

```
In [2]: train=pd.read_csv(r"C:\Users\Pravesh Singh\Desktop\house-prices-advance  
d-regression-techniques\train.csv")
```

```
In [4]: train.shape
```

```
Out[4]: (1460, 81)
```

```
In [6]: pd.set_option('display.max_rows',None)  
pd.set_option('display.max_columns',None)
```

```
In [7]: train.isnull().sum()
```

```
Out[7]: Id                0  
MSSubClass                0  
MSZoning                  0  
LotFrontage              259  
LotArea                   0  
Street                    0  
Alley                    1369  
LotShape                   0  
LandContour               0  
Utilities                 0  
LotConfig                 0  
LandSlope                 0  
Neighborhood              0  
Condition1                0  
Condition2                0  
BldgType                  0  
HouseStyle                0  
OverallQual               0  
OverallCond               0  
YearBuilt                 0  
YearRemodAdd              0
```

RoofStyle	0
RoofMatl	0
Exterior1st	0
Exterior2nd	0
MasVnrType	8
MasVnrArea	8
ExterQual	0
ExterCond	0
Foundation	0
BsmtQual	37
BsmtCond	37
BsmtExposure	38
BsmtFinType1	37
BsmtFinSF1	0
BsmtFinType2	38
BsmtFinSF2	0
BsmtUnfSF	0
TotalBsmtSF	0
Heating	0
HeatingQC	0
CentralAir	0
Electrical	1
1stFlrSF	0
2ndFlrSF	0
LowQualFinSF	0
GrLivArea	0
BsmtFullBath	0
BsmtHalfBath	0
FullBath	0
HalfBath	0
BedroomAbvGr	0
KitchenAbvGr	0
KitchenQual	0
TotRmsAbvGrd	0
Functional	0
Fireplaces	0
FireplaceQu	690
GarageType	81
GarageYrBlt	81

```
GarageFinish      81
GarageCars         0
GarageArea         0
GarageQual        81
GarageCond        81
PavedDrive         0
WoodDeckSF         0
OpenPorchSF        0
EnclosedPorch      0
3SsnPorch          0
ScreenPorch        0
PoolArea           0
PoolQC            1453
Fence              1179
MiscFeature        1406
MiscVal            0
MoSold             0
YrSold             0
SaleType           0
SaleCondition      0
SalePrice          0
dtype: int64
```

```
In [8]: train.drop(columns=['Id', 'Alley', 'PoolQC', 'Fence', 'MiscFeature', 'FireplaceQu'], inplace=True)
```

```
In [9]: train.shape
```

```
Out[9]: (1460, 75)
```

```
In [10]: sns.heatmap(train.isnull())
```

```
Out[10]: <matplotlib.axes._subplots.AxesSubplot at 0x262771dc508>
```

```
In [11]: train.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 1460 entries, 0 to 1459
```

Data columns (total 75 columns):

MSSubClass	1460	non-null	int64
MSZoning	1460	non-null	object
LotFrontage	1201	non-null	float64
LotArea	1460	non-null	int64
Street	1460	non-null	object
LotShape	1460	non-null	object
LandContour	1460	non-null	object
Utilities	1460	non-null	object
LotConfig	1460	non-null	object
LandSlope	1460	non-null	object
Neighborhood	1460	non-null	object
Condition1	1460	non-null	object
Condition2	1460	non-null	object
BldgType	1460	non-null	object
HouseStyle	1460	non-null	object
OverallQual	1460	non-null	int64
OverallCond	1460	non-null	int64
YearBuilt	1460	non-null	int64
YearRemodAdd	1460	non-null	int64
RoofStyle	1460	non-null	object
RoofMatl	1460	non-null	object
Exterior1st	1460	non-null	object
Exterior2nd	1460	non-null	object
MasVnrType	1452	non-null	object
MasVnrArea	1452	non-null	float64
ExterQual	1460	non-null	object
ExterCond	1460	non-null	object
Foundation	1460	non-null	object
BsmtQual	1423	non-null	object
BsmtCond	1423	non-null	object
BsmtExposure	1422	non-null	object
BsmtFinType1	1423	non-null	object
BsmtFinSF1	1460	non-null	int64
BsmtFinType2	1422	non-null	object
BsmtFinSF2	1460	non-null	int64
BsmtUnfSF	1460	non-null	int64
TotalBsmtSF	1460	non-null	int64
Heating	1460	non-null	object

```

HeatingQC          1460 non-null object
CentralAir         1460 non-null object
Electrical         1459 non-null object
1stFlrSF           1460 non-null int64
2ndFlrSF           1460 non-null int64
LowQualFinSF       1460 non-null int64
GrLivArea          1460 non-null int64
BsmtFullBath       1460 non-null int64
BsmtHalfBath       1460 non-null int64
FullBath           1460 non-null int64
HalfBath           1460 non-null int64
BedroomAbvGr       1460 non-null int64
KitchenAbvGr       1460 non-null int64
KitchenQual        1460 non-null object
TotRmsAbvGrd       1460 non-null int64
Functional         1460 non-null object
Fireplaces         1460 non-null int64
GarageType         1379 non-null object
GarageYrBltd       1379 non-null float64
GarageFinish       1379 non-null object
GarageCars         1460 non-null int64
GarageArea         1460 non-null int64
GarageQual         1379 non-null object
GarageCond         1379 non-null object
PavedDrive         1460 non-null object
WoodDeckSF         1460 non-null int64
OpenPorchSF        1460 non-null int64
EnclosedPorch      1460 non-null int64
3SsnPorch          1460 non-null int64
ScreenPorch        1460 non-null int64
PoolArea           1460 non-null int64
MiscVal            1460 non-null int64
MoSold             1460 non-null int64
YrSold             1460 non-null int64
SaleType           1460 non-null object
SaleCondition       1460 non-null object
SalePrice          1460 non-null int64
dtypes: float64(3), int64(34), object(38)
memory usage: 855.6+ KB

```

```
In [12]: train['LotFrontage']=train['LotFrontage'].fillna(train['LotFrontage'].mean())
```

```
In [13]: train['MasVnrType']=train['MasVnrType'].fillna(train['MasVnrType'].mode()[0])
```

```
In [14]: train['MasVnrArea']=train['MasVnrArea'].fillna(train['MasVnrArea'].mean())
train['BsmtQual']=train['BsmtQual'].fillna(train['BsmtQual'].mode()[0])
train['BsmtCond']=train['BsmtCond'].fillna(train['BsmtCond'].mode()[0])
```

```
In [17]: train['BsmtExposure']=train['BsmtExposure'].fillna(train['BsmtExposure'].mode()[0])
train['BsmtFinType1']=train['BsmtFinType1'].fillna(train['BsmtFinType1'].mode()[0])
train['BsmtFinSF1']=train['BsmtFinSF1'].fillna(train['BsmtFinSF1'].mean())
train['BsmtFinType2']=train['BsmtFinType2'].fillna(train['BsmtFinType2'].mode()[0])

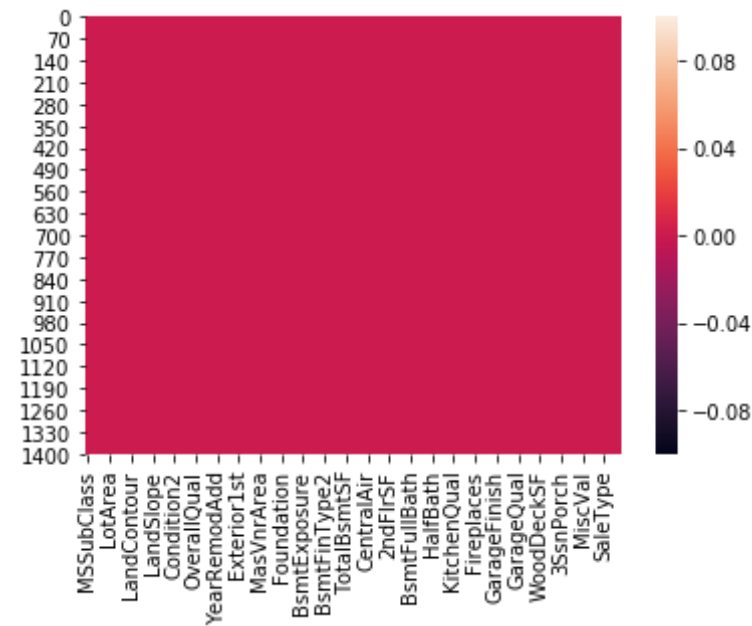
train['BsmtFinType2']=train['BsmtFinType2'].fillna(train['BsmtFinType2'].mode()[0])
```

```
In [18]: train['Electrical']=train['Electrical'].fillna(train['Electrical'].mode()[0])

train['GarageType']=train['GarageType'].fillna(train['GarageType'].mode()[0])
train['GarageYrBlt']=train['GarageYrBlt'].fillna(train['GarageYrBlt'].mean())
train['GarageFinish']=train['GarageFinish'].fillna(train['GarageFinish'].mode()[0])
train['GarageQual']=train['GarageQual'].fillna(train['GarageQual'].mode()[0])
train['GarageCond']=train['GarageCond'].fillna(train['GarageCond'].mode()[0])
```

```
In [19]: sns.heatmap(train.isnull())
```

```
Out[19]: <matplotlib.axes._subplots.AxesSubplot at 0x262787e07c8>
```



```
In [20]: train.isnull().sum().sum()
```

```
Out[20]: 0
```

```
In [22]: test=pd.read_csv('test_clean.csv')
```

```
In [24]: test.head(30)
```

```
Out[24]:
```

	MSSubClass	MSZoning	LotFrontage	LotArea	Street	LotShape	LandContour	Utilities	LotC
0	20	RH	80.000000	11622	Pave	Reg	Lvl	AllPub	
1	20	RL	81.000000	14267	Pave	IR1	Lvl	AllPub	

	MSSubClass	MSZoning	LotFrontage	LotArea	Street	LotShape	LandContour	Utilities	LotC
2	60	RL	74.000000	13830	Pave	IR1	Lvl	AllPub	
3	60	RL	78.000000	9978	Pave	IR1	Lvl	AllPub	
4	120	RL	43.000000	5005	Pave	IR1	HLS	AllPub	
5	60	RL	75.000000	10000	Pave	IR1	Lvl	AllPub	C
6	20	RL	68.580357	7980	Pave	IR1	Lvl	AllPub	
7	60	RL	63.000000	8402	Pave	IR1	Lvl	AllPub	
8	20	RL	85.000000	10176	Pave	Reg	Lvl	AllPub	
9	20	RL	70.000000	8400	Pave	Reg	Lvl	AllPub	C
10	120	RH	26.000000	5858	Pave	IR1	Lvl	AllPub	
11	160	RM	21.000000	1680	Pave	Reg	Lvl	AllPub	
12	160	RM	21.000000	1680	Pave	Reg	Lvl	AllPub	
13	160	RL	24.000000	2280	Pave	Reg	Lvl	AllPub	
14	120	RL	24.000000	2280	Pave	Reg	Lvl	AllPub	
15	60	RL	102.000000	12858	Pave	IR1	Lvl	AllPub	
16	20	RL	94.000000	12883	Pave	IR1	Lvl	AllPub	C
17	20	RL	90.000000	11520	Pave	Reg	Lvl	AllPub	
18	20	RL	79.000000	14122	Pave	IR1	Lvl	AllPub	
19	20	RL	110.000000	14300	Pave	Reg	HLS	AllPub	
20	60	RL	105.000000	13650	Pave	Reg	Lvl	AllPub	C
21	120	RL	41.000000	7132	Pave	IR1	Lvl	AllPub	
22	20	RL	100.000000	18494	Pave	IR1	Lvl	AllPub	C
23	120	RL	43.000000	3203	Pave	Reg	Lvl	AllPub	
24	80	RL	67.000000	13300	Pave	IR1	Lvl	AllPub	
25	60	RL	63.000000	8577	Pave	IR1	Lvl	AllPub	
26	60	RL	60.000000	17433	Pave	IR2	Lvl	AllPub	Cu



	MSSubClass	MSZoning	LotFrontage	LotArea	Street	LotShape	LandContour	Utilities	LotC
27	20	RL	73.000000	8987	Pave	Reg	Lvl	AllPub	
28	20	FV	92.000000	9215	Pave	Reg	Lvl	AllPub	
29	20	FV	84.000000	10440	Pave	Reg	Lvl	AllPub	(

In [25]: `test.shape`

Out[25]: (1459, 74)

In [26]: `test.drop(columns=['PoolArea', 'MiscVal'], inplace=True)`

In [27]: `test.shape`

Out[27]: (1459, 72)

In [28]: `train.head(30)`

Out[28]:

	MSSubClass	MSZoning	LotFrontage	LotArea	Street	LotShape	LandContour	Utilities	LotC
0	60	RL	65.000000	8450	Pave	Reg	Lvl	AllPub	
1	20	RL	80.000000	9600	Pave	Reg	Lvl	AllPub	
2	60	RL	68.000000	11250	Pave	IR1	Lvl	AllPub	
3	70	RL	60.000000	9550	Pave	IR1	Lvl	AllPub	(
4	60	RL	84.000000	14260	Pave	IR1	Lvl	AllPub	
5	50	RL	85.000000	14115	Pave	IR1	Lvl	AllPub	
6	20	RL	75.000000	10084	Pave	Reg	Lvl	AllPub	
7	60	RL	70.049958	10382	Pave	IR1	Lvl	AllPub	(
8	50	RM	51.000000	6120	Pave	Reg	Lvl	AllPub	
9	190	RL	50.000000	7420	Pave	Reg	Lvl	AllPub	(

	MSSubClass	MSZoning	LotFrontage	LotArea	Street	LotShape	LandContour	Utilities	LotC
10	20	RL	70.000000	11200	Pave	Reg	Lvl	AllPub	
11	60	RL	85.000000	11924	Pave	IR1	Lvl	AllPub	
12	20	RL	70.049958	12968	Pave	IR2	Lvl	AllPub	
13	20	RL	91.000000	10652	Pave	IR1	Lvl	AllPub	
14	20	RL	70.049958	10920	Pave	IR1	Lvl	AllPub	C
15	45	RM	51.000000	6120	Pave	Reg	Lvl	AllPub	C
16	20	RL	70.049958	11241	Pave	IR1	Lvl	AllPub	Cu
17	90	RL	72.000000	10791	Pave	Reg	Lvl	AllPub	
18	20	RL	66.000000	13695	Pave	Reg	Lvl	AllPub	
19	20	RL	70.000000	7560	Pave	Reg	Lvl	AllPub	
20	60	RL	101.000000	14215	Pave	IR1	Lvl	AllPub	C
21	45	RM	57.000000	7449	Pave	Reg	Bnk	AllPub	
22	20	RL	75.000000	9742	Pave	Reg	Lvl	AllPub	
23	120	RM	44.000000	4224	Pave	Reg	Lvl	AllPub	
24	20	RL	70.049958	8246	Pave	IR1	Lvl	AllPub	
25	20	RL	110.000000	14230	Pave	Reg	Lvl	AllPub	C
26	20	RL	60.000000	7200	Pave	Reg	Lvl	AllPub	C
27	20	RL	98.000000	11478	Pave	Reg	Lvl	AllPub	
28	20	RL	47.000000	16321	Pave	IR1	Lvl	AllPub	Cu
29	30	RM	60.000000	6324	Pave	IR1	Lvl	AllPub	

In [29]: `train.shape`

Out[29]: (1460, 75)

In [30]: `train.drop(columns=['PoolArea', 'MiscVal'], inplace=True)`

```
In [31]: train.shape
```

```
Out[31]: (1460, 73)
```

```
In [32]: final_data=pd.concat([train,test],axis=0)
```

C:\Users\Pravesh Singh\Anaconda3\lib\site-packages\ipykernel\_launcher.py:1: FutureWarning: Sorting because non-concatenation axis is not aligned. A future version of pandas will change to not sort by default.

To accept the future behavior, pass 'sort=False'.

To retain the current behavior and silence the warning, pass 'sort=True'.

"""Entry point for launching an IPython kernel.

```
In [33]: final_data.isnull().sum().sum()
```

```
Out[33]: 1459
```

```
In [34]: final_data.head(10)
```

```
Out[34]:
```

	1stFlrSF	2ndFlrSF	3SsnPorch	BedroomAbvGr	BldgType	BsmtCond	BsmtExposure	BsmtFin
0	856	854	0	3	1Fam	TA	No	7
1	1262	0	0	3	1Fam	TA	Gd	9
2	920	866	0	3	1Fam	TA	Mn	4
3	961	756	0	3	1Fam	Gd	No	2
4	1145	1053	0	4	1Fam	TA	Av	6
5	796	566	320	1	1Fam	TA	No	7
6	1694	0	0	3	1Fam	TA	Av	13

	1stFlrSF	2ndFlrSF	3SsnPorch	BedroomAbvGr	BldgType	BsmtCond	BsmtExposure	BsmtFin
7	1107	983	0	3	1Fam	TA	Mn	ε
8	1022	752	0	2	1Fam	TA	No	
9	1077	0	0	2	2fmCon	TA	No	ε

In [35]: `cat_var=final_data.select_dtypes(include=['O']).columns.tolist()`

In [36]: `cat_var`

Out[36]:

- 'BldgType',
- 'BsmtCond',
- 'BsmtExposure',
- 'BsmtFinType1',
- 'BsmtFinType2',
- 'BsmtQual',
- 'CentralAir',
- 'Condition1',
- 'Condition2',
- 'Electrical',
- 'ExterCond',
- 'ExterQual',
- 'Exterior1st',
- 'Exterior2nd',
- 'Foundation',
- 'Functional',
- 'GarageCond',
- 'GarageFinish',
- 'GarageQual',
- 'GarageType',
- 'Heating',
- 'HeatingQC',
- 'HouseStyle',
- 'KitchenQual',
- 'LandContour',
- 'LandSlope',
- 'LotConfig',

```
'LotShape',  
'MSZoning',  
'MasVnrType',  
'Neighborhood',  
'PavedDrive',  
'RoofMatl',  
'RoofStyle',  
'SaleCondition',  
'SaleType',  
'Street',  
'Utilities']
```

```
In [39]: final_data.shape
```

```
Out[39]: (2919, 73)
```

```
In [42]: final_data['Heating'].shape
```

```
Out[42]: (2919,)
```

```
In [43]: final_data=pd.get_dummies(final_data,columns=cat_var,drop_first=True)
```

```
In [44]: final_data.shape
```

```
Out[44]: (2919, 231)
```

```
In [45]: 1459+1460
```

```
Out[45]: 2919
```

```
In [47]: corr=final_data.corr()
```

```
In [48]: columns=np.full((corr.shape[0],),True,dtype=bool)  
         for i in range(corr.shape[0]):  
             for j in range(i+1,corr.shape[0]):  
                 if corr.iloc[i,j]>=0.9:
```

```
        if columns[j]:
            columns[j]=False

selected_columns=final_data.columns[columns]
final_data=final_data[selected_columns]
```

```
In [49]: final_data.shape
```

```
Out[49]: (2919, 227)
```

```
In [51]: 2881/2
```

```
Out[51]: 1440.5
```

```
In [52]: df_train=final_data.iloc[:len(train),:]
df_test=final_data.iloc[len(train):,:]
```

```
In [53]: df_test.isnull().sum().sum()
```

```
Out[53]: 1459
```

```
In [54]: df_test.drop(columns=['SalePrice'],axis=1,inplace=True)
```

```
C:\Users\Pravesh Singh\Anaconda3\lib\site-packages\pandas\core\frame.p
y:4102: SettingWithCopyWarning:
A value is trying to be set on a copy of a slice from a DataFrame

See the caveats in the documentation: http://pandas.pydata.org/pandas-d
ocs/stable/user\_guide/indexing.html#returning-a-view-versus-a-copy
errors=errors,
```

```
In [55]: df_test.isnull().sum().sum()
```

```
Out[55]: 0
```

```
In [56]: df_train.isnull().sum().sum()
```

Out[56]: 0

```
In [57]: x_train=df_train.drop(['SalePrice'],axis=1)
         y_train=df_train['SalePrice']
```

```
In [58]: from sklearn.model_selection import cross_val_score
```

```
In [60]: from sklearn.linear_model import LinearRegression
```

```
In [61]: score=cross_val_score(LinearRegression(),x_train,y_train,cv=20)
```

```
In [62]: score
```

```
Out[62]: array([ 9.11291000e-01, -3.89303548e+07, -2.38757701e+06, -5.47691213e+
          08,
          -3.49137592e+08, -1.37970493e+11,  9.26904097e-01, -1.69228269e+
          08,
          -2.69738148e+09, -7.44122999e+06,  9.19663643e-01,  4.23979941e-
          01,
           8.97722221e-01, -7.49280008e+07,  8.79094678e-01,  9.22705811e-
          01,
          -1.40729049e+07, -5.66366477e+06, -4.31563709e+09,  9.16273222e-
          01])
```

```
In [63]: np.average(score)
```

```
Out[63]: -7309649629.968989
```

```
In [ ]: from sklearn.ensemble import RandomForestRegressor
```

```
In [64]: score1=cross_val_score(RandomForestRegressor(),x_train,y_train,cv=20)
```

```
In [65]: np.average(score1)
```

Out[65]: 0.8532269237669494

```
In [67]: from sklearn.ensemble import AdaBoostRegressor, GradientBoostingRegressor
```

```
In [68]: from sklearn.tree import DecisionTreeRegressor
```

```
In [69]: score1=cross_val_score(AdaBoostRegressor(DecisionTreeRegressor(max_depth=1)), x_train, y_train, cv=20)
```

```
In [70]: np.average(score1)
```

Out[70]: 0.4121622711839442

```
In [71]: score4=cross_val_score(GradientBoostingRegressor(), x_train, y_train, cv=20)
```

```
In [72]: np.average(score4)
```

Out[72]: 0.8784202670400386

```
In [73]: from xgboost import XGBRegressor
```

```
In [74]: score5=cross_val_score(XGBRegressor(), x_train, y_train, cv=20)
```

```
In [75]: np.average(score5)
```

Out[75]: 0.8600397928593108

```
In [76]: from sklearn.model_selection import RandomizedSearchCV
```

```
In [77]: rcf=RandomizedSearchCV(estimator=XGBRegressor(), param_distributions={
    'n_estimators': [20, 30, 40, 50, 70, 80, 90, 100, 150, 200],
```



```

        'max_depth':[2,3,5,10,15],
        'learning_rate':[0.05,0.1,0.15,0.20],
        'booster':['gbtree', 'gblinear'],
        'max_depth':[2,3,5,10,15],
        'min_child_weight':[1,2,3,4]

    }, cv=10, n_iter=50, random_state=42, verbose=5, return_train_score=True)

```

In [78]: `rcf.fit(x_train,y_train)`

Fitting 10 folds for each of 50 candidates, totalling 500 fits  
 [CV] n\_estimators=90, min\_child\_weight=1, max\_depth=10, learning\_rate=0.15, booster=gbtree

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

[CV] n\_estimators=90, min\_child\_weight=1, max\_depth=10, learning\_rate=0.15, booster=gbtree, score=(train=1.000, test=0.901), total= 3.0s  
 [CV] n\_estimators=90, min\_child\_weight=1, max\_depth=10, learning\_rate=0.15, booster=gbtree

[Parallel(n\_jobs=1)]: Done 1 out of 1 | elapsed: 3.0s remaining: 0.0s

[CV] n\_estimators=90, min\_child\_weight=1, max\_depth=10, learning\_rate=0.15, booster=gbtree, score=(train=1.000, test=0.886), total= 2.9s  
 [CV] n\_estimators=90, min\_child\_weight=1, max\_depth=10, learning\_rate=0.15, booster=gbtree

[Parallel(n\_jobs=1)]: Done 2 out of 2 | elapsed: 6.0s remaining: 0.0s

[CV] n\_estimators=90, min\_child\_weight=1, max\_depth=10, learning\_rate=0.15, booster=gbtree, score=(train=1.000, test=0.918), total= 3.0s

```

[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=
0.15, booster=gbtree

[Parallel(n_jobs=1)]: Done    3 out of    3 | elapsed:    9.0s remaining:
0.0s

[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=
0.15, booster=gbtree, score=(train=1.000, test=0.672), total=    3.0s
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=
0.15, booster=gbtree

[Parallel(n_jobs=1)]: Done    4 out of    4 | elapsed:   12.0s remaining:
0.0s

[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=
0.15, booster=gbtree, score=(train=1.000, test=0.884), total=    3.0s
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=
0.15, booster=gbtree, score=(train=1.000, test=0.899), total=    2.9s
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=
0.15, booster=gbtree, score=(train=1.000, test=0.869), total=    3.0s
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=
0.15, booster=gbtree, score=(train=1.000, test=0.917), total=    3.0s
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=
0.15, booster=gbtree, score=(train=1.000, test=0.910), total=    3.0s
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=
0.15, booster=gbtree, score=(train=1.000, test=0.854), total=    2.9s
[CV] n_estimators=70, min_child_weight=4, max_depth=10, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=70, min_child_weight=4, max_depth=10, learning_rate=
0.1, booster=gbtree, score=(train=0.998, test=0.894), total=    2.2s
[CV] n_estimators=70, min_child_weight=4, max_depth=10, learning_rate=

```

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[CV] n_estimators=70, min_child_weight=4, max_depth=10, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=70, min_child_weight=4, max_depth=10, learning_rate=
0.1, booster=gbtree, score=(train=0.997, test=0.903), total= 2.2s
[CV] n_estimators=70, min_child_weight=4, max_depth=10, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=70, min_child_weight=4, max_depth=10, learning_rate=
0.1, booster=gbtree, score=(train=0.997, test=0.914), total= 2.4s
[CV] n_estimators=70, min_child_weight=4, max_depth=10, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=70, min_child_weight=4, max_depth=10, learning_rate=
0.1, booster=gbtree, score=(train=0.998, test=0.800), total= 2.3s
[CV] n_estimators=70, min_child_weight=4, max_depth=10, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=70, min_child_weight=4, max_depth=10, learning_rate=
0.1, booster=gbtree, score=(train=0.997, test=0.894), total= 2.2s
[CV] n_estimators=70, min_child_weight=4, max_depth=10, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=70, min_child_weight=4, max_depth=10, learning_rate=
0.1, booster=gbtree, score=(train=0.997, test=0.881), total= 2.2s
[CV] n_estimators=70, min_child_weight=4, max_depth=10, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=70, min_child_weight=4, max_depth=10, learning_rate=
0.1, booster=gbtree, score=(train=0.997, test=0.897), total= 2.2s
[CV] n_estimators=70, min_child_weight=4, max_depth=10, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=70, min_child_weight=4, max_depth=10, learning_rate=
0.1, booster=gbtree, score=(train=0.997, test=0.920), total= 2.2s
[CV] n_estimators=70, min_child_weight=4, max_depth=10, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=70, min_child_weight=4, max_depth=10, learning_rate=
0.1, booster=gbtree, score=(train=0.996, test=0.842), total= 2.2s
[CV] n_estimators=70, min_child_weight=4, max_depth=10, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=70, min_child_weight=4, max_depth=10, learning_rate=
0.1, booster=gbtree, score=(train=0.997, test=0.862), total= 2.2s
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate
0.05, booster=gbtree, score=(train=1.000, test=0.800), total= 6.7s

