0	Cash loans	M	N
...
396891	0	Revolving loans	M	Y
423085	0	Cash loans	F	N
356971	0	Cash loans	M	N
320581	0	Cash loans	M	Y
392758	0	Cash loans	F	N

SK_ID_CURR	FLAG_OWN_REALTY	CNT_CHILDREN	AMT_INCOME_TOTAL	AMT_CREDIT	\
384575	N	2	207000.0	465457.5	
214010	Y	0	247500.0	1281712.5	
142232	N	0	202500.0	495000.0	
389171	Y	0	247500.0	254700.0	
283617	Y	0	112500.0	308133.0	
...	
396891	Y	2	450000.0	900000.0	
423085	Y	0	225000.0	202500.0	
356971	Y	0	121500.0	254700.0	
320581	Y	1	112500.0	1314117.0	
392758	N	0	157500.0	521280.0	

SK_ID_CURR	AMT_ANNUITY	AMT_GOODS_PRICE	... FLAG_DOCUMENT_21	\
384575	52641.0	418500.0	...	0
214010	48946.5	1179000.0	...	0
142232	39109.5	495000.0	...	0
389171	24939.0	225000.0	...	0
283617	15862.5	234000.0	...	0
...
396891	45000.0	900000.0	...	0
423085	24030.0	202500.0	...	0
356971	30357.0	225000.0	...	0
320581	38551.5	1147500.0	...	0
392758	27423.0	450000.0	...	0

SK_ID_CURR	AMT_REQ_CREDIT_BUREAU_HOUR	AMT_REQ_CREDIT_BUREAU_DAY	\
384575	0.0	0.0	
214010	0.0	0.0	
142232	0.0	0.0	
389171	0.0	0.0	
283617	0.0	0.0	

...
396891	0.0	0.0
423085	0.0	0.0
356971	0.0	0.0
320581	0.0	0.0
392758	0.0	0.0

	AMT_REQ_CREDIT_BUREAU_WEEK	AMT_REQ_CREDIT_BUREAU_MON	\
SK_ID_CURR			
384575	0.0	1.0	
214010	0.0	1.0	
142232	0.0	1.0	
389171	0.0	0.0	
283617	0.0	0.0	
...	
396891	0.0	0.0	
423085	0.0	1.0	
356971	0.0	0.0	
320581	0.0	0.0	
392758	0.0	1.0	

	AMT_REQ_CREDIT_BUREAU_QRT	AMT_REQ_CREDIT_BUREAU_YEAR	\
SK_ID_CURR			
384575	0.0	1.0	
214010	0.0	3.0	
142232	0.0	3.0	
389171	0.0	0.0	
283617	0.0	4.0	
...	
396891	1.0	1.0	
423085	1.0	3.0	
356971	0.0	1.0	
320581	0.0	1.0	
392758	0.0	2.0	

	AMT_INTEREST	INTEREST_RATE	PREDICT
SK_ID_CURR			
384575	46957.5	0.100885	1
214010	102712.5	0.080137	0
142232	67686.0	0.136740	1
389171	29700.0	0.116608	0
283617	74133.0	0.240588	1
...
396891	123066.0	0.136740	0
423085	27690.0	0.136740	1
356971	29700.0	0.116608	0
320581	166617.0	0.126790	0

```
392758          71280.0      0.136740      0
```

```
[61503 rows x 124 columns]
```

```
[ ]: def correct(X):
      verdicts = []
      for idx in X.index:
          if X.loc[idx, 'TARGET'] == X.loc[idx, 'PREDICT']:
              verdict = 'gagné'
          else:
              verdict = 'perdu'
          verdicts.append(verdict)
      return verdicts
```

```
[ ]: pd.DataFrame({'size': pd.Series(correct(df_test)).value_counts(),
                  'freq': pd.Series(correct(df_test)).value_counts(normalize=True)})
```

```
[ ]:      size      freq
      gagné 42775  0.695495
      perdu 18728  0.304505
```

```
[ ]: def home_credit_profits(X):
      profits = []
      for idx in X.index:
          if X.loc[idx, 'PREDICT'] == 1:
              profit = 0.0
          elif X.loc[idx, 'PREDICT'] == 0 and X.loc[idx, 'TARGET'] == 0:
              profit = X.loc[idx, 'AMT_INTEREST']
          elif X.loc[idx, 'PREDICT'] == 0 and X.loc[idx, 'TARGET'] == 1:
              profit = - X.loc[idx, 'AMT_GOODS_PRICE']
          profits.append(profit)
      return profits
```

```
[ ]: df_test.loc[:, 'PROFIT'] = home_credit_profits(df_test)
      df_test.PROFIT.sum()
```

```
[ ]: 2566715877.0
```

```
[ ]: df_test
```

```
[ ]:      TARGET NAME_CONTRACT_TYPE CODE_GENDER FLAG_OWN_CAR \
      SK_ID_CURR
      384575      0      Cash loans      M      Y
      214010      0      Cash loans      F      Y
      142232      0      Cash loans      F      Y
      389171      0      Cash loans      F      N
      283617      0      Cash loans      M      N
```

...
396891	0	Revolving loans	M	Y	
423085	0	Cash loans	F	N	
356971	0	Cash loans	M	N	
320581	0	Cash loans	M	Y	
392758	0	Cash loans	F	N	