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=0.05, booster=gbtree, score=(train=1.000, test=0.890), total= 6.7s
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate
=0.05, booster=gbtree, score=(train=1.000, test=0.895), total= 6.7s
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate
=0.05, booster=gbtree, score=(train=1.000, test=0.911), total= 6.8s
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate
=0.05, booster=gbtree, score=(train=1.000, test=0.741), total= 6.6s
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate
=0.05, booster=gbtree, score=(train=1.000, test=0.877), total= 6.6s
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate
=0.05, booster=gbtree, score=(train=1.000, test=0.903), total= 6.7s
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate
=0.05, booster=gbtree, score=(train=1.000, test=0.858), total= 6.7s
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate
=0.05, booster=gbtree, score=(train=1.000, test=0.919), total= 6.7s
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate
=0.05, booster=gbtree, score=(train=1.000, test=0.927), total= 6.7s
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate
=0.05, booster=gbtree, score=(train=1.000, test=0.858), total= 6.9s
[CV] n_estimators=80, min_child_weight=2, max_depth=10, learning_rate=
0.05, booster=gbtree

```

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[CV] n_estimators=80, min_child_weight=2, max_depth=10, learning_rate=

```

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[CV] n_estimators=80, min_child_weight=2, max_depth=10, learning_rate=
0.05, booster=gbtree, score=(train=0.992, test=0.890), total= 2.7s
[CV] n_estimators=80, min_child_weight=2, max_depth=10, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=80, min_child_weight=2, max_depth=10, learning_rate=
0.05, booster=gbtree, score=(train=0.992, test=0.889), total= 2.5s
[CV] n_estimators=80, min_child_weight=2, max_depth=10, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=80, min_child_weight=2, max_depth=10, learning_rate=
0.05, booster=gbtree, score=(train=0.992, test=0.909), total= 2.5s
[CV] n_estimators=80, min_child_weight=2, max_depth=10, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=80, min_child_weight=2, max_depth=10, learning_rate=
0.05, booster=gbtree, score=(train=0.992, test=0.776), total= 2.6s
[CV] n_estimators=80, min_child_weight=2, max_depth=10, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=80, min_child_weight=2, max_depth=10, learning_rate=
0.05, booster=gbtree, score=(train=0.991, test=0.894), total= 2.5s
[CV] n_estimators=80, min_child_weight=2, max_depth=10, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=80, min_child_weight=2, max_depth=10, learning_rate=
0.05, booster=gbtree, score=(train=0.992, test=0.892), total= 2.5s
[CV] n_estimators=80, min_child_weight=2, max_depth=10, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=80, min_child_weight=2, max_depth=10, learning_rate=
0.05, booster=gbtree, score=(train=0.992, test=0.867), total= 2.5s
[CV] n_estimators=80, min_child_weight=2, max_depth=10, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=80, min_child_weight=2, max_depth=10, learning_rate=
0.05, booster=gbtree, score=(train=0.992, test=0.917), total= 2.5s
[CV] n_estimators=80, min_child_weight=2, max_depth=10, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=80, min_child_weight=2, max_depth=10, learning_rate=
0.05, booster=gbtree, score=(train=0.991, test=0.807), total= 2.5s
[CV] n_estimators=80, min_child_weight=2, max_depth=10, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=80, min_child_weight=2, max_depth=10, learning_rate=
0.05, booster=gbtree, score=(train=0.992, test=0.861), total= 2.5s
[CV] n_estimators=100, min_child_weight=2, max_depth=10, learning_rate=
0.05, booster=gblinear

```

```
0.05, booster=gblinear  
[11:14:27] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=2, max_depth=10, learning_rate=0.05, booster=gblinear, score=(train=0.879, test=0.894), total= 0.3s  
[CV] n_estimators=100, min_child_weight=2, max_depth=10, learning_rate=0.05, booster=gblinear  
[11:14:28] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=2, max_depth=10, learning_rate=0.05, booster=gblinear, score=(train=0.878, test=0.888), total= 0.4s  
[CV] n_estimators=100, min_child_weight=2, max_depth=10, learning_rate=0.05, booster=gblinear  
[11:14:28] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this

verification. Please open an issue if you find above cases.

verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=2, max_depth=10, learning_rate=0.05, booster=gblinear, score=(train=0.880, test=0.862), total= 0.3s
[CV] n_estimators=100, min_child_weight=2, max_depth=10, learning_rate=0.05, booster=gblinear
[11:14:28] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=2, max_depth=10, learning_rate=0.05, booster=gblinear, score=(train=0.885, test=0.773), total= 0.3s
[CV] n_estimators=100, min_child_weight=2, max_depth=10, learning_rate=0.05, booster=gblinear
[11:14:29] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=2, max_depth=10, learning_rate=0.05, booster=gblinear, score=(train=0.879, test=0.862), total= 0.3s
[CV] n_estimators=100, min_child_weight=2, max_depth=10, learning_rate=0.05, booster=gblinear
[11:14:29] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
```

```
Parameters: { max_depth, min_child_weight } might not be used.
```

Parameters: { max\_depth, min\_child\_weight } might not be used.

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=2, max_depth=10, learning_rate=0.05, booster=gblinear, score=(train=0.885, test=0.771), total= 0.3s
[CV] n_estimators=100, min_child_weight=2, max_depth=10, learning_rate=0.05, booster=gblinear
[11:14:30] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=2, max_depth=10, learning_rate=0.05, booster=gblinear, score=(train=0.882, test=0.853), total= 0.3s
[CV] n_estimators=100, min_child_weight=2, max_depth=10, learning_rate=0.05, booster=gblinear
[11:14:30] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=2, max_depth=10, learning_rate
```



```
[CV] n_estimators=100, min_child_weight=2, max_depth=10, learning_rate=0.05, booster=gblinear, score=(train=0.884, test=0.825), total= 0.3s
[CV] n_estimators=100, min_child_weight=2, max_depth=10, learning_rate=0.05, booster=gblinear
[11:14:30] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=2, max_depth=10, learning_rate=0.05, booster=gblinear, score=(train=0.907, test=0.613), total= 0.3s
[CV] n_estimators=100, min_child_weight=2, max_depth=10, learning_rate=0.05, booster=gblinear
[11:14:31] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=2, max_depth=10, learning_rate=0.05, booster=gblinear, score=(train=0.880, test=0.880), total= 0.3s
[CV] n_estimators=70, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear
[11:14:31] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but

uage bindings but  
passed down to XGBoost core. Or some parameters are not used but slip through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.891, test=0.901), total= 0.3s
[CV] n_estimators=70, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear
[11:14:31] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but  
passed down to XGBoost core. Or some parameters are not used but slip through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.891, test=0.890), total= 0.3s
[CV] n_estimators=70, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear
[11:14:32] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but  
passed down to XGBoost core. Or some parameters are not used but slip through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.892, test=0.856), total= 0.3s
[CV] n_estimators=70, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear
```

```
0.2, booster=gblinear  
[11:14:32] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.898, test=0.789), total= 0.3s  
[CV] n_estimators=70, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear  
[11:14:32] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.890, test=0.879), total= 0.3s  
[CV] n_estimators=70, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear  
[11:14:33] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this

verification. Please open an issue if you find above cases.

verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=3, max_depth=10, learning_rate=
0.2, booster=gblinear, score=(train=0.898, test=0.765), total= 0.2s
[CV] n_estimators=70, min_child_weight=3, max_depth=10, learning_rate=
0.2, booster=gblinear
[11:14:33] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=3, max_depth=10, learning_rate=
0.2, booster=gblinear, score=(train=0.894, test=0.864), total= 0.3s
[CV] n_estimators=70, min_child_weight=3, max_depth=10, learning_rate=
0.2, booster=gblinear
[11:14:33] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=3, max_depth=10, learning_rate=
0.2, booster=gblinear, score=(train=0.895, test=0.824), total= 0.2s
[CV] n_estimators=70, min_child_weight=3, max_depth=10, learning_rate=
0.2, booster=gblinear
[11:14:34] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
```

```
Parameters: { max_depth, min_child_weight } might not be used
```

Parameters: { max\_depth, min\_child\_weight } might not be used.

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.919, test=0.583), total= 0.3s
[CV] n_estimators=70, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear
[11:14:34] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.892, test=0.888), total= 0.3s
[CV] n_estimators=50, min_child_weight=2, max_depth=3, learning_rate=0.15, booster=gblinear
[11:14:34] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=2, max_depth=3, learning_rate=
```

```
[CV] n_estimators=50, min_child_weight=2, max_depth=3, learning_rate=
0.15, booster=gblinear, score=(train=0.884, test=0.899), total= 0.2s
[CV] n_estimators=50, min_child_weight=2, max_depth=3, learning_rate=0.
15, booster=gblinear
[11:14:34] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=2, max_depth=3, learning_rate=
0.15, booster=gblinear, score=(train=0.884, test=0.886), total= 0.2s
[CV] n_estimators=50, min_child_weight=2, max_depth=3, learning_rate=0.
15, booster=gblinear
[11:14:35] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=2, max_depth=3, learning_rate=
0.15, booster=gblinear, score=(train=0.886, test=0.856), total= 0.2s
[CV] n_estimators=50, min_child_weight=2, max_depth=3, learning_rate=0.
15, booster=gblinear
[11:14:35] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but

uage bindings but  
passed down to XGBoost core. Or some parameters are not used but slip through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=2, max_depth=3, learning_rate=0.15, booster=gblinear, score=(train=0.890, test=0.783), total= 0.2s
[CV] n_estimators=50, min_child_weight=2, max_depth=3, learning_rate=0.15, booster=gblinear
[11:14:35] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but  
passed down to XGBoost core. Or some parameters are not used but slip through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=2, max_depth=3, learning_rate=0.15, booster=gblinear, score=(train=0.884, test=0.870), total= 0.2s
[CV] n_estimators=50, min_child_weight=2, max_depth=3, learning_rate=0.15, booster=gblinear
[11:14:35] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but  
passed down to XGBoost core. Or some parameters are not used but slip through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=2, max_depth=3, learning_rate=0.15, booster=gblinear, score=(train=0.891, test=0.766), total= 0.2s
[CV] n_estimators=50, min_child_weight=2, max_depth=3, learning_rate=0.15, booster=gblinear
```

```
15, booster=gblinear
[11:14:36] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=2, max_depth=3, learning_rate=0.15, booster=gblinear, score=(train=0.887, test=0.858), total= 0.2s
[CV] n_estimators=50, min_child_weight=2, max_depth=3, learning_rate=0.15, booster=gblinear
[11:14:36] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=2, max_depth=3, learning_rate=0.15, booster=gblinear, score=(train=0.889, test=0.817), total= 0.2s
[CV] n_estimators=50, min_child_weight=2, max_depth=3, learning_rate=0.15, booster=gblinear
[11:14:36] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this

verification. Please open an issue if you find above cases.



verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=2, max_depth=3, learning_rate=
0.15, booster=gblinear, score=(train=0.913, test=0.601), total= 0.2s
[CV] n_estimators=50, min_child_weight=2, max_depth=3, learning_rate=0.
15, booster=gblinear
[11:14:37] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=2, max_depth=3, learning_rate=
0.15, booster=gblinear, score=(train=0.885, test=0.883), total= 0.2s
[CV] n_estimators=100, min_child_weight=4, max_depth=2, learning_rate=
0.1, booster=gbtrees
[CV] n_estimators=100, min_child_weight=4, max_depth=2, learning_rate=
0.1, booster=gbtrees, score=(train=0.935, test=0.874), total= 0.8s
[CV] n_estimators=100, min_child_weight=4, max_depth=2, learning_rate=
0.1, booster=gbtrees
[CV] n_estimators=100, min_child_weight=4, max_depth=2, learning_rate=
0.1, booster=gbtrees, score=(train=0.935, test=0.893), total= 0.8s
[CV] n_estimators=100, min_child_weight=4, max_depth=2, learning_rate=
0.1, booster=gbtrees
[CV] n_estimators=100, min_child_weight=4, max_depth=2, learning_rate=
0.1, booster=gbtrees, score=(train=0.932, test=0.895), total= 0.8s
[CV] n_estimators=100, min_child_weight=4, max_depth=2, learning_rate=
0.1, booster=gbtrees
[CV] n_estimators=100, min_child_weight=4, max_depth=2, learning_rate=
0.1, booster=gbtrees, score=(train=0.937, test=0.809), total= 0.8s
[CV] n_estimators=100, min_child_weight=4, max_depth=2, learning_rate=
0.1, booster=gbtrees
[CV] n_estimators=100, min_child_weight=4, max_depth=2, learning_rate=
0.1, booster=gbtrees, score=(train=0.934, test=0.803), total= 0.8s
```

```

0.1, booster=gdtree, score=(train=0.934, test=0.895), total= 0.8s
[CV] n_estimators=100, min_child_weight=4, max_depth=2, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=100, min_child_weight=4, max_depth=2, learning_rate=
0.1, booster=gdtree, score=(train=0.934, test=0.867), total= 0.8s
[CV] n_estimators=100, min_child_weight=4, max_depth=2, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=100, min_child_weight=4, max_depth=2, learning_rate=
0.1, booster=gdtree, score=(train=0.931, test=0.883), total= 0.8s
[CV] n_estimators=100, min_child_weight=4, max_depth=2, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=100, min_child_weight=4, max_depth=2, learning_rate=
0.1, booster=gdtree, score=(train=0.931, test=0.883), total= 0.8s
[CV] n_estimators=100, min_child_weight=4, max_depth=2, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=100, min_child_weight=4, max_depth=2, learning_rate=
0.1, booster=gdtree, score=(train=0.932, test=0.819), total= 0.8s
[CV] n_estimators=100, min_child_weight=4, max_depth=2, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=100, min_child_weight=4, max_depth=2, learning_rate=
0.1, booster=gdtree, score=(train=0.936, test=0.856), total= 0.8s
[CV] n_estimators=150, min_child_weight=4, max_depth=3, learning_rate=
0.15, booster=gdtree
[CV] n_estimators=150, min_child_weight=4, max_depth=3, learning_rate=
0.15, booster=gdtree, score=(train=0.978, test=0.891), total= 1.6s
[CV] n_estimators=150, min_child_weight=4, max_depth=3, learning_rate=
0.15, booster=gdtree
[CV] n_estimators=150, min_child_weight=4, max_depth=3, learning_rate=
0.15, booster=gdtree, score=(train=0.977, test=0.902), total= 1.6s
[CV] n_estimators=150, min_child_weight=4, max_depth=3, learning_rate=
0.15, booster=gdtree
[CV] n_estimators=150, min_child_weight=4, max_depth=3, learning_rate=
0.15, booster=gdtree, score=(train=0.979, test=0.920), total= 1.6s
[CV] n_estimators=150, min_child_weight=4, max_depth=3, learning_rate=
0.15, booster=gdtree
[CV] n_estimators=150, min_child_weight=4, max_depth=3, learning_rate=
0.15, booster=gdtree, score=(train=0.980, test=0.776), total= 1.6s
[CV] n_estimators=150, min_child_weight=4, max_depth=3, learning_rate=
0.15, booster=gdtree
[CV] n_estimators=150, min_child_weight=4, max_depth=3, learning_rate=

```

```

[CV] n_estimators=150, min_child_weight=4, max_depth=3, learning_rate=
0.15, booster=gbtree, score=(train=0.978, test=0.906), total= 1.6s
[CV] n_estimators=150, min_child_weight=4, max_depth=3, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=150, min_child_weight=4, max_depth=3, learning_rate=
0.15, booster=gbtree, score=(train=0.978, test=0.877), total= 1.6s
[CV] n_estimators=150, min_child_weight=4, max_depth=3, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=150, min_child_weight=4, max_depth=3, learning_rate=
0.15, booster=gbtree, score=(train=0.977, test=0.889), total= 1.6s
[CV] n_estimators=150, min_child_weight=4, max_depth=3, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=150, min_child_weight=4, max_depth=3, learning_rate=
0.15, booster=gbtree, score=(train=0.977, test=0.910), total= 1.6s
[CV] n_estimators=150, min_child_weight=4, max_depth=3, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=150, min_child_weight=4, max_depth=3, learning_rate=
0.15, booster=gbtree, score=(train=0.977, test=0.850), total= 1.6s
[CV] n_estimators=150, min_child_weight=4, max_depth=3, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=150, min_child_weight=4, max_depth=3, learning_rate=
0.15, booster=gbtree, score=(train=0.980, test=0.867), total= 1.6s
[CV] n_estimators=20, min_child_weight=2, max_depth=3, learning_rate=0.
2, booster=gbtree
[CV] n_estimators=20, min_child_weight=2, max_depth=3, learning_rate=
0.2, booster=gbtree, score=(train=0.934, test=0.883), total= 0.3s
[CV] n_estimators=20, min_child_weight=2, max_depth=3, learning_rate=0.
2, booster=gbtree
[CV] n_estimators=20, min_child_weight=2, max_depth=3, learning_rate=
0.2, booster=gbtree, score=(train=0.933, test=0.880), total= 0.3s
[CV] n_estimators=20, min_child_weight=2, max_depth=3, learning_rate=0.
2, booster=gbtree
[CV] n_estimators=20, min_child_weight=2, max_depth=3, learning_rate=
0.2, booster=gbtree, score=(train=0.932, test=0.901), total= 0.3s
[CV] n_estimators=20, min_child_weight=2, max_depth=3, learning_rate=0.
2, booster=gbtree
[CV] n_estimators=20, min_child_weight=2, max_depth=3, learning_rate=
0.2, booster=gbtree, score=(train=0.932, test=0.813), total= 0.3s
[CV] n_estimators=20, min_child_weight=2, max_depth=3, learning_rate=0.
2, booster=gbtree

```

```

2, booster=gbtree
[CV] n_estimators=20, min_child_weight=2, max_depth=3, learning_rate=
0.2, booster=gbtree, score=(train=0.929, test=0.888), total= 0.3s
[CV] n_estimators=20, min_child_weight=2, max_depth=3, learning_rate=0.
2, booster=gbtree
[CV] n_estimators=20, min_child_weight=2, max_depth=3, learning_rate=
0.2, booster=gbtree, score=(train=0.931, test=0.865), total= 0.3s
[CV] n_estimators=20, min_child_weight=2, max_depth=3, learning_rate=0.
2, booster=gbtree
[CV] n_estimators=20, min_child_weight=2, max_depth=3, learning_rate=
0.2, booster=gbtree, score=(train=0.932, test=0.858), total= 0.3s
[CV] n_estimators=20, min_child_weight=2, max_depth=3, learning_rate=0.
2, booster=gbtree
[CV] n_estimators=20, min_child_weight=2, max_depth=3, learning_rate=
0.2, booster=gbtree, score=(train=0.930, test=0.880), total= 0.3s
[CV] n_estimators=20, min_child_weight=2, max_depth=3, learning_rate=0.
2, booster=gbtree
[CV] n_estimators=20, min_child_weight=2, max_depth=3, learning_rate=
0.2, booster=gbtree, score=(train=0.928, test=0.789), total= 0.3s
[CV] n_estimators=20, min_child_weight=2, max_depth=3, learning_rate=0.
2, booster=gbtree
[CV] n_estimators=20, min_child_weight=2, max_depth=3, learning_rate=
0.2, booster=gbtree, score=(train=0.936, test=0.851), total= 0.3s
[CV] n_estimators=70, min_child_weight=4, max_depth=5, learning_rate=0.
15, booster=gbtree
[CV] n_estimators=70, min_child_weight=4, max_depth=5, learning_rate=
0.15, booster=gbtree, score=(train=0.989, test=0.895), total= 1.2s
[CV] n_estimators=70, min_child_weight=4, max_depth=5, learning_rate=0.
15, booster=gbtree
[CV] n_estimators=70, min_child_weight=4, max_depth=5, learning_rate=
0.15, booster=gbtree, score=(train=0.987, test=0.918), total= 1.2s
[CV] n_estimators=70, min_child_weight=4, max_depth=5, learning_rate=0.
15, booster=gbtree
[CV] n_estimators=70, min_child_weight=4, max_depth=5, learning_rate=
0.15, booster=gbtree, score=(train=0.988, test=0.928), total= 1.2s
[CV] n_estimators=70, min_child_weight=4, max_depth=5, learning_rate=0.
15, booster=gbtree
[CV] n_estimators=70, min_child_weight=4, max_depth=5, learning_rate=
0.15, booster=gbtree, score=(train=0.989, test=0.760), total= 1.2s
[CV] n_estimators=70, min_child_weight=4, max_depth=5, learning_rate=0

```

```

[CV] n_estimators=70, min_child_weight=4, max_depth=5, learning_rate=0.15, booster=gbtree
[CV] n_estimators=70, min_child_weight=4, max_depth=5, learning_rate=0.15, booster=gbtree, score=(train=0.989, test=0.899), total= 1.2s
[CV] n_estimators=70, min_child_weight=4, max_depth=5, learning_rate=0.15, booster=gbtree
[CV] n_estimators=70, min_child_weight=4, max_depth=5, learning_rate=0.15, booster=gbtree, score=(train=0.989, test=0.900), total= 1.2s
[CV] n_estimators=70, min_child_weight=4, max_depth=5, learning_rate=0.15, booster=gbtree
[CV] n_estimators=70, min_child_weight=4, max_depth=5, learning_rate=0.15, booster=gbtree, score=(train=0.988, test=0.913), total= 1.2s
[CV] n_estimators=70, min_child_weight=4, max_depth=5, learning_rate=0.15, booster=gbtree
[CV] n_estimators=70, min_child_weight=4, max_depth=5, learning_rate=0.15, booster=gbtree, score=(train=0.988, test=0.909), total= 1.2s
[CV] n_estimators=70, min_child_weight=4, max_depth=5, learning_rate=0.15, booster=gbtree
[CV] n_estimators=70, min_child_weight=4, max_depth=5, learning_rate=0.15, booster=gbtree, score=(train=0.986, test=0.865), total= 1.2s
[CV] n_estimators=70, min_child_weight=4, max_depth=5, learning_rate=0.15, booster=gbtree
[CV] n_estimators=70, min_child_weight=4, max_depth=5, learning_rate=0.15, booster=gbtree, score=(train=0.989, test=0.868), total= 1.2s
[CV] n_estimators=50, min_child_weight=3, max_depth=5, learning_rate=0.1, booster=gblinear
[11:15:17] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.

```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```

[CV] n_estimators=50, min_child_weight=3, max_depth=5, learning_rate=0.1, booster=gblinear, score=(train=0.880, test=0.897), total= 0.2s

```

```

[CV] n_estimators=50, min_child_weight=3, max_depth=5, learning_rate=0.1, booster=gblinear, score=(train=0.880, test=0.897), total= 0.2s

```

```
[CV] n_estimators=50, min_child_weight=3, max_depth=5, learning_rate=0.1, booster=gblinear  
[11:15:18] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=3, max_depth=5, learning_rate=0.1, booster=gblinear, score=(train=0.879, test=0.886), total= 0.2s  
[CV] n_estimators=50, min_child_weight=3, max_depth=5, learning_rate=0.1, booster=gblinear  
[11:15:18] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=3, max_depth=5, learning_rate=0.1, booster=gblinear, score=(train=0.881, test=0.860), total= 0.2s  
[CV] n_estimators=50, min_child_weight=3, max_depth=5, learning_rate=0.1, booster=gblinear  
[11:15:18] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this

p through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=3, max_depth=5, learning_rate=
0.1, booster=gblinear, score=(train=0.886, test=0.775), total= 0.2s
[CV] n_estimators=50, min_child_weight=3, max_depth=5, learning_rate=0.
1, booster=gblinear
[11:15:19] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in lang  
uage bindings but  
passed down to XGBoost core. Or some parameters are not used but sli  
p through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=3, max_depth=5, learning_rate=
0.1, booster=gblinear, score=(train=0.880, test=0.864), total= 0.2s
[CV] n_estimators=50, min_child_weight=3, max_depth=5, learning_rate=0.
1, booster=gblinear
[11:15:19] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in lang  
uage bindings but  
passed down to XGBoost core. Or some parameters are not used but sli  
p through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=3, max_depth=5, learning_rate=
0.1, booster=gblinear, score=(train=0.886, test=0.770), total= 0.2s
[CV] n_estimators=50, min_child_weight=3, max_depth=5, learning_rate=0.
1, booster=gblinear
[11:15:19] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
```

```
ase_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=3, max_depth=5, learning_rate=  
0.1, booster=gblinear, score=(train=0.882, test=0.855), total= 0.2s  
[CV] n_estimators=50, min_child_weight=3, max_depth=5, learning_rate=0.  
1, booster=gblinear  
[11:15:19] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele  
ase_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=3, max_depth=5, learning_rate=  
0.1, booster=gblinear, score=(train=0.884, test=0.818), total= 0.2s  
[CV] n_estimators=50, min_child_weight=3, max_depth=5, learning_rate=0.  
1, booster=gblinear  
[11:15:20] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele  
ase_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.