	FLAG_OWN_REALTY	CNT_CHILDREN	AMT_INCOME_TOTAL	AMT_CREDIT	\
SK_ID_CURR					
384575	N	2	207000.0	465457.5	
214010	Y	0	247500.0	1281712.5	
142232	N	0	202500.0	495000.0	
389171	Y	0	247500.0	254700.0	
283617	Y	0	112500.0	308133.0	

...
396891	Y	2	450000.0	900000.0	
423085	Y	0	225000.0	202500.0	
356971	Y	0	121500.0	254700.0	
320581	Y	1	112500.0	1314117.0	
392758	N	0	157500.0	521280.0	

	AMT_ANNUITY	AMT_GOODS_PRICE	...	AMT_REQ_CREDIT_BUREAU_HOUR	\
SK_ID_CURR			...		
384575	52641.0	418500.0	...	0.0	
214010	48946.5	1179000.0	...	0.0	
142232	39109.5	495000.0	...	0.0	
389171	24939.0	225000.0	...	0.0	
283617	15862.5	234000.0	...	0.0	

...
396891	45000.0	900000.0	...	0.0	
423085	24030.0	202500.0	...	0.0	
356971	30357.0	225000.0	...	0.0	
320581	38551.5	1147500.0	...	0.0	
392758	27423.0	450000.0	...	0.0	

	AMT_REQ_CREDIT_BUREAU_DAY	AMT_REQ_CREDIT_BUREAU_WEEK	\
SK_ID_CURR			
384575	0.0	0.0	
214010	0.0	0.0	
142232	0.0	0.0	
389171	0.0	0.0	
283617	0.0	0.0	

...
396891	0.0	0.0	
423085	0.0	0.0	
356971	0.0	0.0	
320581	0.0	0.0	

392758	0.0	0.0
--------	-----	-----

	AMT_REQ_CREDIT_BUREAU_MON	AMT_REQ_CREDIT_BUREAU_QRT	\
SK_ID_CURR			
384575	1.0	0.0	
214010	1.0	0.0	
142232	1.0	0.0	
389171	0.0	0.0	
283617	0.0	0.0	
...	
396891	0.0	1.0	
423085	1.0	1.0	
356971	0.0	0.0	
320581	0.0	0.0	
392758	1.0	0.0	

	AMT_REQ_CREDIT_BUREAU_YEAR	AMT_INTEREST	INTEREST_RATE	PREDICT	\
SK_ID_CURR					
384575	1.0	46957.5	0.100885	1	
214010	3.0	102712.5	0.080137	0	
142232	3.0	67686.0	0.136740	1	
389171	0.0	29700.0	0.116608	0	
283617	4.0	74133.0	0.240588	1	
...	
396891	1.0	123066.0	0.136740	0	
423085	3.0	27690.0	0.136740	1	
356971	1.0	29700.0	0.116608	0	
320581	1.0	166617.0	0.126790	0	
392758	2.0	71280.0	0.136740	0	

	PROFIT
SK_ID_CURR	
384575	0.0
214010	102712.5
142232	0.0
389171	29700.0
283617	0.0
...	...
396891	123066.0
423085	0.0
356971	29700.0
320581	166617.0
392758	71280.0

[61503 rows x 125 columns]

```
[ ]: print(threshold[np.argmin(np.abs(precision - recall))])
```

0.7560445445897188

```
[ ]: # Fonction de modèle final avec un seuil de décision paramétrable
def final_model(model, X, threshold=0.5):
    return np.array(model.predict_proba(X)[: ,1] > threshold, dtype=int)
```

```
[ ]: final_model(best_model, X_test)
```

```
[ ]: array([1, 0, 1, ..., 0, 0, 0])
```

```
[ ]: assert (np.asarray(df_test.PREDICT) == final_model(best_model, X_test)).all()
```

```
[ ]: def get_profit_curve(threshold):
    total_profits = []
    for t in threshold:
        df_test.loc[:, 'PREDICT'] = final_model(best_model, X_test, threshold=t)
        total_profit = sum(home_credit_profits(df_test))
        total_profits.append(total_profit)
    return total_profits
```

```
[ ]: len(threshold[::10000])
```

```
[ ]: 7
```

```
[ ]: gross_profit_curve = get_profit_curve(threshold[::10000])
```

```
[ ]: threshold[::10000]
```

```
[ ]: array([0.08643151, 0.20255794, 0.28498796, 0.37769066, 0.49316424,
          0.64045551, 0.86134536])
```

```
[ ]: precision[::10000]
```

```
[ ]: array([0.08099439, 0.09426061, 0.11033258, 0.1322702 , 0.16225181,
          0.21804918, 0.41795104])
```

```
[ ]: fig = plt.figure(figsize=(12,9))

ax1 = fig.add_subplot(111)
ax1.plot(threshold[::10000], precision[::10000], label='precision',)
ax1.plot(threshold[::10000], recall[::10000], label='recall')
ax2 = fig.add_subplot(111, sharex=ax1, frameon=False)
ax2.plot(threshold[::10000], gross_profit_curve, label='profit', color='g')
ax2.yaxis.tick_right()
fig.legend(loc='upper left')
plt.show()
```