```
[CV] n_estimators=50, min_child_weight=3, max_depth=5, learning_rate=
0.1, booster=gblinear, score=(train=0.908, test=0.610), total= 0.2s
[CV] n_estimators=50, min_child_weight=3, max_depth=5, learning_rate=0.
1, booster=gblinear
[11:15:20] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=3, max_depth=5, learning_rate=
0.1, booster=gblinear, score=(train=0.880, test=0.881), total= 0.2s
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=
0.05, booster=gblinear
[11:15:20] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=
=0.05, booster=gblinear, score=(train=0.884, test=0.897), total= 0.5s
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=
0.05, booster=gblinear
[11:15:21] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=0.05, booster=gblinear, score=(train=0.884, test=0.893), total= 0.5s
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=0.05, booster=gblinear
[11:15:21] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=0.05, booster=gblinear, score=(train=0.886, test=0.860), total= 0.5s
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=0.05, booster=gblinear
[11:15:22] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=0.05, booster=gblinear, score=(train=0.891, test=0.781), total= 0.5s
```

```
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=
```

```
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=
0.05, booster=gblinear
[11:15:22] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate
=0.05, booster=gblinear, score=(train=0.884, test=0.867), total= 0.5s
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=
0.05, booster=gblinear
[11:15:23] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate
=0.05, booster=gblinear, score=(train=0.891, test=0.769), total= 0.5s
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=
0.05, booster=gblinear
[11:15:23] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this

p through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=0.05, booster=gblinear, score=(train=0.887, test=0.857), total= 0.5s
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=0.05, booster=gblinear
[11:15:24] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=0.05, booster=gblinear, score=(train=0.889, test=0.825), total= 0.5s
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=0.05, booster=gblinear
[11:15:24] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=0.05, booster=gblinear, score=(train=0.912, test=0.607), total= 0.4s
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate=0.05, booster=gblinear
[11:15:25] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
```

```
ase_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=1, max_depth=15, learning_rate  
=0.05, booster=gblinear, score=(train=0.885, test=0.883), total= 0.5s  
[CV] n_estimators=200, min_child_weight=1, max_depth=15, learning_rate=  
0.2, booster=gblinear  
[11:15:25] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele  
ase_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=200, min_child_weight=1, max_depth=15, learning_rate  
=0.2, booster=gblinear, score=(train=0.900, test=0.904), total= 0.6s  
[CV] n_estimators=200, min_child_weight=1, max_depth=15, learning_rate=  
0.2, booster=gblinear  
[11:15:26] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele  
ase_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=200, min_child_weight=1, max_depth=15, learning_rate=0.2, booster=gblinear, score=(train=0.900, test=0.896), total= 0.6s
[CV] n_estimators=200, min_child_weight=1, max_depth=15, learning_rate=0.2, booster=gblinear
[11:15:26] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=200, min_child_weight=1, max_depth=15, learning_rate=0.2, booster=gblinear, score=(train=0.902, test=0.859), total= 0.6s
[CV] n_estimators=200, min_child_weight=1, max_depth=15, learning_rate=0.2, booster=gblinear
[11:15:27] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=200, min_child_weight=1, max_depth=15, learning_rate=0.2, booster=gblinear, score=(train=0.908, test=0.787), total= 0.6s
[CV] n_estimators=200, min_child_weight=1, max_depth=15, learning_rate=0.2, booster=gblinear
[11:15:28] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=200, min_child_weight=1, max_depth=15, learning_rate=0.2, booster=gblinear, score=(train=0.900, test=0.890), total= 0.6s
[CV] n_estimators=200, min_child_weight=1, max_depth=15, learning_rate=0.2, booster=gblinear
[11:15:28] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=200, min_child_weight=1, max_depth=15, learning_rate=0.2, booster=gblinear, score=(train=0.907, test=0.764), total= 0.6s
[CV] n_estimators=200, min_child_weight=1, max_depth=15, learning_rate=0.2, booster=gblinear
[11:15:29] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=200, min_child_weight=1, max_depth=15, learning_rate=0.2, booster=gblinear, score=(train=0.904, test=0.863), total= 0.6s
```

```
[CV] n_estimators=200, min_child_weight=1, max_depth=15, learning_rate=
```

```
[CV] n_estimators=200, min_child_weight=1, max_depth=15, learning_rate=
0.2, booster=gblinear
[11:15:30] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=200, min_child_weight=1, max_depth=15, learning_rate
=0.2, booster=gblinear, score=(train=0.904, test=0.846), total= 0.6s
[CV] n_estimators=200, min_child_weight=1, max_depth=15, learning_rate=
0.2, booster=gblinear
[11:15:30] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=200, min_child_weight=1, max_depth=15, learning_rate
=0.2, booster=gblinear, score=(train=0.926, test=0.570), total= 0.6s
[CV] n_estimators=200, min_child_weight=1, max_depth=15, learning_rate=
0.2, booster=gblinear
[11:15:31] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this



through this

verification. Please open an issue if you find above cases.

```
[CV] n_estimators=200, min_child_weight=1, max_depth=15, learning_rate=
=0.2, booster=gblinear, score=(train=0.901, test=0.893), total= 0.6s
[CV] n_estimators=70, min_child_weight=3, max_depth=15, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=70, min_child_weight=3, max_depth=15, learning_rate=
0.15, booster=gbtree, score=(train=1.000, test=0.889), total= 3.1s
[CV] n_estimators=70, min_child_weight=3, max_depth=15, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=70, min_child_weight=3, max_depth=15, learning_rate=
0.15, booster=gbtree, score=(train=1.000, test=0.883), total= 3.1s
[CV] n_estimators=70, min_child_weight=3, max_depth=15, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=70, min_child_weight=3, max_depth=15, learning_rate=
0.15, booster=gbtree, score=(train=1.000, test=0.919), total= 3.1s
[CV] n_estimators=70, min_child_weight=3, max_depth=15, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=70, min_child_weight=3, max_depth=15, learning_rate=
0.15, booster=gbtree, score=(train=1.000, test=0.794), total= 3.1s
[CV] n_estimators=70, min_child_weight=3, max_depth=15, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=70, min_child_weight=3, max_depth=15, learning_rate=
0.15, booster=gbtree, score=(train=1.000, test=0.898), total= 3.1s
[CV] n_estimators=70, min_child_weight=3, max_depth=15, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=70, min_child_weight=3, max_depth=15, learning_rate=
0.15, booster=gbtree, score=(train=1.000, test=0.887), total= 3.1s
[CV] n_estimators=70, min_child_weight=3, max_depth=15, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=70, min_child_weight=3, max_depth=15, learning_rate=
0.15, booster=gbtree, score=(train=1.000, test=0.893), total= 3.1s
[CV] n_estimators=70, min_child_weight=3, max_depth=15, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=70, min_child_weight=3, max_depth=15, learning_rate=
0.15, booster=gbtree, score=(train=1.000, test=0.927), total= 3.1s
[CV] n_estimators=70, min_child_weight=3, max_depth=15, learning_rate=
```

0.15, booster=gbtree

```

0.15, booster=gdtree
[CV] n_estimators=70, min_child_weight=3, max_depth=15, learning_rate=
0.15, booster=gdtree, score=(train=1.000, test=0.821), total= 3.1s
[CV] n_estimators=70, min_child_weight=3, max_depth=15, learning_rate=
0.15, booster=gdtree
[CV] n_estimators=70, min_child_weight=3, max_depth=15, learning_rate=
0.15, booster=gdtree, score=(train=1.000, test=0.875), total= 3.2s
[CV] n_estimators=80, min_child_weight=3, max_depth=3, learning_rate=0.
05, booster=gdtree
[CV] n_estimators=80, min_child_weight=3, max_depth=3, learning_rate=
0.05, booster=gdtree, score=(train=0.930, test=0.887), total= 0.9s
[CV] n_estimators=80, min_child_weight=3, max_depth=3, learning_rate=0.
05, booster=gdtree
[CV] n_estimators=80, min_child_weight=3, max_depth=3, learning_rate=
0.05, booster=gdtree, score=(train=0.932, test=0.880), total= 0.9s
[CV] n_estimators=80, min_child_weight=3, max_depth=3, learning_rate=0.
05, booster=gdtree
[CV] n_estimators=80, min_child_weight=3, max_depth=3, learning_rate=
0.05, booster=gdtree, score=(train=0.930, test=0.904), total= 0.9s
[CV] n_estimators=80, min_child_weight=3, max_depth=3, learning_rate=0.
05, booster=gdtree
[CV] n_estimators=80, min_child_weight=3, max_depth=3, learning_rate=
0.05, booster=gdtree, score=(train=0.932, test=0.782), total= 0.9s
[CV] n_estimators=80, min_child_weight=3, max_depth=3, learning_rate=0.
05, booster=gdtree
[CV] n_estimators=80, min_child_weight=3, max_depth=3, learning_rate=
0.05, booster=gdtree, score=(train=0.930, test=0.869), total= 0.9s
[CV] n_estimators=80, min_child_weight=3, max_depth=3, learning_rate=0.
05, booster=gdtree
[CV] n_estimators=80, min_child_weight=3, max_depth=3, learning_rate=
0.05, booster=gdtree, score=(train=0.929, test=0.862), total= 0.9s
[CV] n_estimators=80, min_child_weight=3, max_depth=3, learning_rate=0.
05, booster=gdtree
[CV] n_estimators=80, min_child_weight=3, max_depth=3, learning_rate=
0.05, booster=gdtree, score=(train=0.929, test=0.883), total= 0.9s
[CV] n_estimators=80, min_child_weight=3, max_depth=3, learning_rate=0.
05, booster=gdtree
[CV] n_estimators=80, min_child_weight=3, max_depth=3, learning_rate=
0.05, booster=gdtree, score=(train=0.929, test=0.891), total= 0.9s
[CV] n_estimators=80, min_child_weight=3, max_depth=3, learning_rate=0

```

```

[CV] n_estimators=80, min_child_weight=3, max_depth=3, learning_rate=0.05, booster=gbtree
[CV] n_estimators=80, min_child_weight=3, max_depth=3, learning_rate=0.05, booster=gbtree, score=(train=0.927, test=0.782), total= 0.9s
[CV] n_estimators=80, min_child_weight=3, max_depth=3, learning_rate=0.05, booster=gbtree
[CV] n_estimators=80, min_child_weight=3, max_depth=3, learning_rate=0.05, booster=gbtree, score=(train=0.933, test=0.854), total= 0.9s
[CV] n_estimators=20, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree
[CV] n_estimators=20, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree, score=(train=-0.035, test=-0.167), total= 0.2s
[CV] n_estimators=20, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree
[CV] n_estimators=20, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree, score=(train=-0.048, test=-0.198), total= 0.2s
[CV] n_estimators=20, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree
[CV] n_estimators=20, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree, score=(train=-0.054, test=-0.035), total= 0.2s
[CV] n_estimators=20, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree
[CV] n_estimators=20, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree, score=(train=-0.053, test=0.017), total= 0.2s
[CV] n_estimators=20, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree
[CV] n_estimators=20, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree, score=(train=-0.084, test=0.047), total= 0.2s
[CV] n_estimators=20, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree
[CV] n_estimators=20, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree, score=(train=-0.045, test=-0.211), total= 0.2s
[CV] n_estimators=20, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree
[CV] n_estimators=20, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree, score=(train=-0.043, test=-0.032), total= 0.3s
[CV] n_estimators=20, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree
[CV] n_estimators=20, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree, score=(train=-0.041, test=-0.105), total= 0.2s

```

```

0.05, booster=gdtree, score=(train=-0.041, test=-0.105), total= 0.25
[CV] n_estimators=20, min_child_weight=4, max_depth=2, learning_rate=0.
05, booster=gdtree
[CV] n_estimators=20, min_child_weight=4, max_depth=2, learning_rate=
0.05, booster=gdtree, score=(train=-0.058, test=-0.092), total= 0.25
[CV] n_estimators=20, min_child_weight=4, max_depth=2, learning_rate=0.
05, booster=gdtree
[CV] n_estimators=20, min_child_weight=4, max_depth=2, learning_rate=
0.05, booster=gdtree, score=(train=-0.042, test=-0.065), total= 0.25
[CV] n_estimators=70, min_child_weight=3, max_depth=5, learning_rate=0.
05, booster=gblinear
[11:16:15] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.

```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```

[CV] n_estimators=70, min_child_weight=3, max_depth=5, learning_rate=
0.05, booster=gblinear, score=(train=0.874, test=0.891), total= 0.35
[CV] n_estimators=70, min_child_weight=3, max_depth=5, learning_rate=0.
05, booster=gblinear
[11:16:16] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.

```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```

[CV] n_estimators=70, min_child_weight=3, max_depth=5, learning_rate=
0.05, booster=gblinear, score=(train=0.873, test=0.887), total= 0.35

```

```

[CV] n_estimators=70, min_child_weight=3, max_depth=5, learning_rate=0

```

```
[CV] n_estimators=70, min_child_weight=3, max_depth=5, learning_rate=0.05, booster=gblinear  
[11:16:16] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=3, max_depth=5, learning_rate=0.05, booster=gblinear, score=(train=0.875, test=0.865), total= 0.3s  
[CV] n_estimators=70, min_child_weight=3, max_depth=5, learning_rate=0.05, booster=gblinear  
[11:16:16] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=3, max_depth=5, learning_rate=0.05, booster=gblinear, score=(train=0.880, test=0.765), total= 0.3s  
[CV] n_estimators=70, min_child_weight=3, max_depth=5, learning_rate=0.05, booster=gblinear  
[11:16:17] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this

p through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=3, max_depth=5, learning_rate=
0.05, booster=gblinear, score=(train=0.874, test=0.856), total= 0.3s
[CV] n_estimators=70, min_child_weight=3, max_depth=5, learning_rate=0.
05, booster=gblinear
[11:16:17] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in lang  
uage bindings but  
passed down to XGBoost core. Or some parameters are not used but sli  
p through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=3, max_depth=5, learning_rate=
0.05, booster=gblinear, score=(train=0.880, test=0.778), total= 0.3s
[CV] n_estimators=70, min_child_weight=3, max_depth=5, learning_rate=0.
05, booster=gblinear
[11:16:17] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in lang  
uage bindings but  
passed down to XGBoost core. Or some parameters are not used but sli  
p through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=3, max_depth=5, learning_rate=
0.05, booster=gblinear, score=(train=0.876, test=0.849), total= 0.2s
[CV] n_estimators=70, min_child_weight=3, max_depth=5, learning_rate=0.
05, booster=gblinear
[11:16:18] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
```

```
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=3, max_depth=5, learning_rate=
0.05, booster=gblinear, score=(train=0.878, test=0.827), total= 0.3s
[CV] n_estimators=70, min_child_weight=3, max_depth=5, learning_rate=0.
05, booster=gblinear
[11:16:18] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=3, max_depth=5, learning_rate=
0.05, booster=gblinear, score=(train=0.902, test=0.616), total= 0.3s
[CV] n_estimators=70, min_child_weight=3, max_depth=5, learning_rate=0.
05, booster=gblinear
[11:16:18] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```

[CV] n_estimators=70, min_child_weight=3, max_depth=5, learning_rate=
0.05, booster=gblinear, score=(train=0.875, test=0.878), total= 0.3s
[CV] n_estimators=100, min_child_weight=1, max_depth=15, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=100, min_child_weight=1, max_depth=15, learning_rate
=0.1, booster=gbtree, score=(train=1.000, test=0.899), total= 4.7s
[CV] n_estimators=100, min_child_weight=1, max_depth=15, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=100, min_child_weight=1, max_depth=15, learning_rate
=0.1, booster=gbtree, score=(train=1.000, test=0.877), total= 4.6s
[CV] n_estimators=100, min_child_weight=1, max_depth=15, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=100, min_child_weight=1, max_depth=15, learning_rate
=0.1, booster=gbtree, score=(train=1.000, test=0.911), total= 4.7s
[CV] n_estimators=100, min_child_weight=1, max_depth=15, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=100, min_child_weight=1, max_depth=15, learning_rate
=0.1, booster=gbtree, score=(train=1.000, test=0.675), total= 4.8s
[CV] n_estimators=100, min_child_weight=1, max_depth=15, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=100, min_child_weight=1, max_depth=15, learning_rate
=0.1, booster=gbtree, score=(train=1.000, test=0.888), total= 4.8s
[CV] n_estimators=100, min_child_weight=1, max_depth=15, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=100, min_child_weight=1, max_depth=15, learning_rate
=0.1, booster=gbtree, score=(train=1.000, test=0.890), total= 4.7s
[CV] n_estimators=100, min_child_weight=1, max_depth=15, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=100, min_child_weight=1, max_depth=15, learning_rate
=0.1, booster=gbtree, score=(train=1.000, test=0.867), total= 4.7s
[CV] n_estimators=100, min_child_weight=1, max_depth=15, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=100, min_child_weight=1, max_depth=15, learning_rate
=0.1, booster=gbtree, score=(train=1.000, test=0.925), total= 4.6s
[CV] n_estimators=100, min_child_weight=1, max_depth=15, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=100, min_child_weight=1, max_depth=15, learning_rate
=0.1, booster=gbtree, score=(train=1.000, test=0.913), total= 4.6s
[CV] n_estimators=100, min_child_weight=1, max_depth=15, learning_rate=

```



```
[CV] n_estimators=100, min_child_weight=1, max_depth=15, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=100, min_child_weight=1, max_depth=15, learning_rate
=0.1, booster=gbtree, score=(train=1.000, test=0.851), total= 4.6s
[CV] n_estimators=70, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gblinear
[11:17:06] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gblinear, score=(train=0.884, test=0.898), total= 0.3s
[CV] n_estimators=70, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gblinear
[11:17:06] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gblinear, score=(train=0.883, test=0.887), total= 0.3s
[CV] n_estimators=70, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gblinear
[11:17:06] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=2, max_depth=10, learning_rate=0.1, booster=gblinear, score=(train=0.885, test=0.858), total= 0.2s
[CV] n_estimators=70, min_child_weight=2, max_depth=10, learning_rate=0.1, booster=gblinear
[11:17:07] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=2, max_depth=10, learning_rate=0.1, booster=gblinear, score=(train=0.890, test=0.781), total= 0.3s
[CV] n_estimators=70, min_child_weight=2, max_depth=10, learning_rate=0.1, booster=gblinear
[11:17:07] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=2, max_depth=10, learning_rate=0.1, booster=gblinear, score=(train=0.883, test=0.867), total= 0.3s
```

```
0.1, booster=gblinear, score=(train=0.803, test=0.807), total= 0.3s
[CV] n_estimators=70, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gblinear
[11:17:07] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gblinear, score=(train=0.890, test=0.768), total= 0.2s
[CV] n_estimators=70, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gblinear
[11:17:08] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gblinear, score=(train=0.886, test=0.858), total= 0.3s
[CV] n_estimators=70, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gblinear
[11:17:08] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but

passed down to XGBoost core. Or some parameters are not used but slip

passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=2, max_depth=10, learning_rate=0.1, booster=gblinear, score=(train=0.888, test=0.820), total= 0.3s
[CV] n_estimators=70, min_child_weight=2, max_depth=10, learning_rate=0.1, booster=gblinear
[11:17:08] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=2, max_depth=10, learning_rate=0.1, booster=gblinear, score=(train=0.912, test=0.605), total= 0.3s
[CV] n_estimators=70, min_child_weight=2, max_depth=10, learning_rate=0.1, booster=gblinear
[11:17:09] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=70, min_child_weight=2, max_depth=10, learning_rate=0.1, booster=gblinear, score=(train=0.884, test=0.884), total= 0.3s
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=0.2, booster=gblinear
```

```
[11:17:00] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
```

```
[11:17:09] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=0.2, booster=gblinear, score=(train=0.895, test=0.903), total= 0.4s  
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=0.2, booster=gblinear  
[11:17:09] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=0.2, booster=gblinear, score=(train=0.894, test=0.892), total= 0.3s  
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=0.2, booster=gblinear  
[11:17:10] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
0.2, booster=gblinear, score=(train=0.896, test=0.857), total= 0.3s
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
0.2, booster=gblinear
[11:17:10] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
0.2, booster=gblinear, score=(train=0.902, test=0.790), total= 0.4s
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
0.2, booster=gblinear
[11:17:11] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
0.2, booster=gblinear, score=(train=0.894, test=0.884), total= 0.3s
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
0.2, booster=gblinear
[11:17:11] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=0.2, booster=gblinear, score=(train=0.901, test=0.766), total= 0.3s
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=0.2, booster=gblinear
[11:17:11] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=0.2, booster=gblinear, score=(train=0.898, test=0.864), total= 0.3s
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=0.2, booster=gblinear
[11:17:12] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=0.2, booster=gblinear, score=(train=0.899, test=0.832), total= 0.3s
```

```
0.2, booster=gblinear, score=(train=0.899, test=0.832), total= 0.3s
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
0.2, booster=gblinear
[11:17:12] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
0.2, booster=gblinear, score=(train=0.922, test=0.578), total= 0.3s
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
0.2, booster=gblinear
[11:17:12] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
0.2, booster=gblinear, score=(train=0.895, test=0.891), total= 0.4s
[CV] n_estimators=80, min_child_weight=1, max_depth=5, learning_rate=0.
15, booster=gbtrees
[CV] n_estimators=80, min_child_weight=1, max_depth=5, learning_rate=
0.15, booster=gbtrees, score=(train=0.992, test=0.903), total= 1.3s
[CV] n_estimators=80, min_child_weight=1, max_depth=5, learning_rate=0.
15, booster=gbtrees
[CV] n_estimators=80, min_child_weight=1, max_depth=5, learning_rate=
0.15, booster=gbtrees, score=(train=0.991, test=0.912), total= 1.4s
```

```
[CV] n_estimators=80, min_child_weight=1, max_depth=5, learning_rate=0
```



```

[CV] n_estimators=80, min_child_weight=1, max_depth=5, learning_rate=0.15, booster=gbtree
[CV] n_estimators=80, min_child_weight=1, max_depth=5, learning_rate=0.15, booster=gbtree, score=(train=0.991, test=0.929), total= 1.3s
[CV] n_estimators=80, min_child_weight=1, max_depth=5, learning_rate=0.15, booster=gbtree
[CV] n_estimators=80, min_child_weight=1, max_depth=5, learning_rate=0.15, booster=gbtree, score=(train=0.992, test=0.692), total= 1.4s
[CV] n_estimators=80, min_child_weight=1, max_depth=5, learning_rate=0.15, booster=gbtree
[CV] n_estimators=80, min_child_weight=1, max_depth=5, learning_rate=0.15, booster=gbtree, score=(train=0.991, test=0.881), total= 1.4s
[CV] n_estimators=80, min_child_weight=1, max_depth=5, learning_rate=0.15, booster=gbtree
[CV] n_estimators=80, min_child_weight=1, max_depth=5, learning_rate=0.15, booster=gbtree, score=(train=0.991, test=0.893), total= 1.4s
[CV] n_estimators=80, min_child_weight=1, max_depth=5, learning_rate=0.15, booster=gbtree
[CV] n_estimators=80, min_child_weight=1, max_depth=5, learning_rate=0.15, booster=gbtree, score=(train=0.991, test=0.881), total= 1.4s
[CV] n_estimators=80, min_child_weight=1, max_depth=5, learning_rate=0.15, booster=gbtree
[CV] n_estimators=80, min_child_weight=1, max_depth=5, learning_rate=0.15, booster=gbtree, score=(train=0.991, test=0.923), total= 1.4s
[CV] n_estimators=80, min_child_weight=1, max_depth=5, learning_rate=0.15, booster=gbtree
[CV] n_estimators=80, min_child_weight=1, max_depth=5, learning_rate=0.15, booster=gbtree, score=(train=0.990, test=0.927), total= 1.4s
[CV] n_estimators=80, min_child_weight=1, max_depth=5, learning_rate=0.15, booster=gbtree
[CV] n_estimators=80, min_child_weight=1, max_depth=5, learning_rate=0.15, booster=gbtree, score=(train=0.992, test=0.865), total= 1.3s
[CV] n_estimators=150, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear
[11:17:27] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.

```

This may not be accurate due to some parameters are only used in lang  
uage bindings but

uage bindings but  
passed down to XGBoost core. Or some parameters are not used but slip through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.898, test=0.904), total= 0.5s
[CV] n_estimators=150, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear
[11:17:28] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but  
passed down to XGBoost core. Or some parameters are not used but slip through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.898, test=0.895), total= 0.4s
[CV] n_estimators=150, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear
[11:17:28] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but  
passed down to XGBoost core. Or some parameters are not used but slip through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.900, test=0.859), total= 0.5s
[CV] n_estimators=150, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear
```

```
0.2, booster=gblinear  
[11:17:29] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.906, test=0.789), total= 0.5s  
[CV] n_estimators=150, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear  
[11:17:29] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.898, test=0.888), total= 0.5s  
[CV] n_estimators=150, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear  
[11:17:30] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this

verification. Please open an issue if you find above cases.

verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.906, test=0.768), total= 0.5s
[CV] n_estimators=150, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear
[11:17:30] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.901, test=0.864), total= 0.4s
[CV] n_estimators=150, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear
[11:17:31] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.902, test=0.841), total= 0.5s
[CV] n_estimators=150, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear
[11:17:31] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
```

```
Parameters: { max_depth, min_child_weight } might not be used.
```

```
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.925, test=0.572), total= 0.4s
[CV] n_estimators=150, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear
[11:17:32] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=3, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.899, test=0.892), total= 0.5s
[CV] n_estimators=70, min_child_weight=2, max_depth=15, learning_rate=0.1, booster=gbtrees
[CV] n_estimators=70, min_child_weight=2, max_depth=15, learning_rate=0.1, booster=gbtrees, score=(train=1.000, test=0.887), total= 3.1s
[CV] n_estimators=70, min_child_weight=2, max_depth=15, learning_rate=0.1, booster=gbtrees
[CV] n_estimators=70, min_child_weight=2, max_depth=15, learning_rate=0.1, booster=gbtrees, score=(train=1.000, test=0.892), total= 3.1s
[CV] n_estimators=70, min_child_weight=2, max_depth=15, learning_rate=0.1, booster=gbtrees
[CV] n_estimators=70, min_child_weight=2, max_depth=15, learning_rate=0.1, booster=gbtrees, score=(train=1.000, test=0.906), total= 3.1s
[CV] n_estimators=70, min_child_weight=2, max_depth=15, learning_rate=
```

```
0.1, booster=gbtrees
```

```

0.1, booster=gdtree
[CV] n_estimators=70, min_child_weight=2, max_depth=15, learning_rate=
0.1, booster=gdtree, score=(train=1.000, test=0.809), total= 3.1s
[CV] n_estimators=70, min_child_weight=2, max_depth=15, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=70, min_child_weight=2, max_depth=15, learning_rate=
0.1, booster=gdtree, score=(train=1.000, test=0.904), total= 3.1s
[CV] n_estimators=70, min_child_weight=2, max_depth=15, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=70, min_child_weight=2, max_depth=15, learning_rate=
0.1, booster=gdtree, score=(train=1.000, test=0.892), total= 3.1s
[CV] n_estimators=70, min_child_weight=2, max_depth=15, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=70, min_child_weight=2, max_depth=15, learning_rate=
0.1, booster=gdtree, score=(train=1.000, test=0.863), total= 3.1s
[CV] n_estimators=70, min_child_weight=2, max_depth=15, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=70, min_child_weight=2, max_depth=15, learning_rate=
0.1, booster=gdtree, score=(train=1.000, test=0.927), total= 3.1s
[CV] n_estimators=70, min_child_weight=2, max_depth=15, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=70, min_child_weight=2, max_depth=15, learning_rate=
0.1, booster=gdtree, score=(train=0.999, test=0.829), total= 3.1s
[CV] n_estimators=70, min_child_weight=2, max_depth=15, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=70, min_child_weight=2, max_depth=15, learning_rate=
0.1, booster=gdtree, score=(train=1.000, test=0.870), total= 3.2s
[CV] n_estimators=200, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gdtree
[CV] n_estimators=200, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gdtree, score=(train=0.938, test=0.879), total= 1.5s
[CV] n_estimators=200, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gdtree
[CV] n_estimators=200, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gdtree, score=(train=0.938, test=0.897), total= 1.5s
[CV] n_estimators=200, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gdtree
[CV] n_estimators=200, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gdtree, score=(train=0.936, test=0.896), total= 1.5s
[CV] n_estimators=200, min_child_weight=3, max_depth=2, learning_rate=

```

```

[CV] n_estimators=200, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=200, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gbtree, score=(train=0.938, test=0.813), total= 1.5s
[CV] n_estimators=200, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=200, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gbtree, score=(train=0.935, test=0.897), total= 1.5s
[CV] n_estimators=200, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=200, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gbtree, score=(train=0.935, test=0.866), total= 1.5s
[CV] n_estimators=200, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=200, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gbtree, score=(train=0.936, test=0.881), total= 1.5s
[CV] n_estimators=200, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=200, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gbtree, score=(train=0.936, test=0.882), total= 1.5s
[CV] n_estimators=200, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=200, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gbtree, score=(train=0.935, test=0.806), total= 1.5s
[CV] n_estimators=200, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=200, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gbtree, score=(train=0.940, test=0.865), total= 1.5s
[CV] n_estimators=40, min_child_weight=3, max_depth=10, learning_rate=
0.1, booster=gblinear
[11:18:19] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.

```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=40, min_child_weight=3, max_depth=10, learning_rate=
0.1, booster=gblinear, score=(train=0.876, test=0.893), total= 0.2s
[CV] n_estimators=40, min_child_weight=3, max_depth=10, learning_rate=
0.1, booster=gblinear
[11:18:19] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=40, min_child_weight=3, max_depth=10, learning_rate=
0.1, booster=gblinear, score=(train=0.876, test=0.886), total= 0.2s
[CV] n_estimators=40, min_child_weight=3, max_depth=10, learning_rate=
0.1, booster=gblinear
[11:18:20] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=40, min_child_weight=3, max_depth=10, learning_rate=
0.1, booster=gblinear, score=(train=0.878, test=0.862), total= 0.2s
[CV] n_estimators=40, min_child_weight=3, max_depth=10, learning_rate=
0.1, booster=gblinear
[11:18:20] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```



This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=40, min_child_weight=3, max_depth=10, learning_rate=0.1, booster=gblinear, score=(train=0.883, test=0.770), total= 0.2s
[CV] n_estimators=40, min_child_weight=3, max_depth=10, learning_rate=0.1, booster=gblinear
[11:18:20] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=40, min_child_weight=3, max_depth=10, learning_rate=0.1, booster=gblinear, score=(train=0.877, test=0.861), total= 0.2s
[CV] n_estimators=40, min_child_weight=3, max_depth=10, learning_rate=0.1, booster=gblinear
[11:18:20] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=40, min_child_weight=3, max_depth=10, learning_rate=0.1, booster=gblinear, score=(train=0.883, test=0.773), total= 0.2s
```

```
0.1, booster=gblinear, score=(train=0.883, test=0.773), total= 0.2s
[CV] n_estimators=40, min_child_weight=3, max_depth=10, learning_rate=
0.1, booster=gblinear
[11:18:20] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=40, min_child_weight=3, max_depth=10, learning_rate=
0.1, booster=gblinear, score=(train=0.879, test=0.853), total= 0.2s
[CV] n_estimators=40, min_child_weight=3, max_depth=10, learning_rate=
0.1, booster=gblinear
[11:18:21] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=40, min_child_weight=3, max_depth=10, learning_rate=
0.1, booster=gblinear, score=(train=0.882, test=0.822), total= 0.2s
[CV] n_estimators=40, min_child_weight=3, max_depth=10, learning_rate=
0.1, booster=gblinear
[11:18:21] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but

passed down to XGBoost core. Or some parameters are not used but slip

passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=40, min_child_weight=3, max_depth=10, learning_rate=0.1, booster=gblinear, score=(train=0.905, test=0.613), total= 0.2s
[CV] n_estimators=40, min_child_weight=3, max_depth=10, learning_rate=0.1, booster=gblinear
[11:18:21] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=40, min_child_weight=3, max_depth=10, learning_rate=0.1, booster=gblinear, score=(train=0.877, test=0.879), total= 0.2s
[CV] n_estimators=150, min_child_weight=4, max_depth=10, learning_rate=0.05, booster=gblinear
[11:18:21] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=4, max_depth=10, learning_rate=0.05, booster=gblinear, score=(train=0.885, test=0.897), total= 0.4s
[CV] n_estimators=150, min_child_weight=4, max_depth=10, learning_rate=0.05, booster=gblinear
```

```
[11:18:21] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
```

```
[11:18:22] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=4, max_depth=10, learning_rate=0.05, booster=gblinear, score=(train=0.884, test=0.890), total= 0.5s  
[CV] n_estimators=150, min_child_weight=4, max_depth=10, learning_rate=0.05, booster=gblinear  
[11:18:22] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=4, max_depth=10, learning_rate=0.05, booster=gblinear, score=(train=0.885, test=0.860), total= 0.4s  
[CV] n_estimators=150, min_child_weight=4, max_depth=10, learning_rate=0.05, booster=gblinear  
[11:18:23] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=4, max_depth=10, learning_rate=0.05, booster=gblinear, score=(train=0.890, test=0.781), total= 0.5s
[CV] n_estimators=150, min_child_weight=4, max_depth=10, learning_rate=0.05, booster=gblinear
[11:18:24] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=4, max_depth=10, learning_rate=0.05, booster=gblinear, score=(train=0.884, test=0.868), total= 0.5s
[CV] n_estimators=150, min_child_weight=4, max_depth=10, learning_rate=0.05, booster=gblinear
[11:18:24] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=4, max_depth=10, learning_rate=0.05, booster=gblinear, score=(train=0.891, test=0.769), total= 0.5s
[CV] n_estimators=150, min_child_weight=4, max_depth=10, learning_rate=0.05, booster=gblinear
[11:18:25] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=4, max_depth=10, learning_rate=0.05, booster=gblinear, score=(train=0.887, test=0.857), total= 0.4s
[CV] n_estimators=150, min_child_weight=4, max_depth=10, learning_rate=0.05, booster=gblinear
[11:18:25] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=4, max_depth=10, learning_rate=0.05, booster=gblinear, score=(train=0.889, test=0.825), total= 0.4s
[CV] n_estimators=150, min_child_weight=4, max_depth=10, learning_rate=0.05, booster=gblinear
[11:18:26] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=4, max_depth=10, learning_rate=0.05, booster=gblinear, score=(train=0.812, test=0.608), total= 0.4s
```

```
=0.05, booster=gblinear, score=(train=0.912, test=0.000), total= 0.4s  
[CV] n_estimators=150, min_child_weight=4, max_depth=10, learning_rate=  
0.05, booster=gblinear  
[11:18:26] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele  
ase_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=150, min_child_weight=4, max_depth=10, learning_rate=  
=0.05, booster=gblinear, score=(train=0.885, test=0.883), total= 0.4s  
[CV] n_estimators=90, min_child_weight=3, max_depth=3, learning_rate=0.  
2, booster=gblinear  
[11:18:27] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele  
ase_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=90, min_child_weight=3, max_depth=3, learning_rate=  
0.2, booster=gblinear, score=(train=0.895, test=0.904), total= 0.3s  
[CV] n_estimators=90, min_child_weight=3, max_depth=3, learning_rate=0.  
2, booster=gblinear  
[11:18:27] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele  
ase_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but

passed down to XGBoost core. Or some parameters are not used but slip

passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=90, min_child_weight=3, max_depth=3, learning_rate=0.2, booster=gblinear, score=(train=0.893, test=0.891), total= 0.3s
[CV] n_estimators=90, min_child_weight=3, max_depth=3, learning_rate=0.2, booster=gblinear
[11:18:27] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=90, min_child_weight=3, max_depth=3, learning_rate=0.2, booster=gblinear, score=(train=0.895, test=0.857), total= 0.3s
[CV] n_estimators=90, min_child_weight=3, max_depth=3, learning_rate=0.2, booster=gblinear
[11:18:28] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=90, min_child_weight=3, max_depth=3, learning_rate=0.2, booster=gblinear, score=(train=0.902, test=0.786), total= 0.3s
[CV] n_estimators=90, min_child_weight=3, max_depth=3, learning_rate=0.2, booster=gblinear
```

```
[11:18:28] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
```



```
[11:18:28] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=90, min_child_weight=3, max_depth=3, learning_rate=0.2, booster=gblinear, score=(train=0.893, test=0.882), total= 0.3s  
[CV] n_estimators=90, min_child_weight=3, max_depth=3, learning_rate=0.2, booster=gblinear  
[11:18:28] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=90, min_child_weight=3, max_depth=3, learning_rate=0.2, booster=gblinear, score=(train=0.900, test=0.765), total= 0.3s  
[CV] n_estimators=90, min_child_weight=3, max_depth=3, learning_rate=0.2, booster=gblinear  
[11:18:29] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=90, min_child_weight=3, max_depth=3, learning_rate=
0.2, booster=gblinear, score=(train=0.897, test=0.864), total= 0.3s
[CV] n_estimators=90, min_child_weight=3, max_depth=3, learning_rate=0.
2, booster=gblinear
[11:18:29] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=90, min_child_weight=3, max_depth=3, learning_rate=
0.2, booster=gblinear, score=(train=0.898, test=0.830), total= 0.3s
[CV] n_estimators=90, min_child_weight=3, max_depth=3, learning_rate=0.
2, booster=gblinear
[11:18:29] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=90, min_child_weight=3, max_depth=3, learning_rate=
0.2, booster=gblinear, score=(train=0.921, test=0.579), total= 0.3s
[CV] n_estimators=90, min_child_weight=3, max_depth=3, learning_rate=0.
2, booster=gblinear
[11:18:30] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=90, min_child_weight=3, max_depth=3, learning_rate=
0.2, booster=gblinear, score=(train=0.894, test=0.890), total= 0.3s
[CV] n_estimators=40, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=40, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gbtree, score=(train=0.993, test=0.889), total= 1.3s
[CV] n_estimators=40, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=40, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gbtree, score=(train=0.992, test=0.884), total= 1.3s
[CV] n_estimators=40, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=40, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gbtree, score=(train=0.993, test=0.907), total= 1.3s
[CV] n_estimators=40, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=40, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gbtree, score=(train=0.992, test=0.802), total= 1.3s
[CV] n_estimators=40, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=40, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gbtree, score=(train=0.992, test=0.889), total= 1.3s
[CV] n_estimators=40, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=40, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gbtree, score=(train=0.993, test=0.886), total= 1.3s
[CV] n_estimators=40, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gbtree
[CV] n_estimators=40, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gbtree, score=(train=0.993, test=0.865), total= 1.3s
[CV] n_estimators=40, min_child_weight=2, max_depth=10, learning_rate=
```

```
0.1, booster=gbtree
```

```

0.1, booster=gdtree
[CV] n_estimators=40, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gdtree, score=(train=0.993, test=0.920), total= 1.3s
[CV] n_estimators=40, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=40, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gdtree, score=(train=0.992, test=0.822), total= 1.3s
[CV] n_estimators=40, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=40, min_child_weight=2, max_depth=10, learning_rate=
0.1, booster=gdtree, score=(train=0.993, test=0.872), total= 1.3s
[CV] n_estimators=40, min_child_weight=4, max_depth=5, learning_rate=0.
2, booster=gdtree
[CV] n_estimators=40, min_child_weight=4, max_depth=5, learning_rate=
0.2, booster=gdtree, score=(train=0.984, test=0.892), total= 0.8s
[CV] n_estimators=40, min_child_weight=4, max_depth=5, learning_rate=0.
2, booster=gdtree
[CV] n_estimators=40, min_child_weight=4, max_depth=5, learning_rate=
0.2, booster=gdtree, score=(train=0.984, test=0.899), total= 0.7s
[CV] n_estimators=40, min_child_weight=4, max_depth=5, learning_rate=0.
2, booster=gdtree
[CV] n_estimators=40, min_child_weight=4, max_depth=5, learning_rate=
0.2, booster=gdtree, score=(train=0.984, test=0.922), total= 0.7s
[CV] n_estimators=40, min_child_weight=4, max_depth=5, learning_rate=0.
2, booster=gdtree
[CV] n_estimators=40, min_child_weight=4, max_depth=5, learning_rate=
0.2, booster=gdtree, score=(train=0.985, test=0.739), total= 0.7s
[CV] n_estimators=40, min_child_weight=4, max_depth=5, learning_rate=0.
2, booster=gdtree
[CV] n_estimators=40, min_child_weight=4, max_depth=5, learning_rate=
0.2, booster=gdtree, score=(train=0.983, test=0.893), total= 0.8s
[CV] n_estimators=40, min_child_weight=4, max_depth=5, learning_rate=0.
2, booster=gdtree
[CV] n_estimators=40, min_child_weight=4, max_depth=5, learning_rate=
0.2, booster=gdtree, score=(train=0.985, test=0.878), total= 0.8s
[CV] n_estimators=40, min_child_weight=4, max_depth=5, learning_rate=0.
2, booster=gdtree
[CV] n_estimators=40, min_child_weight=4, max_depth=5, learning_rate=
0.2, booster=gdtree, score=(train=0.983, test=0.912), total= 0.7s
[CV] n_estimators=40, min_child_weight=4, max_depth=5, learning_rate=0

```

```

[CV] n_estimators=40, min_child_weight=4, max_depth=5, learning_rate=0.2, booster=gbtree
[CV] n_estimators=40, min_child_weight=4, max_depth=5, learning_rate=0.2, booster=gbtree, score=(train=0.982, test=0.921), total= 0.7s
[CV] n_estimators=40, min_child_weight=4, max_depth=5, learning_rate=0.2, booster=gbtree
[CV] n_estimators=40, min_child_weight=4, max_depth=5, learning_rate=0.2, booster=gbtree, score=(train=0.980, test=0.841), total= 0.8s
[CV] n_estimators=40, min_child_weight=4, max_depth=5, learning_rate=0.2, booster=gbtree
[CV] n_estimators=40, min_child_weight=4, max_depth=5, learning_rate=0.2, booster=gbtree, score=(train=0.986, test=0.873), total= 0.8s
[CV] n_estimators=20, min_child_weight=4, max_depth=3, learning_rate=0.05, booster=gbtree
[CV] n_estimators=20, min_child_weight=4, max_depth=3, learning_rate=0.05, booster=gbtree, score=(train=0.028, test=-0.106), total= 0.3s
[CV] n_estimators=20, min_child_weight=4, max_depth=3, learning_rate=0.05, booster=gbtree
[CV] n_estimators=20, min_child_weight=4, max_depth=3, learning_rate=0.05, booster=gbtree, score=(train=0.018, test=-0.153), total= 0.3s
[CV] n_estimators=20, min_child_weight=4, max_depth=3, learning_rate=0.05, booster=gbtree
[CV] n_estimators=20, min_child_weight=4, max_depth=3, learning_rate=0.05, booster=gbtree, score=(train=0.009, test=0.005), total= 0.3s
[CV] n_estimators=20, min_child_weight=4, max_depth=3, learning_rate=0.05, booster=gbtree
[CV] n_estimators=20, min_child_weight=4, max_depth=3, learning_rate=0.05, booster=gbtree, score=(train=0.012, test=0.056), total= 0.3s
[CV] n_estimators=20, min_child_weight=4, max_depth=3, learning_rate=0.05, booster=gbtree
[CV] n_estimators=20, min_child_weight=4, max_depth=3, learning_rate=0.05, booster=gbtree, score=(train=-0.024, test=0.093), total= 0.3s
[CV] n_estimators=20, min_child_weight=4, max_depth=3, learning_rate=0.05, booster=gbtree
[CV] n_estimators=20, min_child_weight=4, max_depth=3, learning_rate=0.05, booster=gbtree, score=(train=0.015, test=-0.169), total= 0.3s
[CV] n_estimators=20, min_child_weight=4, max_depth=3, learning_rate=0.05, booster=gbtree
[CV] n_estimators=20, min_child_weight=4, max_depth=3, learning_rate=0.05, booster=gbtree, score=(train=0.010, test=-0.021), total= 0.3s

```

```

0.05, booster=gdtree, score=(train=0.019, test=-0.021), total= 0.3s
[CV] n_estimators=20, min_child_weight=4, max_depth=3, learning_rate=0.
05, booster=gdtree
[CV] n_estimators=20, min_child_weight=4, max_depth=3, learning_rate=
0.05, booster=gdtree, score=(train=0.020, test=-0.056), total= 0.3s
[CV] n_estimators=20, min_child_weight=4, max_depth=3, learning_rate=0.
05, booster=gdtree
[CV] n_estimators=20, min_child_weight=4, max_depth=3, learning_rate=
0.05, booster=gdtree, score=(train=0.001, test=-0.019), total= 0.3s
[CV] n_estimators=20, min_child_weight=4, max_depth=3, learning_rate=0.
05, booster=gdtree
[CV] n_estimators=20, min_child_weight=4, max_depth=3, learning_rate=
0.05, booster=gdtree, score=(train=0.021, test=-0.047), total= 0.3s
[CV] n_estimators=200, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=200, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gdtree, score=(train=0.996, test=0.898), total= 3.4s
[CV] n_estimators=200, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=200, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gdtree, score=(train=0.996, test=0.911), total= 3.3s
[CV] n_estimators=200, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=200, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gdtree, score=(train=0.996, test=0.929), total= 3.3s
[CV] n_estimators=200, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=200, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gdtree, score=(train=0.996, test=0.735), total= 3.3s
[CV] n_estimators=200, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=200, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gdtree, score=(train=0.996, test=0.906), total= 3.3s
[CV] n_estimators=200, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=200, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gdtree, score=(train=0.996, test=0.891), total= 3.3s
[CV] n_estimators=200, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=200, min_child_weight=1, max_depth=5, learning_rate=

```

```

[CV] n_estimators=200, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gbtrees, score=(train=0.996, test=0.877), total= 3.3s
[CV] n_estimators=200, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gbtrees
[CV] n_estimators=200, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gbtrees, score=(train=0.996, test=0.934), total= 3.4s
[CV] n_estimators=200, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gbtrees
[CV] n_estimators=200, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gbtrees, score=(train=0.995, test=0.891), total= 3.3s
[CV] n_estimators=200, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gbtrees
[CV] n_estimators=200, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gbtrees, score=(train=0.996, test=0.874), total= 3.3s
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=
0.05, booster=gblinesar
[11:19:29] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.

```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```

[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=
=0.05, booster=gblinesar, score=(train=0.879, test=0.894), total= 0.3s
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=
0.05, booster=gblinesar
[11:19:29] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.

```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this

verification. Please open an issue if you find above cases

verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.05, booster=gblinear, score=(train=0.878, test=0.888), total= 0.4s
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.05, booster=gblinear
[11:19:30] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.05, booster=gblinear, score=(train=0.880, test=0.862), total= 0.3s
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.05, booster=gblinear
[11:19:30] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.05, booster=gblinear, score=(train=0.885, test=0.773), total= 0.3s
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.05, booster=gblinear
[11:19:30] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
```

```
Parameters: { max_depth, min_child_weight } might not be used.
```



Parameters: { max\_depth, min\_child\_weight } might not be used.

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.05, booster=gblinear, score=(train=0.879, test=0.862), total= 0.3s
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.05, booster=gblinear
[11:19:31] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.05, booster=gblinear, score=(train=0.886, test=0.771), total= 0.3s
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.05, booster=gblinear
[11:19:31] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate
```

```
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.05, booster=gblinear, score=(train=0.882, test=0.853), total= 0.3s
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.05, booster=gblinear
[11:19:31] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.05, booster=gblinear, score=(train=0.884, test=0.825), total= 0.3s
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.05, booster=gblinear
[11:19:32] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.05, booster=gblinear, score=(train=0.908, test=0.611), total= 0.3s
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.05, booster=gblinear
[11:19:32] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but

uage bindings but  
passed down to XGBoost core. Or some parameters are not used but slip through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.05, booster=gblinear, score=(train=0.880, test=0.880), total= 0.4s
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear
[11:19:33] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but  
passed down to XGBoost core. Or some parameters are not used but slip through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.894, test=0.903), total= 0.3s
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear
[11:19:33] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but  
passed down to XGBoost core. Or some parameters are not used but slip through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.893, test=0.891), total= 0.3s
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear
```

```
0.2, booster=gblinear  
[11:19:33] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.895, test=0.857), total= 0.3s  
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear  
[11:19:34] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.901, test=0.790), total= 0.3s  
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear  
[11:19:34] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this

verification. Please open an issue if you find above cases.

verification. Please open an issue if you find above cases.

```
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear, score=(train=0.893, test=0.883), total= 0.3s
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear
[11:19:34] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear, score=(train=0.900, test=0.765), total= 0.4s
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear
[11:19:35] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear, score=(train=0.897, test=0.865), total= 0.3s
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear
[11:19:35] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
```

```
Parameters: { max_depth, min_child_weight } might not be used.
```

Parameters: { max\_depth, min\_child\_weight } might not be used.

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.898, test=0.830), total= 0.3s
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear
[11:19:36] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.921, test=0.579), total= 0.4s
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear
[11:19:36] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=
```

```

[CV] n_estimators=90, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear, score=(train=0.894, test=0.890), total= 0.3s
[CV] n_estimators=90, min_child_weight=2, max_depth=2, learning_rate=0.
15, booster=gbtree
[CV] n_estimators=90, min_child_weight=2, max_depth=2, learning_rate=
0.15, booster=gbtree, score=(train=0.948, test=0.876), total= 0.7s
[CV] n_estimators=90, min_child_weight=2, max_depth=2, learning_rate=0.
15, booster=gbtree
[CV] n_estimators=90, min_child_weight=2, max_depth=2, learning_rate=
0.15, booster=gbtree, score=(train=0.947, test=0.913), total= 0.7s
[CV] n_estimators=90, min_child_weight=2, max_depth=2, learning_rate=0.
15, booster=gbtree
[CV] n_estimators=90, min_child_weight=2, max_depth=2, learning_rate=
0.15, booster=gbtree, score=(train=0.946, test=0.906), total= 0.7s
[CV] n_estimators=90, min_child_weight=2, max_depth=2, learning_rate=0.
15, booster=gbtree
[CV] n_estimators=90, min_child_weight=2, max_depth=2, learning_rate=
0.15, booster=gbtree, score=(train=0.948, test=0.794), total= 0.8s
[CV] n_estimators=90, min_child_weight=2, max_depth=2, learning_rate=0.
15, booster=gbtree
[CV] n_estimators=90, min_child_weight=2, max_depth=2, learning_rate=
0.15, booster=gbtree, score=(train=0.946, test=0.905), total= 0.7s
[CV] n_estimators=90, min_child_weight=2, max_depth=2, learning_rate=0.
15, booster=gbtree
[CV] n_estimators=90, min_child_weight=2, max_depth=2, learning_rate=
0.15, booster=gbtree, score=(train=0.945, test=0.879), total= 0.7s
[CV] n_estimators=90, min_child_weight=2, max_depth=2, learning_rate=0.
15, booster=gbtree
[CV] n_estimators=90, min_child_weight=2, max_depth=2, learning_rate=
0.15, booster=gbtree, score=(train=0.946, test=0.881), total= 0.7s
[CV] n_estimators=90, min_child_weight=2, max_depth=2, learning_rate=0.
15, booster=gbtree
[CV] n_estimators=90, min_child_weight=2, max_depth=2, learning_rate=
0.15, booster=gbtree, score=(train=0.946, test=0.885), total= 0.7s
[CV] n_estimators=90, min_child_weight=2, max_depth=2, learning_rate=0.
15, booster=gbtree
[CV] n_estimators=90, min_child_weight=2, max_depth=2, learning_rate=
0.15, booster=gbtree, score=(train=0.945, test=0.843), total= 0.7s
[CV] n_estimators=90, min_child_weight=2, max_depth=2, learning_rate=0.
15, booster=gbtree

```

```
13, booster=gdtree
[CV] n_estimators=90, min_child_weight=2, max_depth=2, learning_rate=
0.15, booster=gdtree, score=(train=0.948, test=0.870), total= 0.7s
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gblinear
[11:19:44] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gblinear, score=(train=0.888, test=0.901), total= 0.3s
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gblinear
[11:19:44] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gblinear, score=(train=0.888, test=0.889), total= 0.3s
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gblinear
[11:19:45] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.



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```
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=0.1, booster=gblinear, score=(train=0.889, test=0.857), total= 0.3s
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=0.1, booster=gblinear
[11:19:45] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=0.1, booster=gblinear, score=(train=0.894, test=0.786), total= 0.4s
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=0.1, booster=gblinear
[11:19:45] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=0.1, booster=gblinear, score=(train=0.888, test=0.873), total= 0.3s
```

```
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
```

```
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gblinear
[11:19:46] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gblinear, score=(train=0.894, test=0.768), total= 0.3s
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gblinear
[11:19:46] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gblinear, score=(train=0.890, test=0.860), total= 0.4s
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gblinear
[11:19:47] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this

p through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gblinear, score=(train=0.892, test=0.824), total= 0.3s
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gblinear
[11:19:47] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in lang  
uage bindings but  
passed down to XGBoost core. Or some parameters are not used but sli  
p through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gblinear, score=(train=0.916, test=0.597), total= 0.3s
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gblinear
[11:19:47] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in lang  
uage bindings but  
passed down to XGBoost core. Or some parameters are not used but sli  
p through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=1, max_depth=5, learning_rate=
0.1, booster=gblinear, score=(train=0.889, test=0.886), total= 0.4s
[CV] n_estimators=70, min_child_weight=1, max_depth=10, learning_rate=
0.1, booster=gbtrees
[CV] n_estimators=70, min_child_weight=1, max_depth=10, learning_rate=
0.1, booster=gbtrees, score=(train=0.889, test=0.882), total= 0.3s
```

```

0.1, booster=gdbtree, score=(train=0.999, test=0.902), total= 2.3s
[CV] n_estimators=70, min_child_weight=1, max_depth=10, learning_rate=
0.1, booster=gdbtree
[CV] n_estimators=70, min_child_weight=1, max_depth=10, learning_rate=
0.1, booster=gdbtree, score=(train=0.999, test=0.883), total= 2.3s
[CV] n_estimators=70, min_child_weight=1, max_depth=10, learning_rate=
0.1, booster=gdbtree
[CV] n_estimators=70, min_child_weight=1, max_depth=10, learning_rate=
0.1, booster=gdbtree, score=(train=0.999, test=0.918), total= 2.3s
[CV] n_estimators=70, min_child_weight=1, max_depth=10, learning_rate=
0.1, booster=gdbtree
[CV] n_estimators=70, min_child_weight=1, max_depth=10, learning_rate=
0.1, booster=gdbtree, score=(train=0.999, test=0.684), total= 2.3s
[CV] n_estimators=70, min_child_weight=1, max_depth=10, learning_rate=
0.1, booster=gdbtree
[CV] n_estimators=70, min_child_weight=1, max_depth=10, learning_rate=
0.1, booster=gdbtree, score=(train=0.999, test=0.890), total= 2.3s
[CV] n_estimators=70, min_child_weight=1, max_depth=10, learning_rate=
0.1, booster=gdbtree
[CV] n_estimators=70, min_child_weight=1, max_depth=10, learning_rate=
0.1, booster=gdbtree, score=(train=0.999, test=0.886), total= 2.3s
[CV] n_estimators=70, min_child_weight=1, max_depth=10, learning_rate=
0.1, booster=gdbtree
[CV] n_estimators=70, min_child_weight=1, max_depth=10, learning_rate=
0.1, booster=gdbtree, score=(train=0.999, test=0.858), total= 2.4s
[CV] n_estimators=70, min_child_weight=1, max_depth=10, learning_rate=
0.1, booster=gdbtree
[CV] n_estimators=70, min_child_weight=1, max_depth=10, learning_rate=
0.1, booster=gdbtree, score=(train=0.999, test=0.925), total= 2.3s
[CV] n_estimators=70, min_child_weight=1, max_depth=10, learning_rate=
0.1, booster=gdbtree
[CV] n_estimators=70, min_child_weight=1, max_depth=10, learning_rate=
0.1, booster=gdbtree, score=(train=0.999, test=0.913), total= 2.3s
[CV] n_estimators=70, min_child_weight=1, max_depth=10, learning_rate=
0.1, booster=gdbtree
[CV] n_estimators=70, min_child_weight=1, max_depth=10, learning_rate=
0.1, booster=gdbtree, score=(train=0.999, test=0.844), total= 2.3s
[CV] n_estimators=100, min_child_weight=2, max_depth=2, learning_rate=
0.2, booster=gdbtree
[CV] n_estimators=100, min_child_weight=2, max_depth=2, learning_rate=

```

```

[CV] n_estimators=100, min_child_weight=2, max_depth=2, learning_rate=
0.2, booster=gbtree, score=(train=0.957, test=0.877), total= 0.7s
[CV] n_estimators=100, min_child_weight=2, max_depth=2, learning_rate=
0.2, booster=gbtree
[CV] n_estimators=100, min_child_weight=2, max_depth=2, learning_rate=
0.2, booster=gbtree, score=(train=0.957, test=0.906), total= 0.8s
[CV] n_estimators=100, min_child_weight=2, max_depth=2, learning_rate=
0.2, booster=gbtree
[CV] n_estimators=100, min_child_weight=2, max_depth=2, learning_rate=
0.2, booster=gbtree, score=(train=0.955, test=0.928), total= 0.8s
[CV] n_estimators=100, min_child_weight=2, max_depth=2, learning_rate=
0.2, booster=gbtree
[CV] n_estimators=100, min_child_weight=2, max_depth=2, learning_rate=
0.2, booster=gbtree, score=(train=0.955, test=0.815), total= 0.8s
[CV] n_estimators=100, min_child_weight=2, max_depth=2, learning_rate=
0.2, booster=gbtree
[CV] n_estimators=100, min_child_weight=2, max_depth=2, learning_rate=
0.2, booster=gbtree, score=(train=0.956, test=0.913), total= 0.8s
[CV] n_estimators=100, min_child_weight=2, max_depth=2, learning_rate=
0.2, booster=gbtree
[CV] n_estimators=100, min_child_weight=2, max_depth=2, learning_rate=
0.2, booster=gbtree, score=(train=0.956, test=0.883), total= 0.7s
[CV] n_estimators=100, min_child_weight=2, max_depth=2, learning_rate=
0.2, booster=gbtree
[CV] n_estimators=100, min_child_weight=2, max_depth=2, learning_rate=
0.2, booster=gbtree, score=(train=0.956, test=0.867), total= 0.8s
[CV] n_estimators=100, min_child_weight=2, max_depth=2, learning_rate=
0.2, booster=gbtree
[CV] n_estimators=100, min_child_weight=2, max_depth=2, learning_rate=
0.2, booster=gbtree, score=(train=0.954, test=0.887), total= 0.8s
[CV] n_estimators=100, min_child_weight=2, max_depth=2, learning_rate=
0.2, booster=gbtree
[CV] n_estimators=100, min_child_weight=2, max_depth=2, learning_rate=
0.2, booster=gbtree, score=(train=0.955, test=0.855), total= 0.8s
[CV] n_estimators=100, min_child_weight=2, max_depth=2, learning_rate=
0.2, booster=gbtree
[CV] n_estimators=100, min_child_weight=2, max_depth=2, learning_rate=
0.2, booster=gbtree, score=(train=0.958, test=0.874), total= 0.7s
[CV] n_estimators=20, min_child_weight=3, max_depth=15, learning_rate=

```

0.1 booster=gbtree

```

0.1, booster=gdtree
[CV] n_estimators=20, min_child_weight=3, max_depth=15, learning_rate=
0.1, booster=gdtree, score=(train=0.854, test=0.763), total= 0.7s
[CV] n_estimators=20, min_child_weight=3, max_depth=15, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=20, min_child_weight=3, max_depth=15, learning_rate=
0.1, booster=gdtree, score=(train=0.853, test=0.749), total= 0.7s
[CV] n_estimators=20, min_child_weight=3, max_depth=15, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=20, min_child_weight=3, max_depth=15, learning_rate=
0.1, booster=gdtree, score=(train=0.852, test=0.794), total= 0.7s
[CV] n_estimators=20, min_child_weight=3, max_depth=15, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=20, min_child_weight=3, max_depth=15, learning_rate=
0.1, booster=gdtree, score=(train=0.852, test=0.692), total= 0.7s
[CV] n_estimators=20, min_child_weight=3, max_depth=15, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=20, min_child_weight=3, max_depth=15, learning_rate=
0.1, booster=gdtree, score=(train=0.846, test=0.768), total= 0.7s
[CV] n_estimators=20, min_child_weight=3, max_depth=15, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=20, min_child_weight=3, max_depth=15, learning_rate=
0.1, booster=gdtree, score=(train=0.852, test=0.719), total= 0.7s
[CV] n_estimators=20, min_child_weight=3, max_depth=15, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=20, min_child_weight=3, max_depth=15, learning_rate=
0.1, booster=gdtree, score=(train=0.853, test=0.779), total= 0.7s
[CV] n_estimators=20, min_child_weight=3, max_depth=15, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=20, min_child_weight=3, max_depth=15, learning_rate=
0.1, booster=gdtree, score=(train=0.852, test=0.788), total= 0.7s
[CV] n_estimators=20, min_child_weight=3, max_depth=15, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=20, min_child_weight=3, max_depth=15, learning_rate=
0.1, booster=gdtree, score=(train=0.847, test=0.634), total= 0.7s
[CV] n_estimators=20, min_child_weight=3, max_depth=15, learning_rate=
0.1, booster=gdtree
[CV] n_estimators=20, min_child_weight=3, max_depth=15, learning_rate=
0.1, booster=gdtree, score=(train=0.854, test=0.772), total= 0.6s
[CV] n_estimators=50, min_child_weight=2, max_depth=15, learning_rate=

```

```

[CV] n_estimators=50, min_child_weight=2, max_depth=15, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=50, min_child_weight=2, max_depth=15, learning_rate=
0.05, booster=gbtree, score=(train=0.933, test=0.833), total= 1.8s
[CV] n_estimators=50, min_child_weight=2, max_depth=15, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=50, min_child_weight=2, max_depth=15, learning_rate=
0.05, booster=gbtree, score=(train=0.932, test=0.825), total= 1.8s
[CV] n_estimators=50, min_child_weight=2, max_depth=15, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=50, min_child_weight=2, max_depth=15, learning_rate=
0.05, booster=gbtree, score=(train=0.931, test=0.855), total= 1.7s
[CV] n_estimators=50, min_child_weight=2, max_depth=15, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=50, min_child_weight=2, max_depth=15, learning_rate=
0.05, booster=gbtree, score=(train=0.931, test=0.770), total= 1.8s
[CV] n_estimators=50, min_child_weight=2, max_depth=15, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=50, min_child_weight=2, max_depth=15, learning_rate=
0.05, booster=gbtree, score=(train=0.927, test=0.828), total= 1.8s
[CV] n_estimators=50, min_child_weight=2, max_depth=15, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=50, min_child_weight=2, max_depth=15, learning_rate=
0.05, booster=gbtree, score=(train=0.932, test=0.810), total= 1.7s
[CV] n_estimators=50, min_child_weight=2, max_depth=15, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=50, min_child_weight=2, max_depth=15, learning_rate=
0.05, booster=gbtree, score=(train=0.932, test=0.815), total= 1.8s
[CV] n_estimators=50, min_child_weight=2, max_depth=15, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=50, min_child_weight=2, max_depth=15, learning_rate=
0.05, booster=gbtree, score=(train=0.932, test=0.866), total= 1.8s
[CV] n_estimators=50, min_child_weight=2, max_depth=15, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=50, min_child_weight=2, max_depth=15, learning_rate=
0.05, booster=gbtree, score=(train=0.928, test=0.752), total= 1.7s
[CV] n_estimators=50, min_child_weight=2, max_depth=15, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=50, min_child_weight=2, max_depth=15, learning_rate=
0.05, booster=gbtree, score=(train=0.933, test=0.806), total= 1.8s

```



```

0.05, booster=gdtree, score=(train=0.955, test=0.880), total= 1.05
[CV] n_estimators=70, min_child_weight=4, max_depth=2, learning_rate=0.
2, booster=gdtree
[CV] n_estimators=70, min_child_weight=4, max_depth=2, learning_rate=
0.2, booster=gdtree, score=(train=0.945, test=0.887), total= 0.6s
[CV] n_estimators=70, min_child_weight=4, max_depth=2, learning_rate=0.
2, booster=gdtree
[CV] n_estimators=70, min_child_weight=4, max_depth=2, learning_rate=
0.2, booster=gdtree, score=(train=0.946, test=0.897), total= 0.5s
[CV] n_estimators=70, min_child_weight=4, max_depth=2, learning_rate=0.
2, booster=gdtree
[CV] n_estimators=70, min_child_weight=4, max_depth=2, learning_rate=
0.2, booster=gdtree, score=(train=0.943, test=0.923), total= 0.6s
[CV] n_estimators=70, min_child_weight=4, max_depth=2, learning_rate=0.
2, booster=gdtree
[CV] n_estimators=70, min_child_weight=4, max_depth=2, learning_rate=
0.2, booster=gdtree, score=(train=0.944, test=0.802), total= 0.6s
[CV] n_estimators=70, min_child_weight=4, max_depth=2, learning_rate=0.
2, booster=gdtree
[CV] n_estimators=70, min_child_weight=4, max_depth=2, learning_rate=
0.2, booster=gdtree, score=(train=0.943, test=0.890), total= 0.6s
[CV] n_estimators=70, min_child_weight=4, max_depth=2, learning_rate=0.
2, booster=gdtree
[CV] n_estimators=70, min_child_weight=4, max_depth=2, learning_rate=
0.2, booster=gdtree, score=(train=0.944, test=0.875), total= 0.6s
[CV] n_estimators=70, min_child_weight=4, max_depth=2, learning_rate=0.
2, booster=gdtree
[CV] n_estimators=70, min_child_weight=4, max_depth=2, learning_rate=
0.2, booster=gdtree, score=(train=0.942, test=0.891), total= 0.6s
[CV] n_estimators=70, min_child_weight=4, max_depth=2, learning_rate=0.
2, booster=gdtree
[CV] n_estimators=70, min_child_weight=4, max_depth=2, learning_rate=
0.2, booster=gdtree, score=(train=0.940, test=0.892), total= 0.6s
[CV] n_estimators=70, min_child_weight=4, max_depth=2, learning_rate=0.
2, booster=gdtree
[CV] n_estimators=70, min_child_weight=4, max_depth=2, learning_rate=
0.2, booster=gdtree, score=(train=0.941, test=0.798), total= 0.6s
[CV] n_estimators=70, min_child_weight=4, max_depth=2, learning_rate=0.
2, booster=gdtree
[CV] n_estimators=70, min_child_weight=4, max_depth=2, learning_rate=

```



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[CV] n_estimators=70, min_child_weight=4, max_depth=2, learning_rate=
0.2, booster=gbtree, score=(train=0.943, test=0.858), total= 0.6s
[CV] n_estimators=30, min_child_weight=3, max_depth=5, learning_rate=0.
2, booster=gbtree
[CV] n_estimators=30, min_child_weight=3, max_depth=5, learning_rate=
0.2, booster=gbtree, score=(train=0.981, test=0.894), total= 0.5s
[CV] n_estimators=30, min_child_weight=3, max_depth=5, learning_rate=0.
2, booster=gbtree
[CV] n_estimators=30, min_child_weight=3, max_depth=5, learning_rate=
0.2, booster=gbtree, score=(train=0.982, test=0.898), total= 0.6s
[CV] n_estimators=30, min_child_weight=3, max_depth=5, learning_rate=0.
2, booster=gbtree
[CV] n_estimators=30, min_child_weight=3, max_depth=5, learning_rate=
0.2, booster=gbtree, score=(train=0.981, test=0.924), total= 0.5s
[CV] n_estimators=30, min_child_weight=3, max_depth=5, learning_rate=0.
2, booster=gbtree
[CV] n_estimators=30, min_child_weight=3, max_depth=5, learning_rate=
0.2, booster=gbtree, score=(train=0.982, test=0.755), total= 0.6s
[CV] n_estimators=30, min_child_weight=3, max_depth=5, learning_rate=0.
2, booster=gbtree
[CV] n_estimators=30, min_child_weight=3, max_depth=5, learning_rate=
0.2, booster=gbtree, score=(train=0.982, test=0.897), total= 0.6s
[CV] n_estimators=30, min_child_weight=3, max_depth=5, learning_rate=0.
2, booster=gbtree
[CV] n_estimators=30, min_child_weight=3, max_depth=5, learning_rate=
0.2, booster=gbtree, score=(train=0.982, test=0.902), total= 0.5s
[CV] n_estimators=30, min_child_weight=3, max_depth=5, learning_rate=0.
2, booster=gbtree
[CV] n_estimators=30, min_child_weight=3, max_depth=5, learning_rate=
0.2, booster=gbtree, score=(train=0.980, test=0.915), total= 0.6s
[CV] n_estimators=30, min_child_weight=3, max_depth=5, learning_rate=0.
2, booster=gbtree
[CV] n_estimators=30, min_child_weight=3, max_depth=5, learning_rate=
0.2, booster=gbtree, score=(train=0.979, test=0.923), total= 0.5s
[CV] n_estimators=30, min_child_weight=3, max_depth=5, learning_rate=0.
2, booster=gbtree
[CV] n_estimators=30, min_child_weight=3, max_depth=5, learning_rate=
0.2, booster=gbtree, score=(train=0.977, test=0.832), total= 0.6s
[CV] n_estimators=30, min_child_weight=3, max_depth=5, learning_rate=0.
2, booster=gbtree

```

```
2, booster=gdtree
[CV] n_estimators=30, min_child_weight=3, max_depth=5, learning_rate=
0.2, booster=gdtree, score=(train=0.982, test=0.875), total= 0.5s
[CV] n_estimators=30, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear
[11:20:58] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=30, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear, score=(train=0.881, test=0.897), total= 0.2s
[CV] n_estimators=30, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear
[11:20:58] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=30, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear, score=(train=0.881, test=0.883), total= 0.2s
[CV] n_estimators=30, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear
[11:20:58] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=30, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.882, test=0.857), total= 0.2s
[CV] n_estimators=30, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear
[11:20:58] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=30, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.887, test=0.782), total= 0.1s
[CV] n_estimators=30, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear
[11:20:59] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=30, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.881, test=0.869), total= 0.1s
```

```
[CV] n_estimators=30, min_child_weight=1, max_depth=10, learning_rate=
```

```
[CV] n_estimators=30, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear
[11:20:59] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=30, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear, score=(train=0.888, test=0.760), total= 0.2s
[CV] n_estimators=30, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear
[11:20:59] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=30, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear, score=(train=0.884, test=0.856), total= 0.2s
[CV] n_estimators=30, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear
[11:20:59] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this

p through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=30, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear, score=(train=0.887, test=0.813), total= 0.1s
[CV] n_estimators=30, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear
[11:20:59] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in lang  
uage bindings but  
passed down to XGBoost core. Or some parameters are not used but sli  
p through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=30, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear, score=(train=0.910, test=0.603), total= 0.2s
[CV] n_estimators=30, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear
[11:21:00] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in lang  
uage bindings but  
passed down to XGBoost core. Or some parameters are not used but sli  
p through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=30, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear, score=(train=0.882, test=0.880), total= 0.1s
[CV] n_estimators=50, min_child_weight=3, max_depth=2, learning_rate=0.
05, booster=gbtrees
[CV] n_estimators=50, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gbtrees, score=(train=0.700, test=0.708), total= 0.5s
```

```

0.05, booster=gdtree, score=(train=0.799, test=0.790), total= 0.3s
[CV] n_estimators=50, min_child_weight=3, max_depth=2, learning_rate=0.
05, booster=gdtree
[CV] n_estimators=50, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gdtree, score=(train=0.798, test=0.744), total= 0.4s
[CV] n_estimators=50, min_child_weight=3, max_depth=2, learning_rate=0.
05, booster=gdtree
[CV] n_estimators=50, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gdtree, score=(train=0.796, test=0.829), total= 0.5s
[CV] n_estimators=50, min_child_weight=3, max_depth=2, learning_rate=0.
05, booster=gdtree
[CV] n_estimators=50, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gdtree, score=(train=0.804, test=0.762), total= 0.4s
[CV] n_estimators=50, min_child_weight=3, max_depth=2, learning_rate=0.
05, booster=gdtree
[CV] n_estimators=50, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gdtree, score=(train=0.791, test=0.748), total= 0.5s
[CV] n_estimators=50, min_child_weight=3, max_depth=2, learning_rate=0.
05, booster=gdtree
[CV] n_estimators=50, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gdtree, score=(train=0.796, test=0.722), total= 0.4s
[CV] n_estimators=50, min_child_weight=3, max_depth=2, learning_rate=0.
05, booster=gdtree
[CV] n_estimators=50, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gdtree, score=(train=0.798, test=0.801), total= 0.5s
[CV] n_estimators=50, min_child_weight=3, max_depth=2, learning_rate=0.
05, booster=gdtree
[CV] n_estimators=50, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gdtree, score=(train=0.799, test=0.771), total= 0.4s
[CV] n_estimators=50, min_child_weight=3, max_depth=2, learning_rate=0.
05, booster=gdtree
[CV] n_estimators=50, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gdtree, score=(train=0.799, test=0.672), total= 0.4s
[CV] n_estimators=50, min_child_weight=3, max_depth=2, learning_rate=0.
05, booster=gdtree
[CV] n_estimators=50, min_child_weight=3, max_depth=2, learning_rate=
0.05, booster=gdtree, score=(train=0.799, test=0.785), total= 0.4s
[CV] n_estimators=50, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear

```

[11:21:05] WARNING: C:\Users\Administrator\workspace\xgboost-win64.exe

```
[11:21:05] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.887, test=0.899), total= 0.2s  
[CV] n_estimators=50, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear  
[11:21:05] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.887, test=0.887), total= 0.2s  
[CV] n_estimators=50, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear  
[11:21:05] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:  
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear, score=(train=0.889, test=0.851), total= 0.2s
[CV] n_estimators=50, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear
[11:21:06] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear, score=(train=0.894, test=0.788), total= 0.2s
[CV] n_estimators=50, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear
[11:21:06] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear, score=(train=0.887, test=0.875), total= 0.2s
[CV] n_estimators=50, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear
[11:21:06] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```



This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.894, test=0.764), total= 0.2s
[CV] n_estimators=50, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear
[11:21:06] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.890, test=0.860), total= 0.3s
[CV] n_estimators=50, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear
[11:21:07] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=1, max_depth=10, learning_rate=0.2, booster=gblinear, score=(train=0.892, test=0.810), total= 0.2s
```

```
0.2, booster=gblinear, score=(train=0.892, test=0.819), total= 0.2s
[CV] n_estimators=50, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear
[11:21:07] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear, score=(train=0.916, test=0.591), total= 0.2s
[CV] n_estimators=50, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear
[11:21:07] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=50, min_child_weight=1, max_depth=10, learning_rate=
0.2, booster=gblinear, score=(train=0.888, test=0.885), total= 0.2s
[CV] n_estimators=40, min_child_weight=4, max_depth=2, learning_rate=0.
05, booster=gbtrees
[CV] n_estimators=40, min_child_weight=4, max_depth=2, learning_rate=
0.05, booster=gbtrees, score=(train=0.706, test=0.703), total= 0.4s
[CV] n_estimators=40, min_child_weight=4, max_depth=2, learning_rate=0.
05, booster=gbtrees
[CV] n_estimators=40, min_child_weight=4, max_depth=2, learning_rate=
0.05, booster=gbtrees, score=(train=0.702, test=0.642), total= 0.3s
```

```
[CV] n_estimators=40, min_child_weight=4, max_depth=2, learning_rate=0
```

```

[CV] n_estimators=40, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree
[CV] n_estimators=40, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree, score=(train=0.699, test=0.741), total= 0.4s
[CV] n_estimators=40, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree
[CV] n_estimators=40, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree, score=(train=0.709, test=0.686), total= 0.4s
[CV] n_estimators=40, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree
[CV] n_estimators=40, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree, score=(train=0.695, test=0.653), total= 0.4s
[CV] n_estimators=40, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree
[CV] n_estimators=40, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree, score=(train=0.700, test=0.623), total= 0.4s
[CV] n_estimators=40, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree
[CV] n_estimators=40, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree, score=(train=0.704, test=0.718), total= 0.4s
[CV] n_estimators=40, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree
[CV] n_estimators=40, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree, score=(train=0.706, test=0.685), total= 0.4s
[CV] n_estimators=40, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree
[CV] n_estimators=40, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree, score=(train=0.706, test=0.585), total= 0.4s
[CV] n_estimators=40, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree
[CV] n_estimators=40, min_child_weight=4, max_depth=2, learning_rate=0.05, booster=gbtree, score=(train=0.705, test=0.706), total= 0.4s
[CV] n_estimators=90, min_child_weight=1, max_depth=15, learning_rate=0.15, booster=gbtree
[CV] n_estimators=90, min_child_weight=1, max_depth=15, learning_rate=0.15, booster=gbtree, score=(train=1.000, test=0.899), total= 4.3s
[CV] n_estimators=90, min_child_weight=1, max_depth=15, learning_rate=0.15, booster=gbtree
[CV] n_estimators=90, min_child_weight=1, max_depth=15, learning_rate=0.15, booster=gbtree, score=(train=1.000, test=0.886), total= 4.3s

```

```

0.15, booster=gbtree, score=(train=1.000, test=0.880), total= 4.3s
[CV] n_estimators=90, min_child_weight=1, max_depth=15, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=90, min_child_weight=1, max_depth=15, learning_rate=
0.15, booster=gbtree, score=(train=1.000, test=0.913), total= 4.3s
[CV] n_estimators=90, min_child_weight=1, max_depth=15, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=90, min_child_weight=1, max_depth=15, learning_rate=
0.15, booster=gbtree, score=(train=1.000, test=0.662), total= 4.2s
[CV] n_estimators=90, min_child_weight=1, max_depth=15, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=90, min_child_weight=1, max_depth=15, learning_rate=
0.15, booster=gbtree, score=(train=1.000, test=0.886), total= 4.7s
[CV] n_estimators=90, min_child_weight=1, max_depth=15, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=90, min_child_weight=1, max_depth=15, learning_rate=
0.15, booster=gbtree, score=(train=1.000, test=0.906), total= 4.7s
[CV] n_estimators=90, min_child_weight=1, max_depth=15, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=90, min_child_weight=1, max_depth=15, learning_rate=
0.15, booster=gbtree, score=(train=1.000, test=0.840), total= 4.7s
[CV] n_estimators=90, min_child_weight=1, max_depth=15, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=90, min_child_weight=1, max_depth=15, learning_rate=
0.15, booster=gbtree, score=(train=1.000, test=0.922), total= 4.3s
[CV] n_estimators=90, min_child_weight=1, max_depth=15, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=90, min_child_weight=1, max_depth=15, learning_rate=
0.15, booster=gbtree, score=(train=1.000, test=0.904), total= 4.3s
[CV] n_estimators=90, min_child_weight=1, max_depth=15, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=90, min_child_weight=1, max_depth=15, learning_rate=
0.15, booster=gbtree, score=(train=1.000, test=0.849), total= 4.4s
[CV] n_estimators=200, min_child_weight=2, max_depth=5, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=200, min_child_weight=2, max_depth=5, learning_rate=
0.05, booster=gbtree, score=(train=0.990, test=0.896), total= 3.3s
[CV] n_estimators=200, min_child_weight=2, max_depth=5, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=200, min_child_weight=2, max_depth=5, learning_rate=

```

```

[CV] n_estimators=200, min_child_weight=2, max_depth=5, learning_rate=
0.05, booster=gbtree, score=(train=0.989, test=0.917), total= 3.5s
[CV] n_estimators=200, min_child_weight=2, max_depth=5, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=200, min_child_weight=2, max_depth=5, learning_rate=
0.05, booster=gbtree, score=(train=0.990, test=0.933), total= 3.3s
[CV] n_estimators=200, min_child_weight=2, max_depth=5, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=200, min_child_weight=2, max_depth=5, learning_rate=
0.05, booster=gbtree, score=(train=0.990, test=0.785), total= 3.3s
[CV] n_estimators=200, min_child_weight=2, max_depth=5, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=200, min_child_weight=2, max_depth=5, learning_rate=
0.05, booster=gbtree, score=(train=0.990, test=0.914), total= 3.3s
[CV] n_estimators=200, min_child_weight=2, max_depth=5, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=200, min_child_weight=2, max_depth=5, learning_rate=
0.05, booster=gbtree, score=(train=0.989, test=0.895), total= 3.3s
[CV] n_estimators=200, min_child_weight=2, max_depth=5, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=200, min_child_weight=2, max_depth=5, learning_rate=
0.05, booster=gbtree, score=(train=0.990, test=0.870), total= 3.3s
[CV] n_estimators=200, min_child_weight=2, max_depth=5, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=200, min_child_weight=2, max_depth=5, learning_rate=
0.05, booster=gbtree, score=(train=0.989, test=0.931), total= 3.3s
[CV] n_estimators=200, min_child_weight=2, max_depth=5, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=200, min_child_weight=2, max_depth=5, learning_rate=
0.05, booster=gbtree, score=(train=0.988, test=0.849), total= 3.3s
[CV] n_estimators=200, min_child_weight=2, max_depth=5, learning_rate=
0.05, booster=gbtree
[CV] n_estimators=200, min_child_weight=2, max_depth=5, learning_rate=
0.05, booster=gbtree, score=(train=0.990, test=0.878), total= 3.2s
[CV] n_estimators=150, min_child_weight=4, max_depth=5, learning_rate=
0.15, booster=gbtree
[CV] n_estimators=150, min_child_weight=4, max_depth=5, learning_rate=
0.15, booster=gbtree, score=(train=0.996, test=0.894), total= 2.7s
[CV] n_estimators=150, min_child_weight=4, max_depth=5, learning_rate=
0.15, booster=gbtree

```

```

0.15, booster=gdtree
[CV] n_estimators=150, min_child_weight=4, max_depth=5, learning_rate=
0.15, booster=gdtree, score=(train=0.995, test=0.918), total= 3.5s
[CV] n_estimators=150, min_child_weight=4, max_depth=5, learning_rate=
0.15, booster=gdtree
[CV] n_estimators=150, min_child_weight=4, max_depth=5, learning_rate=
0.15, booster=gdtree, score=(train=0.996, test=0.928), total= 3.0s
[CV] n_estimators=150, min_child_weight=4, max_depth=5, learning_rate=
0.15, booster=gdtree
[CV] n_estimators=150, min_child_weight=4, max_depth=5, learning_rate=
0.15, booster=gdtree, score=(train=0.996, test=0.763), total= 2.5s
[CV] n_estimators=150, min_child_weight=4, max_depth=5, learning_rate=
0.15, booster=gdtree
[CV] n_estimators=150, min_child_weight=4, max_depth=5, learning_rate=
0.15, booster=gdtree, score=(train=0.997, test=0.900), total= 2.6s
[CV] n_estimators=150, min_child_weight=4, max_depth=5, learning_rate=
0.15, booster=gdtree
[CV] n_estimators=150, min_child_weight=4, max_depth=5, learning_rate=
0.15, booster=gdtree, score=(train=0.996, test=0.897), total= 2.5s
[CV] n_estimators=150, min_child_weight=4, max_depth=5, learning_rate=
0.15, booster=gdtree
[CV] n_estimators=150, min_child_weight=4, max_depth=5, learning_rate=
0.15, booster=gdtree, score=(train=0.996, test=0.912), total= 2.5s
[CV] n_estimators=150, min_child_weight=4, max_depth=5, learning_rate=
0.15, booster=gdtree
[CV] n_estimators=150, min_child_weight=4, max_depth=5, learning_rate=
0.15, booster=gdtree, score=(train=0.996, test=0.911), total= 2.5s
[CV] n_estimators=150, min_child_weight=4, max_depth=5, learning_rate=
0.15, booster=gdtree
[CV] n_estimators=150, min_child_weight=4, max_depth=5, learning_rate=
0.15, booster=gdtree, score=(train=0.996, test=0.868), total= 2.5s
[CV] n_estimators=150, min_child_weight=4, max_depth=5, learning_rate=
0.15, booster=gdtree
[CV] n_estimators=150, min_child_weight=4, max_depth=5, learning_rate=
0.15, booster=gdtree, score=(train=0.996, test=0.867), total= 2.5s
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=
0.1, booster=gblinear
[11:22:57] WARNING: C:\Users\Administrator\workspace\xgboost-win64_rele
ase_1.1.0\src\learner.cc:480:

```

Parameters: { max\_depth, min\_child\_weight } might not be used

Parameters: { max\_depth, min\_child\_weight } might not be used.

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.1, booster=gblinear, score=(train=0.888, test=0.900), total= 0.4s
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.1, booster=gblinear
[11:22:58] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.1, booster=gblinear, score=(train=0.887, test=0.889), total= 0.3s
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.1, booster=gblinear
[11:22:58] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate
```

```
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.1, booster=gblinear, score=(train=0.889, test=0.857), total= 0.3s
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.1, booster=gblinear
[11:22:58] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.1, booster=gblinear, score=(train=0.894, test=0.785), total= 0.3s
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.1, booster=gblinear
[11:22:59] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.1, booster=gblinear, score=(train=0.888, test=0.873), total= 0.3s
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.1, booster=gblinear
[11:22:59] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but



uage bindings but  
passed down to XGBoost core. Or some parameters are not used but slip through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.1, booster=gblinear, score=(train=0.894, test=0.768), total= 0.4s
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.1, booster=gblinear
[11:23:00] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but  
passed down to XGBoost core. Or some parameters are not used but slip through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.1, booster=gblinear, score=(train=0.890, test=0.861), total= 0.3s
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.1, booster=gblinear
[11:23:00] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but  
passed down to XGBoost core. Or some parameters are not used but slip through this  
verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.1, booster=gblinear, score=(train=0.892, test=0.824), total= 0.3s
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.1, booster=gblinear
```

```
0.1, booster=gblinear
[11:23:00] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.1, booster=gblinear, score=(train=0.916, test=0.598), total= 0.4s
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.1, booster=gblinear
[11:23:01] WARNING: C:\Users\Administrator\workspace\xgboost-win64_release_1.1.0\src\learner.cc:480:
Parameters: { max_depth, min_child_weight } might not be used.
```

This may not be accurate due to some parameters are only used in language bindings but passed down to XGBoost core. Or some parameters are not used but slip through this verification. Please open an issue if you find above cases.

```
[CV] n_estimators=100, min_child_weight=3, max_depth=15, learning_rate=0.1, booster=gblinear, score=(train=0.889, test=0.886), total= 0.3s
```

```
[Parallel(n_jobs=1)]: Done 500 out of 500 | elapsed: 11.0min finished
```

```
Out[78]: RandomizedSearchCV(cv=10,
                             estimator=XGBRegressor(base_score=None, booster=None,
                             colsample_bylevel=None,
                             colsample_bynode=None,
                             colsample_bytree=None, gamma=
                             None,
                             gpu_id=None, importance_type
```

```

importance_type='gain',

h=None,

g=nan,

ple=None,

n_iter=50,
param_distributions={'booster': ['gbtree', 'gblina
r'],
                    'learning_rate': [0.05, 0.1, 0.
15, 0.2],
                    'max_depth': [2, 3, 5, 10, 15],
                    'min_child_weight': [1, 2, 3,
4],
                    'n_estimators': [20, 30, 40, 5
0, 70, 80,
90, 100, 150,
200]},
                    random_state=42, return_train_score=True, verbose=5)

```

In [79]: rcf.best\_estimator\_

```

Out[79]: XGBRegressor(base_score=0.5, booster='gbtree', colsample_bylevel=1,
                    colsample_bynode=1, colsample_bytree=1, gamma=0, gpu_id=-
1,
                    importance_type='gain', interaction_constraints='',
                    learning_rate=0.05, max_delta_step=0, max_depth=5,
                    min_child_weight=2, missing=nan, monotone_constraints
                    = '()',
                    n_estimators=200, n_jobs=0, num_parallel_tree=1, random_st
ate=0,

```

```
1,          reg_alpha=0, reg_lambda=1, scale_pos_weight=1, subsample=
          tree_method='exact', validate_parameters=1, verbosity=Non
e)
```

```
In [80]: rcf.best_params_
```

```
Out[80]: {'n_estimators': 200,
          'min_child_weight': 2,
          'max_depth': 5,
          'learning_rate': 0.05,
          'booster': 'gbtree'}
```

```
In [81]: pd.DataFrame(rcf.cv_results_)
```

```
Out[81]:
```

	mean_fit_time	std_fit_time	mean_score_time	std_score_time	param_n_estimators	param_mi
0	2.934263	0.034954	0.024383	0.006493	90	
1	2.202309	0.067322	0.023509	0.006070	70	
2	6.707951	0.096493	0.020313	0.005213	150	
3	2.512644	0.054619	0.021515	0.005671	80	
4	0.313190	0.015031	0.025276	0.005207	100	

	mean_fit_time	std_fit_time	mean_score_time	std_score_time	param_n_estimators	param_mi
5	0.247352	0.017747	0.019058	0.004892	70	
6	0.188962	0.018315	0.019308	0.003678	50	
7	0.767762	0.018657	0.023441	0.004574	100	
8	1.560325	0.024002	0.026447	0.006274	150	
9	0.268538	0.014341	0.021130	0.004332	20	
10	1.182470	0.014131	0.023445	0.004382	70	
11	0.181545	0.005860	0.025605	0.008257	50	
12	0.445892	0.011526	0.024086	0.005604	150	
13	0.564024	0.014637	0.027369	0.005211	200	

	mean_fit_time	std_fit_time	mean_score_time	std_score_time	param_n_estimators	param_mi
14	3.089869	0.043372	0.025909	0.005912	70	
15	0.871940	0.021247	0.022976	0.004342	80	
16	0.204768	0.012219	0.020974	0.003977	20	
17	0.247654	0.014048	0.018782	0.002832	70	
18	4.635889	0.060056	0.024769	0.004906	100	
19	0.245788	0.013880	0.020093	0.002784	70	
20	0.320922	0.019531	0.022966	0.004955	100	
21	1.345584	0.016997	0.017321	0.001787	80	
22	0.439198	0.019648	0.022030	0.005707	150	

	mean_fit_time	std_fit_time	mean_score_time	std_score_time	param_n_estimators	param_mi
23	3.070759	0.046877	0.023035	0.005657	70	
24	1.467053	0.026701	0.022622	0.004245	200	
25	0.166068	0.018532	0.022294	0.007061	40	
26	0.435567	0.019963	0.022988	0.004523	150	
27	0.291940	0.016571	0.022999	0.003819	90	
28	1.285791	0.022534	0.019649	0.002701	40	
29	0.712391	0.028169	0.023868	0.005390	40	
30	0.265835	0.017834	0.020355	0.002364	20	
31	3.288166	0.060181	0.021535	0.003177	200	

	mean_fit_time	std_fit_time	mean_score_time	std_score_time	param_n_estimators	param_mi
32	0.309355	0.018345	0.025730	0.002740	100	
33	0.297475	0.024713	0.021792	0.004183	90	
34	0.696342	0.026506	0.025156	0.003972	90	
35	0.315062	0.027642	0.023002	0.005446	100	
36	2.281741	0.033153	0.025932	0.004844	70	
37	0.765844	0.034080	0.024874	0.004907	100	
38	0.661434	0.027033	0.023505	0.005053	20	
39	1.725079	0.027765	0.027434	0.004598	50	
40	0.558121	0.024202	0.023060	0.005225	70	



	mean_fit_time	std_fit_time	mean_score_time	std_score_time	param_n_estimators	param_mi
41	0.542815	0.031152	0.023743	0.006098	30	
42	0.133572	0.018527	0.021673	0.003096	30	
43	0.420378	0.025623	0.024199	0.004914	50	
44	0.190337	0.018012	0.022331	0.004172	50	
45	0.346099	0.023333	0.021241	0.004491	40	
46	4.385636	0.174751	0.023553	0.005465	90	
47	3.283399	0.072328	0.027025	0.003873	200	
48	2.643986	0.320064	0.023763	0.004518	150	
49	0.318212	0.023210	0.025603	0.004484	100	

In [ ]:

In [ ]:

```
In [83]: regressor=XGBRegressor(base_score=0.5, booster='gbtree', colsample_bylevel=1,
                                colsample_bynode=1, colsample_bytree=1, gamma=0, gpu_id=-1,
                                importance_type='gain', interaction_constraints='',
                                learning_rate=0.05, max_delta_step=0, max_depth=5,
                                min_child_weight=2, monotone_constraints='()',
                                n_estimators=200, n_jobs=0, num_parallel_tree=1, random_state=0,
                                reg_alpha=0, reg_lambda=1, scale_pos_weight=1, subsample=1,
                                tree_method='exact', validate_parameters=1, verbosity=None)
```

```
In [85]: regressor.fit(x_train,y_train)
```

```
Out[85]: XGBRegressor(base_score=0.5, booster='gbtree', colsample_bylevel=1,
                        colsample_bynode=1, colsample_bytree=1, gamma=0, gpu_id=-1,
                        importance_type='gain', interaction_constraints='',
                        learning_rate=0.05, max_delta_step=0, max_depth=5,
                        min_child_weight=2, missing=nan, monotone_constraints='()',
                        n_estimators=200, n_jobs=0, num_parallel_tree=1, random_state=0,
                        reg_alpha=0, reg_lambda=1, scale_pos_weight=1, subsample=1,
                        tree_method='exact', validate_parameters=1, verbosity=None)
```

```
In [86]: y_pred=regressor.predict(df_test)
```

```
In [87]: y_pred
```

```
Out[87]: array([122035.94 , 148993.28 , 184901.75 , ..., 171715.17 , 120263.086,
                225017.62 ], dtype=float32)
```

```
In [88]: import pickle
pickle.dump(regressor, open('finalized1.pkl', 'wb'))
```

```
In [89]: pred=pd.DataFrame(y_pred)
```

```
In [90]: pred
```

```
Out[90]:
```

	0
0	122035.937500
1	148993.281250
2	184901.750000
3	188813.906250
4	195155.093750
5	172504.078125
6	171066.218750
7	167836.765625
8	183243.687500
9	123009.796875
10	199576.968750
11	95499.937500
12	100359.296875
13	155164.031250
14	137743.015625
15	378633.468750

0

16	260863.609375
17	296175.687500
18	248795.968750
19	489538.812500
20	311151.312500
21	206368.140625
22	163934.640625
23	172379.015625
24	169703.671875
25	193454.109375
26	313713.062500
27	234421.343750
28	209882.078125
29	213501.203125
30	185637.734375
31	90864.078125
32	193276.796875
33	284739.500000
34	291762.187500
35	220869.687500
36	190283.000000
37	162076.375000
38	160055.875000
39	152391.171875
40	176042.984375

0

41 161210.375000

42 301566.968750

43 220879.937500

44 224267.890625

45 193112.234375

46 236909.234375

47 198688.734375

48 167033.437500

49 144723.828125

50 142615.750000

51 169802.296875

52 150995.359375

53 167890.671875

54 188167.218750

55 164138.859375

56 149279.062500

57 125207.875000

58 224133.734375

59 136375.062500

60 139038.609375

61 165720.656250

62 109276.796875

63 124444.242188

64 127639.312500

65 122604.781250

0

66	102730.664062
67	130726.054688
68	145911.640625
69	183919.875000
70	109332.375000
71	103025.226562
72	138232.562500
73	117160.851562
74	157103.359375
75	116192.218750
76	71994.570312
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878	223273.250000
879	396326.343750
880	204470.203125
881	238295.812500
882	225250.984375
883	234196.781250
884	230659.593750
885	216483.421875
886	207203.437500
887	235188.234375
888	159811.640625
889	267292.500000
890	249911.140625

891	253391.609375
892	229390.781250
893	135382.515625
894	154279.390625
895	151207.984375
896	194438.734375
897	194453.921875
898	125314.039062
899	118900.523438
900	144261.781250
901	276825.406250
902	138031.531250
903	162337.875000
904	222264.031250
905	190481.015625
906	216348.140625
907	203712.625000
908	222307.328125
909	174007.671875
910	173552.515625
911	188645.500000
912	273008.437500
913	312666.062500
914	259716.625000
915	297068.468750

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916	383541.937500
917	139988.609375
918	187701.656250
919	141346.984375
920	156333.015625
921	190886.453125
922	201295.609375
923	245966.953125
924	158989.046875
925	134852.484375
926	136149.828125
927	101980.257812
928	126598.796875
929	142913.109375
930	142414.140625
931	118054.781250
932	169798.265625
933	148365.234375
934	206188.234375
935	142986.484375
936	215524.250000
937	124461.804688
938	48794.250000
939	57280.148438
940	115998.656250



941	142236.328125
942	128035.578125
943	147880.593750
944	157686.062500
945	138318.703125
946	128836.039062
947	139679.484375
948	130473.296875
949	171649.984375
950	121113.953125
951	162863.750000
952	138324.687500
953	135863.781250
954	124007.914062
955	131369.187500
956	129714.617188
957	126387.453125
958	124883.093750
959	123443.929688
960	150706.593750
961	120133.914062
962	129503.093750
963	152974.500000
964	217780.921875
965	125020.562500

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966	134281.328125
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968	123541.937500
969	127913.500000
970	108040.328125
971	142848.781250
972	150910.750000
973	141840.375000
974	144117.031250
975	110961.445312
976	113359.304688
977	125838.039062
978	107319.335938
979	122519.453125
980	103334.890625
981	104302.757812
982	115384.976562
983	126318.484375
984	81108.164062
985	127061.781250
986	182274.953125
987	141496.234375
988	111038.695312
989	151482.421875
990	124598.875000

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991	202152.968750
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993	126708.015625
994	112414.773438
995	136012.421875
996	127113.796875
997	114378.375000
998	107472.625000
999	148903.828125
1000	118223.054688
1001	136950.140625
1002	121726.648438
1003	171606.531250
1004	127083.789062
1005	110149.820312
1006	148462.343750
1007	79712.750000
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1010	209661.953125
1011	174880.015625
1012	121326.757812
1013	87564.390625
1014	226590.234375
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1021	131038.562500
1022	118063.562500
1023	120640.343750
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1026	176550.234375
1027	153395.062500
1028	144449.046875
1029	150129.531250
1030	89842.507812
1031	171538.062500
1032	147172.656250
1033	161807.843750
1034	86242.125000
1035	238381.296875
1036	150915.703125
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1044	223662.515625
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1047	261047.390625
1048	212664.609375
1049	232958.500000
1050	181267.781250
1051	215883.375000
1052	219930.359375
1053	249916.562500
1054	150608.625000
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1057	147177.734375
1058	224107.343750
1059	209897.828125
1060	185300.578125
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1062	123102.851562
1063	134722.812500
1064	148425.187500
1065	138205.859375

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1068	132802.421875
1069	125408.718750
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1072	198466.531250
1073	232938.984375
1074	323960.875000
1075	229301.796875
1076	233263.109375
1077	180114.937500
1078	188630.703125
1079	171139.953125
1080	180845.218750
1081	158630.000000
1082	129900.164062
1083	131822.234375
1084	130829.976562
1085	129692.671875
1086	135192.296875
1087	148572.281250
1088	165930.078125
1089	222754.562500
1090	146109.484375

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1091	123002.468750
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1093	117979.812500
1094	114005.812500
1095	100686.789062
1096	97249.335938
1097	162485.031250
1098	135214.250000
1099	141653.078125
1100	141914.843750
1101	134987.031250
1102	154746.046875
1103	182923.703125
1104	137377.109375
1105	165099.109375
1106	129991.070312
1107	195191.750000
1108	205647.062500
1109	125451.140625
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1111	175504.312500
1112	228440.890625
1113	264221.406250
1114	126833.125000
1115	124505.078125

1116	158322.296875
1117	89823.945312
1118	72643.585938
1119	133389.953125
1120	133807.187500
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1122	280377.906250
1123	160816.390625
1124	182366.546875
1125	211443.234375
1126	198073.109375
1127	160339.765625
1128	144986.968750
1129	218738.265625
1130	219421.125000
1131	218603.921875
1132	246513.046875
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1135	342618.687500
1136	185773.390625
1137	275303.593750
1138	321250.375000
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1140	141202.500000



1141	83879.898438
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1143	85236.968750
1144	75931.578125
1145	144056.546875
1146	179102.921875
1147	209556.234375
1148	165556.875000
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1150	146520.109375
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1154	149354.953125
1155	140564.734375
1156	171253.015625
1157	190238.375000
1158	203513.187500
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1160	174916.531250
1161	187653.781250
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1163	298925.312500
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1170	448234.343750
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1173	397264.656250
1174	150619.984375
1175	185023.328125
1176	174889.296875
1177	252102.937500
1178	191138.906250
1179	150262.312500
1180	107521.640625
1181	194453.609375
1182	110564.882812
1183	123129.343750
1184	99945.382812
1185	94181.968750
1186	100779.179688
1187	137616.218750
1188	148097.281250
1189	146993.937500
1190	143719.015625

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1191	422813.562500
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1193	249054.156250
1194	367540.312500
1195	305967.343750
1196	342378.062500
1197	287818.187500
1198	320985.000000
1199	328182.968750
1200	353803.562500
1201	343531.781250
1202	282701.406250
1203	264089.375000
1204	333619.531250
1205	286139.531250
1206	164035.140625
1207	179154.375000
1208	172589.046875
1209	309932.312500
1210	180405.375000
1211	183972.859375
1212	206791.062500
1213	203717.796875
1214	170956.671875
1215	183523.781250

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1216	193900.828125
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1221	367046.750000
1222	511183.812500
1223	312919.406250
1224	353100.281250
1225	255379.796875
1226	342062.093750
1227	227837.250000
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1229	485575.281250
1230	191781.812500
1231	134571.531250
1232	199397.671875
1233	125465.882812
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1235	180282.609375
1236	191412.562500
1237	179496.031250
1238	178021.984375
1239	160795.796875
1240	147540.156250

1241	111262.242188
1242	139634.968750
1243	141531.843750
1244	125714.859375
1245	119363.890625
1246	126476.890625
1247	140912.984375
1248	116073.226562
1249	129596.281250
1250	262272.687500
1251	390404.750000
1252	174304.421875
1253	151739.500000
1254	172881.156250
1255	156390.750000
1256	182707.218750
1257	229043.750000
1258	153432.859375
1259	177983.250000
1260	137951.703125
1261	151171.875000
1262	148693.937500
1263	129860.085938
1264	137366.171875
1265	144516.671875

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1268	150471.312500
1269	141572.281250
1270	125854.460938
1271	125737.843750
1272	162083.437500
1273	137323.562500
1274	137474.171875
1275	138871.046875
1276	125284.304688
1277	129368.414062
1278	154608.421875
1279	137697.625000
1280	148546.078125
1281	151323.328125
1282	151952.093750
1283	155384.484375
1284	137861.906250
1285	141871.703125
1286	160193.859375
1287	119677.195312
1288	128375.859375
1289	138477.625000
1290	140670.093750

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1291	189292.343750
1292	149103.359375
1293	204764.109375
1294	127285.640625
1295	93626.476562
1296	65624.781250
1297	85693.523438
1298	162543.500000
1299	130048.851562
1300	141852.312500
1301	146559.781250
1302	193977.437500
1303	163109.562500
1304	270031.187500
1305	140423.093750
1306	87413.757812
1307	128568.953125
1308	122255.132812
1309	149873.593750
1310	119602.632812
1311	123613.085938
1312	147462.562500
1313	139209.812500
1314	131180.890625
1315	148127.171875

1316	141645.640625
1317	120221.507812
1318	120492.679688
1319	103543.531250
1320	100649.476562
1321	94552.132812
1322	106267.453125
1323	127620.156250
1324	133122.750000
1325	75585.625000
1326	123484.054688
1327	82318.382812
1328	207647.031250
1329	92228.046875
1330	113240.414062
1331	57600.238281
1332	176650.812500
1333	107678.570312
1334	116766.351562
1335	105232.859375
1336	219691.015625
1337	123032.414062
1338	116632.960938
1339	69425.671875
1340	113150.984375



1341	134301.000000
1342	165462.531250
1343	144532.078125
1344	101186.578125
1345	74511.773438
1346	154769.984375
1347	150122.468750
1348	134182.515625
1349	138740.796875
1350	157350.734375
1351	145589.968750
1352	145381.656250
1353	149738.734375
1354	95547.601562
1355	236583.812500
1356	144054.906250
1357	129829.265625
1358	171395.265625
1359	131435.703125
1360	101293.281250
1361	197259.218750
1362	262025.906250
1363	171305.859375
1364	159918.468750
1365	126728.632812

1366	140580.937500
1367	209884.765625
1368	180880.218750
1369	232246.765625
1370	185667.937500
1371	230830.218750
1372	291796.125000
1373	217740.312500
1374	217944.359375
1375	189047.484375
1376	164072.593750
1377	147907.187500
1378	179658.656250
1379	205400.781250
1380	202845.437500
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1383	156649.046875
1384	122861.804688
1385	212124.109375
1386	204238.656250
1387	215041.640625
1388	205705.953125
1389	289824.625000
1390	240747.000000

1391	233788.765625
1392	235566.625000
1393	141126.890625
1394	202774.703125
1395	208787.484375
1396	186332.781250
1397	194844.062500
1398	124523.312500
1399	128558.851562
1400	122548.585938
1401	194116.546875
1402	125386.750000
1403	252185.453125
1404	143736.968750
1405	135341.546875
1406	93643.812500
1407	107343.890625
1408	115828.343750
1409	145882.515625
1410	101125.867188
1411	55078.808594
1412	104658.515625
1413	141678.328125
1414	111792.507812
1415	151027.015625

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1416	136781.218750
1417	174255.421875
1418	142940.375000
1419	99637.335938
1420	153612.796875
1421	163693.046875
1422	177678.750000
1423	197832.140625
1424	207997.765625
1425	212018.906250
1426	106782.328125
1427	131837.718750
1428	54461.425781
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1430	129674.257812
1431	56855.742188
1432	112883.539062
1433	60061.296875
1434	317143.468750
1435	275290.750000
1436	207167.921875
1437	153453.890625
1438	226918.296875
1439	159375.421875
1440	216625.734375

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1441	177362.750000
1442	364325.843750
1443	366003.250000
1444	96110.023438
1445	210426.390625
1446	115125.140625
1447	132428.125000
1448	139901.218750
1449	79133.554688
1450	83788.218750
1451	150602.515625
1452	82143.851562
1453	76411.046875
1454	82260.953125
1455	79204.109375
1456	171715.171875
1457	120263.085938
1458	225017.625000

In [92]: `file=pd.read_csv(r"C:\Users\Pravesh Singh\Desktop\house-prices-advanced-regression-techniques\sample_submission.csv")`

In [93]: `file`

Out[93]:

<u>Id</u>	<u>SalePrice</u>
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2	1463	183583.683570
3	1464	179317.477511
4	1465	150730.079977
5	1466	177150.989247
6	1467	172070.659229
7	1468	175110.956520
8	1469	162011.698832
9	1470	160726.247831
10	1471	157933.279456
11	1472	145291.245020
12	1473	159672.017632
13	1474	164167.518302
14	1475	150891.638244
15	1476	179460.965187
16	1477	185034.628914
17	1478	182352.192645
18	1479	183053.458214
19	1480	187823.339254
20	1481	186544.114328
21	1482	158230.775205
22	1483	190552.829321
23	1484	147183.674872
24	1485	185855.300905

	Id	SalePrice
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26	1487	201740.620691
27	1488	162986.378896
28	1489	162330.199086
29	1490	165845.938617
30	1491	180929.622877
31	1492	163481.501520
32	1493	187798.076714
33	1494	198822.198943
34	1495	194868.409900
35	1496	152605.298564
36	1497	147797.702837
37	1498	150521.968993
38	1499	146991.630154
39	1500	150306.307815
40	1501	151164.372535
41	1502	151133.706961
42	1503	156214.042541
43	1504	171992.760735
44	1505	173214.912550
45	1506	192429.187346
46	1507	190878.695085
47	1508	194542.544136
48	1509	191849.439073
49	1510	176363.773908

	Id	SalePrice
50	1511	176954.185412
51	1512	176521.216976
52	1513	179436.704810
53	1514	220079.756777
54	1515	175502.918109
55	1516	188321.073834
56	1517	163276.324450
57	1518	185911.366293
58	1519	171392.830997
59	1520	174418.207021
60	1521	179682.709604
61	1522	179423.751582
62	1523	171756.918092
63	1524	166849.638174
64	1525	181122.168677
65	1526	170934.462747
66	1527	159738.292580
67	1528	174445.759558
68	1529	174706.363660
69	1530	164507.672539
70	1531	163602.512173
71	1532	154126.270250
72	1533	171104.853481
73	1534	167735.392705
74	1535	183003.613338



	Id	SalePrice
75	1536	172580.381161
76	1537	165407.889105
77	1538	176363.773908
78	1539	175182.950899
79	1540	190757.177789
80	1541	167186.995772
81	1542	167839.376779
82	1543	173912.421165
83	1544	154034.917446
84	1545	156002.955794
85	1546	168173.943299
86	1547	168882.437104
87	1548	168173.943299
88	1549	157580.177552
89	1550	181922.152560
90	1551	155134.227843
91	1552	188885.573320
92	1553	183963.193012
93	1554	161298.762306
94	1555	188613.667631
95	1556	175080.111823
96	1557	174744.400305
97	1558	168175.911337
98	1559	182333.472575
99	1560	158307.206742

	Id	SalePrice
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101	1562	175031.089987
102	1563	160713.294603
103	1564	173186.215014
104	1565	191736.759806
105	1566	170401.630997
106	1567	164626.577880
107	1568	205469.409445
108	1569	209561.784212
109	1570	182271.503072
110	1571	178081.549428
111	1572	178425.956139
112	1573	162015.318512
113	1574	181722.420373
114	1575	156705.730169
115	1576	182902.420342
116	1577	157574.595395
117	1578	184380.739101
118	1579	169364.469226
119	1580	175846.179822
120	1581	189673.295302
121	1582	174401.317716
122	1583	179021.448719
123	1584	189196.845337
124	1585	139647.095721

	Id	SalePrice
125	1586	161468.198289
126	1587	171557.323179
127	1588	179447.368042
128	1589	169611.619018
129	1590	172088.872656
130	1591	171190.624129
131	1592	154850.508362
132	1593	158617.655720
133	1594	209258.336937
134	1595	177939.027627
135	1596	194631.100300
136	1597	213618.871563
137	1598	198342.504229
138	1599	138607.971472
139	1600	150778.958977
140	1601	146966.230340
141	1602	162182.596210
142	1603	176825.940961
143	1604	152799.812402
144	1605	180322.322067
145	1606	177508.027228
146	1607	208029.642652
147	1608	181987.282510
148	1609	160172.727974
149	1610	176761.317654

	Id	SalePrice
150	1611	176515.497545
151	1612	176270.453065
152	1613	183050.846258
153	1614	150011.102062
154	1615	159270.537809
155	1616	163419.663729
156	1617	163399.983346
157	1618	173364.161506
158	1619	169556.835902
159	1620	183690.595996
160	1621	176980.914909
161	1622	204773.362225
162	1623	174728.655998
163	1624	181873.458244
164	1625	177322.000824
165	1626	193927.939042
166	1627	181715.622732
167	1628	199270.841200
168	1629	177109.589956
169	1630	153909.578271
170	1631	162931.203336
171	1632	166386.756718
172	1633	173719.303798
173	1634	179757.925657
174	1635	179007.601964

	Id	SalePrice
175	1636	180370.808623
176	1637	185102.616731
177	1638	198825.563452
178	1639	184294.576009
179	1640	200443.792056
180	1641	181294.784484
181	1642	174354.336268
182	1643	172023.677782
183	1644	181666.922855
184	1645	179024.491270
185	1646	178324.191576
186	1647	184534.676688
187	1648	159397.250379
188	1649	178430.966728
189	1650	177743.799386
190	1651	179395.305519
191	1652	151713.384748
192	1653	151713.384748
193	1654	168434.977996
194	1655	153999.100311
195	1656	164096.097354
196	1657	166335.403037
197	1658	163020.725376
198	1659	155862.510669
199	1660	182760.651096

	Id	SalePrice
200	1661	201912.270623
201	1662	185988.233988
202	1663	183778.448880
203	1664	170935.859218
204	1665	184468.908382
205	1666	191569.089663
206	1667	232991.025584
207	1668	180980.721388
208	1669	164279.130482
209	1670	183859.460411
210	1671	185922.465682
211	1672	191742.778119
212	1673	199954.072466
213	1674	180690.274753
214	1675	163099.309636
215	1676	140791.922472
216	1677	166481.866476
217	1678	172080.434497
218	1679	191719.161659
219	1680	160741.098613
220	1681	157829.546855
221	1682	196896.748596
222	1683	159675.423990
223	1684	182084.790902
224	1685	179233.926374

	Id	SalePrice
225	1686	155774.270902
226	1687	181354.326716
227	1688	179605.563664
228	1689	181609.348661
229	1690	178221.531623
230	1691	175559.920736
231	1692	200328.822792
232	1693	178630.060560
233	1694	177174.535222
234	1695	172515.687369
235	1696	204032.992923
236	1697	176023.232788
237	1698	202202.073342
238	1699	181734.480076
239	1700	183982.158993
240	1701	188007.942415
241	1702	185922.966764
242	1703	183978.544875
243	1704	177199.618639
244	1705	181878.647957
245	1706	173622.088728
246	1707	180728.168563
247	1708	176477.026606
248	1709	184282.266698
249	1710	162062.475384

	Id	SalePrice
250	1711	182550.070992
251	1712	180987.949625
252	1713	178173.797621
253	1714	179980.635949
254	1715	173257.637826
255	1716	177271.291059
256	1717	175338.355442
257	1718	177548.140550
258	1719	175969.916629
259	1720	175011.481953
260	1721	185199.372568
261	1722	188514.050229
262	1723	185080.145269
263	1724	157304.402574
264	1725	194260.859481
265	1726	181262.329995
266	1727	157003.292707
267	1728	182924.499360
268	1729	181902.586375
269	1730	188985.371708
270	1731	185290.904495
271	1732	177304.425753
272	1733	166274.900491
273	1734	177807.420530
274	1735	180330.624816



	Id	SalePrice
275	1736	179069.112235
276	1737	175943.371817
277	1738	185199.050610
278	1739	167350.910825
279	1740	149315.311876
280	1741	139010.847767
281	1742	155412.151845
282	1743	171308.313985
283	1744	176220.543266
284	1745	177643.434992
285	1746	187222.653265
286	1747	185635.132083
287	1748	206492.534216
288	1749	181681.021082
289	1750	180500.198073
290	1751	206486.170868
291	1752	161334.301195
292	1753	176156.558314
293	1754	191642.223479
294	1755	191945.808028
295	1756	164146.306037
296	1757	179883.057071
297	1758	178071.137669
298	1759	188241.637897
299	1760	174559.656173

	Id	SalePrice
300	1761	182347.363042
301	1762	191507.251873
302	1763	199751.865597
303	1764	162106.416145
304	1765	164575.982314
305	1766	179176.352181
306	1767	177327.403858
307	1768	177818.083762
308	1769	186965.204048
309	1770	178762.742169
310	1771	183322.866146
311	1772	178903.295932
312	1773	186570.129422
313	1774	199144.242829
314	1775	172154.713311
315	1776	177444.019202
316	1777	166200.938073
317	1778	158995.770556
318	1779	168273.282455
319	1780	189680.453053
320	1781	181681.021082
321	1782	160277.142644
322	1783	197318.547158
323	1784	162228.935604
324	1785	187340.455456

	Id	SalePrice
325	1786	181065.347037
326	1787	190233.609103
327	1788	157929.594852
328	1789	168557.001935
329	1790	160805.584646
330	1791	221648.391978
331	1792	180539.880798
332	1793	182105.616284
333	1794	166380.852603
334	1795	178942.155617
335	1796	162804.747800
336	1797	183077.684393
337	1798	171728.472029
338	1799	164786.741541
339	1800	177427.267170
340	1801	197318.547158
341	1802	178658.114178
342	1803	185437.320524
343	1804	169759.652490
344	1805	173986.635055
345	1806	168607.664289
346	1807	194138.519145
347	1808	192502.440922
348	1809	176746.969819
349	1810	177604.891703

	Id	SalePrice
350	1811	193283.746585
351	1812	181627.061007
352	1813	169071.620258
353	1814	167398.006471
354	1815	150106.505142
355	1816	159650.304286
356	1817	179471.235975
357	1818	177109.589956
358	1819	166558.113328
359	1820	153796.714320
360	1821	174520.152571
361	1822	196297.958295
362	1823	169100.681601
363	1824	176911.319164
364	1825	169234.645483
365	1826	172386.297919
366	1827	156031.904802
367	1828	168202.892307
368	1829	166505.984018
369	1830	176507.370221
370	1831	180116.752553
371	1832	183072.740591
372	1833	189595.964678
373	1834	167523.919076
374	1835	210817.775863

	Id	SalePrice
375	1836	172942.930813
376	1837	145286.278144
377	1838	176468.653371
378	1839	159040.069562
379	1840	178518.204333
380	1841	169163.980787
381	1842	189786.685275
382	1843	181246.728524
383	1844	176349.927154
384	1845	205266.631009
385	1846	187397.993362
386	1847	208943.427726
387	1848	165014.532908
388	1849	182492.037566
389	1850	161718.712590
390	1851	180084.118941
391	1852	178534.950802
392	1853	151217.259961
393	1854	156342.717588
394	1855	188511.443835
395	1856	183570.337897
396	1857	225810.160292
397	1858	214217.401132
398	1859	187665.641016
399	1860	161157.177744

	Id	SalePrice
400	1861	187643.992594
401	1862	228156.372839
402	1863	220449.534665
403	1864	220522.352084
404	1865	156647.763532
405	1866	187388.833375
406	1867	178640.723792
407	1868	180847.216739
408	1869	159505.170529
409	1870	164305.538021
410	1871	180181.196737
411	1872	184602.734990
412	1873	193440.372174
413	1874	184199.788210
414	1875	196241.892908
415	1876	175588.618271
416	1877	179503.046547
417	1878	183658.076583
418	1879	193700.976276
419	1880	165399.624507
420	1881	186847.944787
421	1882	198127.732878
422	1883	183320.898108
423	1884	181613.606697
424	1885	178298.791762

	Id	SalePrice
425	1886	185733.534001
426	1887	180008.188485
427	1888	175127.596216
428	1889	183467.176863
429	1890	182705.546022
430	1891	152324.943593
431	1892	169878.515981
432	1893	183735.975077
433	1894	224118.280106
434	1895	169355.202465
435	1896	180054.276407
436	1897	174081.601977
437	1898	168494.985022
438	1899	181871.598843
439	1900	173554.489658
440	1901	169805.382166
441	1902	176192.990729
442	1903	204264.392847
443	1904	169630.906957
444	1905	185724.838807
445	1906	195699.036282
446	1907	189494.276162
447	1908	149607.905673
448	1909	154650.199046
449	1910	151579.558140

	Id	SalePrice
450	1911	185147.380531
451	1912	196314.531204
452	1913	210802.395364
453	1914	166271.286373
454	1915	154865.359143
455	1916	173575.505287
456	1917	179399.563554
457	1918	164280.776562
458	1919	171247.489481
459	1920	166878.587182
460	1921	188129.459711
461	1922	183517.343697
462	1923	175522.026926
463	1924	190060.105331
464	1925	174179.824772
465	1926	171059.523675
466	1927	183004.186769
467	1928	183601.647387
468	1929	163539.327186
469	1930	164677.676392
470	1931	162395.073865
471	1932	182207.632320
472	1933	192223.939790
473	1934	176391.829390
474	1935	181913.179121



	Id	SalePrice
475	1936	179136.097888
476	1937	196595.568243
477	1938	194822.365691
478	1939	148356.669441
479	1940	160387.604264
480	1941	181276.500572
481	1942	192474.817899
482	1943	157699.907796
483	1944	215785.540813
484	1945	181824.300999
485	1946	221813.009482
486	1947	165281.292597
487	1948	255629.490470
488	1949	173154.590991
489	1950	183884.652465
490	1951	200210.353608
491	1952	186599.221265
492	1953	192718.532696
493	1954	178628.665953
494	1955	180650.342418
495	1956	206003.107947
496	1957	166457.678449
497	1958	202916.221653
498	1959	192463.969983
499	1960	171775.497190

	Id	SalePrice
500	1961	175249.222149
501	1962	147086.598940
502	1963	149709.672100
503	1964	171411.404534
504	1965	178188.964799
505	1966	156491.711373
506	1967	180953.241201
507	1968	203909.759061
508	1969	175470.149088
509	1970	205578.333622
510	1971	199428.857699
511	1972	187599.163869
512	1973	192265.198110
513	1974	196666.554898
514	1975	155537.862253
515	1976	169543.240621
516	1977	202487.010171
517	1978	208232.716273
518	1979	173621.195203
519	1980	172414.608572
520	1981	164400.756416
521	1982	160480.424025
522	1983	156060.853810
523	1984	157437.192821
524	1985	158163.720930

	Id	SalePrice
525	1986	154849.043269
526	1987	152186.609342
527	1988	180340.215399
528	1989	178344.624514
529	1990	190170.382267
530	1991	168092.975481
531	1992	178757.912567
532	1993	174518.256882
533	1994	198168.490116
534	1995	176882.693979
535	1996	183801.672896
536	1997	196400.046681
537	1998	172281.605004
538	1999	196380.366297
539	2000	198228.354307
540	2001	195556.581269
541	2002	186453.264469
542	2003	181869.381196
543	2004	175610.840124
544	2005	183438.730800
545	2006	179584.488673
546	2007	182386.152242
547	2008	160750.367237
548	2009	182477.505046
549	2010	187720.359207

	Id	SalePrice
550	2011	187201.942082
551	2012	176385.102235
552	2013	175901.787841
553	2014	182584.280198
554	2015	195664.686104
555	2016	181420.346494
556	2017	176676.049952
557	2018	181594.678867
558	2019	178521.747965
559	2020	175895.883726
560	2021	168468.005916
561	2022	200973.129448
562	2023	197030.641992
563	2024	192867.417845
564	2025	196449.247639
565	2026	141684.196399
566	2027	153353.334124
567	2028	151143.549017
568	2029	163753.087114
569	2030	158682.460014
570	2031	144959.835251
571	2032	160144.390549
572	2033	156286.534304
573	2034	165726.707620
574	2035	182427.481047

	Id	SalePrice
575	2036	173310.561540
576	2037	173310.561540
577	2038	151556.014030
578	2039	158908.146069
579	2040	209834.383093
580	2041	192410.516551
581	2042	174026.247295
582	2043	195499.830115
583	2044	200918.018812
584	2045	207243.616024
585	2046	196149.783852
586	2047	192097.914850
587	2048	178570.948924
588	2049	228617.968325
589	2050	199929.884438
590	2051	160206.365613
591	2052	179854.431886
592	2053	185987.340462
593	2054	161122.505608
594	2055	175949.342720
595	2056	183683.590595
596	2057	176401.347623
597	2058	205832.532528
598	2059	177799.799849
599	2060	167565.362080

	Id	SalePrice
600	2061	186348.958437
601	2062	179782.759465
602	2063	169837.623333
603	2064	178817.275676
604	2065	174444.479149
605	2066	192834.968917
606	2067	196564.717985
607	2068	206977.567039
608	2069	157054.253944
609	2070	175142.948079
610	2071	159932.164365
611	2072	182801.408334
612	2073	181510.375177
613	2074	181613.035129
614	2075	186920.512598
615	2076	157950.170625
616	2077	176115.159023
617	2078	182744.514344
618	2079	180660.683692
619	2080	160775.629777
620	2081	186711.715848
621	2082	223581.758191
622	2083	172330.943237
623	2084	163474.633393
624	2085	175308.263300

	Id	SalePrice
625	2086	187462.725306
626	2087	180655.101535
627	2088	152121.986035
628	2089	159856.233910
629	2090	186559.854937
630	2091	183962.550959
631	2092	162107.168699
632	2093	162582.288981
633	2094	154407.701597
634	2095	181625.666399
635	2096	164810.609474
636	2097	176429.401242
637	2098	179188.089925
638	2099	145997.635378
639	2100	218676.768270
640	2101	188323.861214
641	2102	168690.072291
642	2103	165088.746798
643	2104	191435.007885
644	2105	168864.404665
645	2106	176041.882372
646	2107	215911.674390
647	2108	167388.238629
648	2109	163854.786753
649	2110	163299.477980

	Id	SalePrice
650	2111	178298.214633
651	2112	176376.586165
652	2113	170211.043977
653	2114	170818.344786
654	2115	174388.867433
655	2116	161112.987375
656	2117	172179.082325
657	2118	157798.309714
658	2119	169106.151423
659	2120	170129.531364
660	2121	157680.227413
661	2122	162690.209132
662	2123	146968.379365
663	2124	181507.721372
664	2125	191215.589753
665	2126	189432.689845
666	2127	207271.484958
667	2128	170030.807488
668	2129	148409.806476
669	2130	193850.613979
670	2131	193808.319298
671	2132	166300.235381
672	2133	163474.633393
673	2134	177473.606565
674	2135	157443.925537



	Id	SalePrice
675	2136	180681.007992
676	2137	183463.170300
677	2138	182481.763081
678	2139	193717.151179
679	2140	182782.550990
680	2141	175530.651633
681	2142	177804.057885
682	2143	159448.670849
683	2144	181338.976718
684	2145	178553.558537
685	2146	162820.928265
686	2147	188832.479997
687	2148	164682.185899
688	2149	181549.735944
689	2150	199158.097009
690	2151	152889.520991
691	2152	181150.551679
692	2153	181416.732376
693	2154	164391.238182
694	2155	185421.046499
695	2156	193981.327550
696	2157	178824.324789
697	2158	209270.051606
698	2159	177801.266806
699	2160	179053.762236

	Id	SalePrice
700	2161	178762.170602
701	2162	184655.300458
702	2163	191284.655780
703	2164	179598.085819
704	2165	167517.628079
705	2166	182873.903794
706	2167	177484.913714
707	2168	188444.597320
708	2169	179184.153849
709	2170	184365.175781
710	2171	184479.322005
711	2172	182927.863869
712	2173	178611.639374
713	2174	181943.343614
714	2175	175080.614768
715	2176	190720.794649
716	2177	198422.868145
717	2178	184482.113083
718	2179	139214.952188
719	2180	169233.113602
720	2181	180664.118687
721	2182	178818.742633
722	2183	180422.049970
723	2184	178601.936456
724	2185	183083.159776

	Id	SalePrice
725	2186	173163.101500
726	2187	185968.161160
727	2188	171226.050683
728	2189	281643.976117
729	2190	160031.711281
730	2191	162775.979779
731	2192	160735.445970
732	2193	166646.109049
733	2194	188384.548445
734	2195	165830.697255
735	2196	182138.358533
736	2197	171595.397976
737	2198	160337.079184
738	2199	191215.088672
739	2200	166956.093232
740	2201	186581.830879
741	2202	176450.548582
742	2203	193743.194910
743	2204	198882.566078
744	2205	176385.102235
745	2206	162447.639334
746	2207	193782.555677
747	2208	183653.890897
748	2209	210578.623547
749	2210	158527.164107

	Id	SalePrice
750	2211	163081.025723
751	2212	174388.867433
752	2213	191905.870132
753	2214	174388.867433
754	2215	161642.711649
755	2216	186939.507215
756	2217	172482.165793
757	2218	159695.999764
758	2219	157230.369671
759	2220	179188.089925
760	2221	157972.821210
761	2222	156804.951429
762	2223	211491.972464
763	2224	186537.246201
764	2225	200468.161071
765	2226	182241.340444
766	2227	157342.225898
767	2228	182022.387106
768	2229	181244.510877
769	2230	178556.671574
770	2231	189547.199876
771	2232	187948.651656
772	2233	194107.287566
773	2234	183521.710369
774	2235	183682.123638

	Id	SalePrice
775	2236	178483.353073
776	2237	184003.879765
777	2238	171318.590334
778	2239	162039.754314
779	2240	154846.252191
780	2241	194822.365691
781	2242	169788.738771
782	2243	178891.554490
783	2244	152084.772429
784	2245	139169.866429
785	2246	192439.536045
786	2247	161067.859767
787	2248	158762.648505
788	2249	175569.690442
789	2250	183659.795012
790	2251	280618.132617
791	2252	180051.809152
792	2253	176519.180316
793	2254	179028.429210
794	2255	177161.583857
795	2256	180081.508850
796	2257	205895.254585
797	2258	183389.781314
798	2259	178543.647860
799	2260	194798.320499

	Id	SalePrice
800	2261	162845.613676
801	2262	148103.867007
802	2263	201016.171121
803	2264	277936.126944
804	2265	249768.279823
805	2266	161596.052160
806	2267	158011.114890
807	2268	194089.683858
808	2269	181733.336941
809	2270	182852.327722
810	2271	189893.003058
811	2272	194650.210980
812	2273	187904.461286
813	2274	171774.925623
814	2275	177998.685921
815	2276	175648.484325
816	2277	196918.071362
817	2278	184299.838071
818	2279	182379.855683
819	2280	184050.725802
820	2281	158296.975970
821	2282	175053.355553
822	2283	162293.376091
823	2284	186328.880047
824	2285	151422.116937

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825	2286	181969.358708
826	2287	189122.677024
827	2288	185645.475220
828	2289	182829.898109
829	2290	195848.788183
830	2291	198785.059551
831	2292	181676.126555
832	2293	194131.012663
833	2294	201416.004865
834	2295	185096.577206
835	2296	195158.972598
836	2297	184795.783735
837	2298	189168.263865
838	2299	216855.260149
839	2300	184946.642484
840	2301	189317.512821
841	2302	180803.277842
842	2303	175061.185858
843	2304	179074.839091
844	2305	145708.764336
845	2306	142398.022752
846	2307	161474.534864
847	2308	157025.945155
848	2309	163424.037827
849	2310	164692.778645

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850	2311	152163.244354
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852	2313	182520.230322
853	2314	187254.507550
854	2315	176489.659740
855	2316	181520.466841
856	2317	186414.978215
857	2318	185197.764640
858	2319	178657.794084
859	2320	179731.198024
860	2321	161748.271317
861	2322	158608.749069
862	2323	178807.370560
863	2324	184187.158804
864	2325	181686.104021
865	2326	190311.050228
866	2327	192252.496354
867	2328	193954.849526
868	2329	181044.201561
869	2330	180258.131220
870	2331	199641.657314
871	2332	197530.775206
872	2333	191777.196949
873	2334	195779.543034
874	2335	202112.046523



	Id	SalePrice
875	2336	192343.348077
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877	2338	186760.207966
878	2339	177733.781935
879	2340	164430.391190
880	2341	185299.601552
881	2342	186414.012339
882	2343	176401.921055
883	2344	182381.322640
884	2345	176334.184711
885	2346	184901.735847
886	2347	180085.766885
887	2348	184901.735847
888	2349	183967.561549
889	2350	193046.301575
890	2351	168538.969496
891	2352	170157.842017
892	2353	196559.709260
893	2354	177133.709362
894	2355	181553.279576
895	2356	185770.606635
896	2357	177017.595099
897	2358	184123.358537
898	2359	165970.357492
899	2360	158151.985049

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903	2364	168590.782410
904	2365	158820.474171
905	2366	151611.370577
906	2367	152125.028586
907	2368	158404.073081
908	2369	160692.078641
909	2370	170175.226842
910	2371	169854.436591
911	2372	183410.785819
912	2373	180347.194027
913	2374	178930.528374
914	2375	153346.220086
915	2376	182675.204271
916	2377	180770.649792
917	2378	188714.148088
918	2379	191393.608594
919	2380	174016.157494
920	2381	183189.685320
921	2382	183621.508758
922	2383	168991.296358
923	2384	185306.650666
924	2385	189030.680303

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925	2386	179208.665698
926	2387	174901.452793
927	2388	168337.406544
928	2389	158234.964619
929	2390	179562.453369
930	2391	174176.391641
931	2392	173931.531845
932	2393	184111.729430
933	2394	179374.482001
934	2395	207348.811885
935	2396	186983.419339
936	2397	206779.094050
937	2398	177472.074684
938	2399	156727.948325
939	2400	157090.568462
940	2401	160387.032697
941	2402	172410.280051
942	2403	191603.365657
943	2404	182152.207151
944	2405	180161.697341
945	2406	169652.235284
946	2407	182503.520140
947	2408	179714.630677
948	2409	180282.570720
949	2410	192600.338060

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954	2415	198176.470907
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956	2417	178003.582312
957	2418	179180.469245
958	2419	191930.561105
959	2420	175590.266215
960	2421	176713.193072
961	2422	180159.090947
962	2423	188090.100808
963	2424	186184.717728
964	2425	223055.588672
965	2426	158270.753116
966	2427	184733.128466
967	2428	199926.378957
968	2429	175075.785166
969	2430	180917.925148
970	2431	182067.760625
971	2432	178238.601915
972	2433	173454.944607
973	2434	176821.936263
974	2435	183642.191304

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977	2438	180096.931198
978	2439	160620.728179
979	2440	175286.544392
980	2441	153494.783276
981	2442	156407.659155
982	2443	162162.525246
983	2444	166809.886827
984	2445	172929.156409
985	2446	193514.330894
986	2447	181612.141604
987	2448	191745.386377
988	2449	171369.325038
989	2450	184425.470567
990	2451	170563.252355
991	2452	184522.369240
992	2453	164968.947931
993	2454	157939.621592
994	2455	151520.381580
995	2456	176129.508723
996	2457	171112.978971
997	2458	169762.081624
998	2459	162246.828936
999	2460	171339.303382

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1003	2464	189806.546645
1004	2465	175370.990918
1005	2466	196895.599900
1006	2467	176905.917995
1007	2468	176866.557228
1008	2469	163590.677170
1009	2470	212693.502958
1010	2471	192686.931748
1011	2472	181578.684952
1012	2473	166475.457582
1013	2474	185998.255166
1014	2475	185527.714878
1015	2476	159027.118198
1016	2477	181169.654934
1017	2478	176732.915305
1018	2479	191619.294649
1019	2480	189114.303789
1020	2481	180934.635330
1021	2482	164573.372223
1022	2483	173902.011270
1023	2484	165625.127741
1024	2485	179555.219571

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1026	2487	207566.124704
1027	2488	163899.981149
1028	2489	189179.428178
1029	2490	193892.880023
1030	2491	178980.874331
1031	2492	179749.876244
1032	2493	197999.674976
1033	2494	203717.470296
1034	2495	185249.261157
1035	2496	201691.208275
1036	2497	181956.548315
1037	2498	171895.936276
1038	2499	187245.168439
1039	2500	157816.774613
1040	2501	191702.912573
1041	2502	198599.420029
1042	2503	187193.313676
1043	2504	220514.994000
1044	2505	181814.527595
1045	2506	183750.755372
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1047	2508	185830.971907
1048	2509	185497.872344
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1055	2516	180990.241486
1056	2517	180064.941503
1057	2518	196070.997394
1058	2519	180352.919019
1059	2520	183367.953769
1060	2521	176734.841494
1061	2522	180848.220766
1062	2523	187806.059369
1063	2524	180521.526400
1064	2525	181502.754496
1065	2526	174525.879427
1066	2527	188927.984063
1067	2528	184728.870431
1068	2529	179857.975518
1069	2530	180962.868072
1070	2531	179194.066390
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1072	2533	180638.463703
1073	2534	185846.215132
1074	2535	195174.031139



	Id	SalePrice
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1076	2537	164200.595497
1077	2538	178403.094097
1078	2539	170774.840183
1079	2540	179879.945898
1080	2541	177668.192753
1081	2542	180174.328611
1082	2543	170643.303572
1083	2544	165448.004290
1084	2545	195531.754886
1085	2546	165314.177682
1086	2547	172532.757661
1087	2548	203310.218070
1088	2549	175090.062516
1089	2550	230841.338626
1090	2551	155225.190066
1091	2552	168322.342442
1092	2553	165956.259265
1093	2554	193956.817564
1094	2555	171070.367894
1095	2556	166285.243628
1096	2557	182875.801347
1097	2558	218108.536770
1098	2559	174378.777632
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1104	2565	174894.588364
1105	2566	196544.144076
1106	2567	179036.158528
1107	2568	211423.986511
1108	2569	208156.398935
1109	2570	159233.941347
1110	2571	210820.115135
1111	2572	140196.109798
1112	2573	198678.469083
1113	2574	186818.610761
1114	2575	175044.797634
1115	2576	180031.162893
1116	2577	176889.171525
1117	2578	159638.856166
1118	2579	154287.264376
1119	2580	191885.618181
1120	2581	177503.378613
1121	2582	166548.316850
1122	2583	164475.149429
1123	2584	167484.744858
1124	2585	188683.160555

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1125	2586	162243.399503
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1128	2589	163438.959094
1129	2590	161495.539369
1130	2591	216032.303722
1131	2592	176632.181541
1132	2593	168743.001567
1133	2594	183810.118481
1134	2595	156794.360547
1135	2596	169136.430114
1136	2597	183203.318752
1137	2598	213252.926931
1138	2599	190550.327867
1139	2600	234707.209860
1140	2601	135751.318893
1141	2602	164228.458869
1142	2603	153219.437030
1143	2604	164210.746524
1144	2605	163883.229118
1145	2606	154892.776270
1146	2607	197092.087338
1147	2608	228148.376399
1148	2609	178680.587504
1149	2610	165643.341168

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1153	2614	189562.873697
1154	2615	170591.884966
1155	2616	172934.351683
1156	2617	186425.069879
1157	2618	218648.131133
1158	2619	183035.606761
1159	2620	178378.906069
1160	2621	184516.716598
1161	2622	181419.525318
1162	2623	196858.923438
1163	2624	189228.701486
1164	2625	208973.380761
1165	2626	180269.868964
1166	2627	159488.713684
1167	2628	191490.299508
1168	2629	228684.245138
1169	2630	201842.998700
1170	2631	209242.822892
1171	2632	202357.622585
1172	2633	168238.612183
1173	2634	202524.124654
1174	2635	170588.771930

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1178	2639	183994.542518
1179	2640	182951.482194
1180	2641	174126.297156
1181	2642	170575.496743
1182	2643	175332.239870
1183	2644	167522.061539
1184	2645	168095.583739
1185	2646	154406.415627
1186	2647	170996.973346
1187	2648	159056.890246
1188	2649	181373.616519
1189	2650	152272.560976
1190	2651	168664.346821
1191	2652	211007.008292
1192	2653	182909.515033
1193	2654	203926.829353
1194	2655	179082.825443
1195	2656	206260.099795
1196	2657	181732.443416
1197	2658	189698.740693
1198	2659	203074.346790
1199	2660	201670.634366

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1203	2664	158313.615667
1204	2665	151951.955410
1205	2666	162537.527045
1206	2667	178998.337068
1207	2668	186732.584943
1208	2669	187323.318406
1209	2670	199437.232798
1210	2671	185546.680859
1211	2672	161595.015799
1212	2673	154672.422763
1213	2674	159355.710116
1214	2675	155919.014078
1215	2676	182424.870956
1216	2677	178100.589622
1217	2678	202577.900044
1218	2679	177862.778941
1219	2680	182056.024745
1220	2681	191403.199177
1221	2682	196264.754980
1222	2683	209375.003420
1223	2684	196691.819302
1224	2685	192458.431540

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1228	2689	171418.640196
1229	2690	194698.882220
1230	2691	174841.840075
1231	2692	172965.476489
1232	2693	189386.323677
1233	2694	185682.618340
1234	2695	176412.012719
1235	2696	174976.489723
1236	2697	180718.581708
1237	2698	186131.188248
1238	2699	165220.786354
1239	2700	164115.893800
1240	2701	182125.729127
1241	2702	182285.140233
1242	2703	196325.442210
1243	2704	164865.215330
1244	2705	182694.492210
1245	2706	185425.485521
1246	2707	171414.704119
1247	2708	183433.472466
1248	2709	176844.981156
1249	2710	180568.187753

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1252	2713	142754.489166
1253	2714	156106.800761
1254	2715	155895.397618
1255	2716	159851.977739
1256	2717	185157.832306
1257	2718	180716.291711
1258	2719	176901.093954
1259	2720	181017.222455
1260	2721	183269.159408
1261	2722	193550.830097
1262	2723	170625.842700
1263	2724	182012.405943
1264	2725	179162.507291
1265	2726	183269.159408
1266	2727	180589.836175
1267	2728	181465.935199
1268	2729	196053.029878
1269	2730	183421.020319
1270	2731	167926.839084
1271	2732	168027.530998
1272	2733	182164.266854
1273	2734	172469.071593
1274	2735	181059.374300



	Id	SalePrice
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1278	2739	193789.648503
1279	2740	173550.025728
1280	2741	176487.943175
1281	2742	188813.302559
1282	2743	178531.911979
1283	2744	182145.731469
1284	2745	179196.465024
1285	2746	169618.349901
1286	2747	170010.168655
1287	2748	181739.671652
1288	2749	172846.934956
1289	2750	195560.883017
1290	2751	180358.114293
1291	2752	211817.702818
1292	2753	176170.128687
1293	2754	234492.248264
1294	2755	182450.956536
1295	2756	174902.068073
1296	2757	173684.174294
1297	2758	147196.673678
1298	2759	175231.189710
1299	2760	193417.647406

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1302	2763	186735.697980
1303	2764	172922.865411
1304	2765	202551.677191
1305	2766	190485.634074
1306	2767	173439.493622
1307	2768	196613.598849
1308	2769	178152.259701
1309	2770	174519.904826
1310	2771	172627.796933
1311	2772	173732.689486
1312	2773	209219.844787
1313	2774	181059.374300
1314	2775	188515.443002
1315	2776	182164.266854
1316	2777	188137.901598
1317	2778	158893.543063
1318	2779	189579.650668
1319	2780	165229.803506
1320	2781	162186.071220
1321	2782	166374.879866
1322	2783	161665.184975
1323	2784	175079.328798
1324	2785	203840.874021

	Id	SalePrice
1325	2786	152129.078861
1326	2787	181012.141380
1327	2788	161305.535038
1328	2789	203326.392972
1329	2790	168385.571142
1330	2791	183564.365160
1331	2792	163784.619441
1332	2793	171989.192194
1333	2794	180839.956168
1334	2795	170895.923186
1335	2796	174071.054809
1336	2797	259423.859148
1337	2798	188000.824680
1338	2799	179171.703565
1339	2800	171022.241448
1340	2801	174126.297156
1341	2802	187625.573272
1342	2803	199567.946369
1343	2804	205328.078219
1344	2805	166231.535025
1345	2806	154743.916061
1346	2807	159714.537013
1347	2808	185563.069082
1348	2809	171500.796725
1349	2810	180983.443845

	Id	SalePrice
1350	2811	183141.236915
1351	2812	178498.634450
1352	2813	224323.710512
1353	2814	218200.642128
1354	2815	182283.177757
1355	2816	190054.639237
1356	2817	160192.453935
1357	2818	171289.393582
1358	2819	151131.098734
1359	2820	181721.458226
1360	2821	172725.053852
1361	2822	222438.699143
1362	2823	235419.373449
1363	2824	185150.926028
1364	2825	184772.239625
1365	2826	180658.216436
1366	2827	209673.316647
1367	2828	205939.810626
1368	2829	165633.573326
1369	2830	186030.317211
1370	2831	160312.319589
1371	2832	190702.440251
1372	2833	175122.810327
1373	2834	183783.139375
1374	2835	178290.666302

	Id	SalePrice
1375	2836	181605.343963
1376	2837	187992.451445
1377	2838	188885.117815
1378	2839	189959.344795
1379	2840	179258.619211
1380	2841	181518.750276
1381	2842	193008.659237
1382	2843	186313.893856
1383	2844	181499.391851
1384	2845	174126.297156
1385	2846	183918.612063
1386	2847	184114.270899
1387	2848	158540.947801
1388	2849	197034.759056
1389	2850	185170.284453
1390	2851	221134.533635
1391	2852	184306.637576
1392	2853	199792.302741
1393	2854	143237.803560
1394	2855	177294.838898
1395	2856	182368.620884
1396	2857	176487.943175
1397	2858	183849.408762
1398	2859	184964.141507
1399	2860	196395.969632

	Id	SalePrice
1400	2861	188374.936650
1401	2862	176261.296806
1402	2863	163628.142248
1403	2864	180618.032629
1404	2865	161647.329794
1405	2866	167129.598868
1406	2867	174750.988353
1407	2868	177560.202116
1408	2869	192577.796113
1409	2870	199202.898961
1410	2871	182818.156667
1411	2872	148217.262541
1412	2873	188997.797082
1413	2874	185807.928878
1414	2875	177030.477842
1415	2876	175942.474594
1416	2877	172912.518576
1417	2878	198359.248865
1418	2879	184379.133036
1419	2880	194255.566949
1420	2881	209449.651603
1421	2882	169979.323958
1422	2883	188206.281859
1423	2884	186412.438609
1424	2885	196761.386410

	Id	SalePrice
1425	2886	208353.269558
1426	2887	166548.067241
1427	2888	175942.474594
1428	2889	166790.457916
1429	2890	160515.850579
1430	2891	192167.621096
1431	2892	178751.551083
1432	2893	198678.894117
1433	2894	164553.120272
1434	2895	156887.932862
1435	2896	164185.777306
1436	2897	212992.120631
1437	2898	197468.550533
1438	2899	180106.843740
1439	2900	183972.071057
1440	2901	245283.198338
1441	2902	170351.963411
1442	2903	195596.307707
1443	2904	189369.756330
1444	2905	223667.404552
1445	2906	169335.310624
1446	2907	167411.028352
1447	2908	187709.555004
1448	2909	196526.002999
1449	2910	137402.569856

	<b>Id</b>	<b>SalePrice</b>
1450	2911	165086.775062
1451	2912	188506.431412
1452	2913	172917.456816
1453	2914	166274.325226
1454	2915	167081.220949
1455	2916	164788.778231
1456	2917	219222.423400
1457	2918	184924.279659
1458	2919	187741.866657

```
In [94]: dataset=pd.concat([file['Id'],pred],axis=1)
```

```
In [96]: dataset.columns=['Id','SalePrice']
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```
In [97]: dataset
```

Out[97]:

	<b>Id</b>	<b>SalePrice</b>
0	1461	122035.937500
1	1462	148993.281250
2	1463	184901.750000
3	1464	188813.906250
4	1465	195155.093750
5	1466	172504.078125
6	1467	171066.218750
7	1468	167836.765625



	Id	SalePrice
8	1469	183243.687500
9	1470	123009.796875
10	1471	199576.968750
11	1472	95499.937500
12	1473	100359.296875
13	1474	155164.031250
14	1475	137743.015625
15	1476	378633.468750
16	1477	260863.609375
17	1478	296175.687500
18	1479	248795.968750
19	1480	489538.812500
20	1481	311151.312500
21	1482	206368.140625
22	1483	163934.640625
23	1484	172379.015625
24	1485	169703.671875
25	1486	193454.109375
26	1487	313713.062500
27	1488	234421.343750
28	1489	209882.078125
29	1490	213501.203125
30	1491	185637.734375
31	1492	90864.078125
32	1493	193276.796875

	Id	SalePrice
33	1494	284739.500000
34	1495	291762.187500
35	1496	220869.687500
36	1497	190283.000000
37	1498	162076.375000
38	1499	160055.875000
39	1500	152391.171875
40	1501	176042.984375
41	1502	161210.375000
42	1503	301566.968750
43	1504	220879.937500
44	1505	224267.890625
45	1506	193112.234375
46	1507	236909.234375
47	1508	198688.734375
48	1509	167033.437500
49	1510	144723.828125
50	1511	142615.750000
51	1512	169802.296875
52	1513	150995.359375
53	1514	167890.671875
54	1515	188167.218750
55	1516	164138.859375
56	1517	149279.062500
57	1518	125207.875000

	Id	SalePrice
58	1519	224133.734375
59	1520	136375.062500
60	1521	139038.609375
61	1522	165720.656250
62	1523	109276.796875
63	1524	124444.242188
64	1525	127639.312500
65	1526	122604.781250
66	1527	102730.664062
67	1528	130726.054688
68	1529	145911.640625
69	1530	183919.875000
70	1531	109332.375000
71	1532	103025.226562
72	1533	138232.562500
73	1534	117160.851562
74	1535	157103.359375
75	1536	116192.218750
76	1537	71994.570312
77	1538	178250.234375
78	1539	206017.781250
79	1540	98519.578125
80	1541	148553.968750
81	1542	140808.015625
82	1543	232448.328125

	Id	SalePrice
83	1544	75354.492188
84	1545	103086.859375
85	1546	130365.109375
86	1547	137881.203125
87	1548	138169.609375
88	1549	121031.937500
89	1550	144433.593750
90	1551	109466.187500
91	1552	131654.593750
92	1553	149121.234375
93	1554	109503.664062
94	1555	165886.687500
95	1556	80318.804688
96	1557	112065.632812
97	1558	89956.781250
98	1559	103527.289062
99	1560	133695.671875
100	1561	140191.203125
101	1562	127361.929688
102	1563	122329.906250
103	1564	157181.812500
104	1565	146820.250000
105	1566	213598.453125
106	1567	71304.382812
107	1568	224695.031250

	Id	SalePrice
108	1569	140954.468750
109	1570	129272.054688
110	1571	134694.031250
111	1572	151527.312500
112	1573	247265.359375
113	1574	94861.343750
114	1575	223604.734375
115	1576	222766.140625
116	1577	197889.281250
117	1578	150089.421875
118	1579	145154.750000
119	1580	187307.203125
120	1581	143947.062500
121	1582	127352.671875
122	1583	330800.781250
123	1584	236300.468750
124	1585	141950.437500
125	1586	72937.875000
126	1587	97038.343750
127	1588	149012.828125
128	1589	96558.875000
129	1590	133336.296875
130	1591	100997.218750
131	1592	125962.937500
132	1593	130758.148438

	Id	SalePrice
133	1594	133418.218750
134	1595	107258.132812
135	1596	247598.687500
136	1597	182906.781250
137	1598	206985.656250
138	1599	185266.609375
139	1600	176595.656250
140	1601	71483.796875
141	1602	113455.070312
142	1603	92702.679688
143	1604	271742.718750
144	1605	239952.828125
145	1606	163406.859375
146	1607	158868.406250
147	1608	219991.640625
148	1609	190364.984375
149	1610	152831.531250
150	1611	138829.109375
151	1612	160925.171875
152	1613	151028.703125
153	1614	126998.507812
154	1615	85869.921875
155	1616	75589.632812
156	1617	88244.054688
157	1618	126201.992188

	Id	SalePrice
158	1619	136943.718750
159	1620	147330.953125
160	1621	134163.593750
161	1622	144416.562500
162	1623	314575.812500
163	1624	225386.265625
164	1625	125786.906250
165	1626	169671.125000
166	1627	188173.437500
167	1628	269971.593750
168	1629	177259.046875
169	1630	391666.031250
170	1631	239505.859375
171	1632	247734.203125
172	1633	170285.468750
173	1634	181946.046875
174	1635	180289.578125
175	1636	152864.312500
176	1637	172295.062500
177	1638	210590.265625
178	1639	175217.640625
179	1640	256297.515625
180	1641	176620.093750
181	1642	222518.234375
182	1643	210051.531250

	Id	SalePrice
183	1644	224918.328125
184	1645	184548.906250
185	1646	152636.375000
186	1647	163625.687500
187	1648	132671.921875
188	1649	137763.062500
189	1650	120408.609375
190	1651	128143.531250
191	1652	95431.539062
192	1653	94052.039062
193	1654	151454.109375
194	1655	152953.921875
195	1656	147356.765625
196	1657	153284.343750
197	1658	148091.718750
198	1659	146653.125000
199	1660	150516.140625
200	1661	465236.468750
201	1662	390980.125000
202	1663	386977.531250
203	1664	428504.906250
204	1665	309863.968750
205	1666	332472.031250
206	1667	337381.031250
207	1668	329306.656250



	Id	SalePrice
208	1669	304396.093750
209	1670	339307.812500
210	1671	263952.531250
211	1672	511194.718750
212	1673	305311.500000
213	1674	254911.000000
214	1675	184858.843750
215	1676	189945.906250
216	1677	216126.875000
217	1678	496055.187500
218	1679	403048.187500
219	1680	334483.968750
220	1681	262201.156250
221	1682	303886.875000
222	1683	181398.390625
223	1684	169438.125000
224	1685	174246.500000
225	1686	172112.265625
226	1687	166125.093750
227	1688	181082.640625
228	1689	186945.375000
229	1690	180982.390625
230	1691	174112.421875
231	1692	260352.968750
232	1693	166094.578125

	Id	SalePrice
233	1694	182321.968750
234	1695	165348.421875
235	1696	281593.156250
236	1697	173452.093750
237	1698	407718.656250
238	1699	314016.750000
239	1700	248577.171875
240	1701	260402.703125
241	1702	254287.312500
242	1703	248735.078125
243	1704	306711.656250
244	1705	231566.203125
245	1706	450699.125000
246	1707	220132.000000
247	1708	216483.015625
248	1709	280159.718750
249	1710	214798.062500
250	1711	252379.515625
251	1712	236273.750000
252	1713	251542.296875
253	1714	223348.078125
254	1715	204546.906250
255	1716	181812.968750
256	1717	173740.468750
257	1718	140039.234375

	Id	SalePrice
258	1719	198705.328125
259	1720	255023.156250
260	1721	162508.515625
261	1722	126876.242188
262	1723	152344.968750
263	1724	208204.125000
264	1725	235275.750000
265	1726	192435.218750
266	1727	162618.562500
267	1728	178964.109375
268	1729	161063.953125
269	1730	170541.718750
270	1731	118507.328125
271	1732	130757.625000
272	1733	119492.867188
273	1734	121093.507812
274	1735	135339.953125
275	1736	117419.351562
276	1737	341131.000000
277	1738	215506.390625
278	1739	262811.375000
279	1740	227606.421875
280	1741	186950.750000
281	1742	174400.546875
282	1743	170178.453125

	Id	SalePrice
283	1744	301411.531250
284	1745	225115.750000
285	1746	219740.640625
286	1747	217185.531250
287	1748	217277.015625
288	1749	152153.765625
289	1750	132477.875000
290	1751	232405.281250
291	1752	124604.343750
292	1753	137209.593750
293	1754	205848.156250
294	1755	161934.500000
295	1756	128823.976562
296	1757	123462.125000
297	1758	149259.359375
298	1759	163264.109375
299	1760	165171.515625
300	1761	144592.984375
301	1762	161261.390625
302	1763	171560.515625
303	1764	116106.210938
304	1765	167144.593750
305	1766	169204.390625
306	1767	206800.484375
307	1768	144264.031250

	Id	SalePrice
308	1769	178643.062500
309	1770	140775.093750
310	1771	137092.171875
311	1772	131570.046875
312	1773	130715.546875
313	1774	126445.398438
314	1775	135042.843750
315	1776	120405.968750
316	1777	117038.898438
317	1778	137578.546875
318	1779	120031.625000
319	1780	173388.578125
320	1781	136485.718750
321	1782	96995.726562
322	1783	124904.937500
323	1784	100453.562500
324	1785	116282.875000
325	1786	148150.953125
326	1787	169595.609375
327	1788	56025.746094
328	1789	99692.078125
329	1790	89001.445312
330	1791	180476.250000
331	1792	154345.171875
332	1793	130324.507812

	Id	SalePrice
333	1794	143725.062500
334	1795	135015.953125
335	1796	125112.625000
336	1797	116094.523438
337	1798	127071.656250
338	1799	113807.523438
339	1800	132379.578125
340	1801	126736.609375
341	1802	156576.078125
342	1803	152491.390625
343	1804	140681.531250
344	1805	136337.734375
345	1806	110520.265625
346	1807	132788.140625
347	1808	120543.171875
348	1809	117361.382812
349	1810	147079.828125
350	1811	111144.210938
351	1812	104960.617188
352	1813	123327.632812
353	1814	97203.484375
354	1815	59793.050781
355	1816	99609.242188
356	1817	116261.195312
357	1818	135887.875000

	Id	SalePrice
358	1819	115348.484375
359	1820	70128.312500
360	1821	113924.531250
361	1822	160857.906250
362	1823	42766.289062
363	1824	137345.328125
364	1825	127686.960938
365	1826	102292.843750
366	1827	104123.242188
367	1828	140285.812500
368	1829	109145.609375
369	1830	147476.125000
370	1831	157332.484375
371	1832	95445.734375
372	1833	140702.328125
373	1834	115513.039062
374	1835	156470.203125
375	1836	126674.195312
376	1837	91219.421875
377	1838	129969.382812
378	1839	78443.742188
379	1840	164668.828125
380	1841	148360.531250
381	1842	71612.968750
382	1843	138459.796875

	Id	SalePrice
383	1844	140196.484375
384	1845	131558.187500
385	1846	154569.171875
386	1847	151189.718750
387	1848	51961.152344
388	1849	122654.679688
389	1850	122542.468750
390	1851	156982.062500
391	1852	136134.234375
392	1853	130826.367188
393	1854	167200.906250
394	1855	140004.937500
395	1856	226042.750000
396	1857	160318.078125
397	1858	130225.578125
398	1859	120180.593750
399	1860	148239.156250
400	1861	120180.593750
401	1862	258687.734375
402	1863	256736.093750
403	1864	256736.093750
404	1865	332743.187500
405	1866	332351.656250
406	1867	250588.953125
407	1868	309369.093750



	Id	SalePrice
408	1869	205092.328125
409	1870	257462.828125
410	1871	247724.578125
411	1872	167151.953125
412	1873	225783.015625
413	1874	142817.671875
414	1875	205745.562500
415	1876	190004.984375
416	1877	213009.375000
417	1878	201424.281250
418	1879	133305.437500
419	1880	134854.421875
420	1881	234376.984375
421	1882	254168.984375
422	1883	191737.750000
423	1884	211278.359375
424	1885	260649.703125
425	1886	301655.062500
426	1887	202768.937500
427	1888	274205.562500
428	1889	163314.984375
429	1890	131226.093750
430	1891	144128.453125
431	1892	106783.281250
432	1893	134398.781250

	Id	SalePrice
433	1894	125835.531250
434	1895	140828.468750
435	1896	128784.921875
436	1897	117367.296875
437	1898	107780.273438
438	1899	152408.171875
439	1900	155381.203125
440	1901	171110.890625
441	1902	133223.578125
442	1903	209410.734375
443	1904	145831.546875
444	1905	194751.062500
445	1906	164600.312500
446	1907	209032.203125
447	1908	118837.804688
448	1909	140348.093750
449	1910	123583.421875
450	1911	215113.046875
451	1912	283771.062500
452	1913	148035.000000
453	1914	70000.929688
454	1915	299709.968750
455	1916	72175.929688
456	1917	269845.218750
457	1918	136763.078125

	Id	SalePrice
458	1919	164857.750000
459	1920	151891.765625
460	1921	425771.593750
461	1922	320444.625000
462	1923	216588.234375
463	1924	219316.796875
464	1925	214934.578125
465	1926	395633.093750
466	1927	134986.546875
467	1928	160801.484375
468	1929	125995.125000
469	1930	133769.812500
470	1931	140014.843750
471	1932	134354.500000
472	1933	174205.968750
473	1934	181863.500000
474	1935	173282.765625
475	1936	186905.031250
476	1937	184194.078125
477	1938	167475.125000
478	1939	241271.203125
479	1940	194367.265625
480	1941	171098.953125
481	1942	185403.078125
482	1943	198698.515625

	Id	SalePrice
483	1944	322456.843750
484	1945	397105.156250
485	1946	171643.171875
486	1947	319244.781250
487	1948	177686.640625
488	1949	238031.234375
489	1950	181472.890625
490	1951	265176.500000
491	1952	225096.093750
492	1953	158932.375000
493	1954	187420.031250
494	1955	130785.484375
495	1956	292585.593750
496	1957	155508.406250
497	1958	316306.312500
498	1959	127739.781250
499	1960	119665.468750
500	1961	117561.953125
501	1962	97133.414062
502	1963	105335.304688
503	1964	109020.476562
504	1965	150155.375000
505	1966	157728.500000
506	1967	301893.250000
507	1968	462561.843750

	Id	SalePrice
508	1969	415383.593750
509	1970	485248.687500
510	1971	496948.375000
511	1972	386078.593750
512	1973	266360.687500
513	1974	320362.343750
514	1975	454306.031250
515	1976	278631.250000
516	1977	345710.687500
517	1978	414447.593750
518	1979	324302.812500
519	1980	190592.562500
520	1981	346926.875000
521	1982	237573.687500
522	1983	210689.953125
523	1984	172710.312500
524	1985	216325.703125
525	1986	209836.750000
526	1987	180971.656250
527	1988	173241.656250
528	1989	183910.500000
529	1990	216909.359375
530	1991	236455.671875
531	1992	209255.718750
532	1993	162796.843750

	Id	SalePrice
533	1994	234216.265625
534	1995	179545.859375
535	1996	246207.515625
536	1997	301724.937500
537	1998	348815.437500
538	1999	257930.375000
539	2000	309802.468750
540	2001	263644.750000
541	2002	228041.515625
542	2003	235736.406250
543	2004	268919.750000
544	2005	225316.218750
545	2006	232142.187500
546	2007	248212.781250
547	2008	210481.546875
548	2009	190849.859375
549	2010	188851.609375
550	2011	145426.500000
551	2012	176196.859375
552	2013	183799.765625
553	2014	186347.046875
554	2015	197363.953125
555	2016	194595.218750
556	2017	198555.437500
557	2018	120632.250000

	Id	SalePrice
558	2019	131251.484375
559	2020	111342.804688
560	2021	112780.328125
561	2022	173016.187500
562	2023	138121.296875
563	2024	217316.500000
564	2025	403966.812500
565	2026	177528.750000
566	2027	151973.171875
567	2028	152335.125000
568	2029	168626.328125
569	2030	274060.406250
570	2031	255612.000000
571	2032	271312.937500
572	2033	266130.343750
573	2034	161704.015625
574	2035	211194.468750
575	2036	192186.578125
576	2037	212160.515625
577	2038	323413.843750
578	2039	214929.234375
579	2040	379620.718750
580	2041	273279.562500
581	2042	199091.859375
582	2043	176153.843750

	Id	SalePrice
583	2044	169900.750000
584	2045	215482.375000
585	2046	132775.328125
586	2047	146582.812500
587	2048	137427.187500
588	2049	131989.281250
589	2050	186597.593750
590	2051	112425.312500
591	2052	135416.656250
592	2053	148374.453125
593	2054	80512.445312
594	2055	163959.687500
595	2056	137414.921875
596	2057	122385.328125
597	2058	229844.687500
598	2059	116964.484375
599	2060	174093.421875
600	2061	181887.781250
601	2062	135458.734375
602	2063	117507.164062
603	2064	137681.953125
604	2065	121778.882812
605	2066	173818.812500
606	2067	113200.335938
607	2068	121163.820312



	Id	SalePrice
608	2069	87306.703125
609	2070	112884.304688
610	2071	89080.210938
611	2072	129642.820312
612	2073	138661.656250
613	2074	187944.765625
614	2075	142982.593750
615	2076	127845.484375
616	2077	151657.640625
617	2078	130553.468750
618	2079	132595.796875
619	2080	114772.125000
620	2081	118496.812500
621	2082	135412.906250
622	2083	140719.875000
623	2084	114425.765625
624	2085	127407.781250
625	2086	117523.500000
626	2087	113701.773438
627	2088	99047.960938
628	2089	84681.460938
629	2090	129590.273438
630	2091	121529.273438
631	2092	131316.875000
632	2093	127129.515625

	Id	SalePrice
633	2094	128069.765625
634	2095	150608.421875
635	2096	83033.250000
636	2097	94876.335938
637	2098	149854.500000
638	2099	64102.593750
639	2100	96924.414062
640	2101	123072.445312
641	2102	125894.531250
642	2103	105057.648438
643	2104	121835.984375
644	2105	122539.312500
645	2106	67435.921875
646	2107	239411.312500
647	2108	119745.203125
648	2109	114249.859375
649	2110	131764.625000
650	2111	145275.718750
651	2112	137895.593750
652	2113	120403.406250
653	2114	103658.023438
654	2115	158387.671875
655	2116	117459.140625
656	2117	155954.078125
657	2118	120693.398438

	Id	SalePrice
658	2119	102162.148438
659	2120	114407.765625
660	2121	107459.687500
661	2122	101901.742188
662	2123	85920.625000
663	2124	169176.640625
664	2125	127306.046875
665	2126	160750.343750
666	2127	157068.718750
667	2128	120382.546875
668	2129	103116.726562
669	2130	147470.109375
670	2131	164909.046875
671	2132	116697.484375
672	2133	118039.640625
673	2134	121275.132812
674	2135	103674.085938
675	2136	74533.531250
676	2137	113462.484375
677	2138	136160.921875
678	2139	153648.234375
679	2140	141678.906250
680	2141	144216.593750
681	2142	130622.585938
682	2143	137592.859375

	Id	SalePrice
683	2144	101789.187500
684	2145	139920.828125
685	2146	158471.796875
686	2147	151398.687500
687	2148	127920.343750
688	2149	145407.984375
689	2150	223806.125000
690	2151	123087.664062
691	2152	181535.750000
692	2153	162321.281250
693	2154	107727.476562
694	2155	131077.640625
695	2156	245874.937500
696	2157	232918.375000
697	2158	235553.343750
698	2159	217929.968750
699	2160	166769.468750
700	2161	248211.593750
701	2162	435249.437500
702	2163	361533.718750
703	2164	255883.015625
704	2165	186718.078125
705	2166	150469.296875
706	2167	220253.718750
707	2168	209022.968750

	Id	SalePrice
708	2169	192110.234375
709	2170	223194.765625
710	2171	141349.125000
711	2172	140948.156250
712	2173	162141.328125
713	2174	238918.765625
714	2175	320988.312500
715	2176	332606.218750
716	2177	251346.484375
717	2178	211106.421875
718	2179	141950.437500
719	2180	196337.203125
720	2181	185093.187500
721	2182	226038.046875
722	2183	193631.828125
723	2184	134732.187500
724	2185	115674.656250
725	2186	142412.781250
726	2187	153315.015625
727	2188	158223.203125
728	2189	192655.000000
729	2190	85662.570312
730	2191	90851.453125
731	2192	90898.718750
732	2193	100631.500000

	Id	SalePrice
733	2194	104399.039062
734	2195	112168.460938
735	2196	105818.445312
736	2197	114737.585938
737	2198	158933.046875
738	2199	180537.828125
739	2200	145769.000000
740	2201	133804.484375
741	2202	213563.687500
742	2203	167312.578125
743	2204	191798.625000
744	2205	116518.875000
745	2206	149774.031250
746	2207	213906.625000
747	2208	246996.140625
748	2209	203991.703125
749	2210	125588.914062
750	2211	116167.257812
751	2212	110983.101562
752	2213	107552.718750
753	2214	131648.171875
754	2215	109088.773438
755	2216	143871.750000
756	2217	79445.117188
757	2218	81002.085938

	Id	SalePrice
758	2219	76651.468750
759	2220	75125.679688
760	2221	301387.062500
761	2222	242044.796875
762	2223	261273.718750
763	2224	216178.734375
764	2225	131000.179688
765	2226	171709.906250
766	2227	195643.593750
767	2228	278666.218750
768	2229	239501.937500
769	2230	153595.937500
770	2231	219533.062500
771	2232	172790.390625
772	2233	166325.953125
773	2234	257421.015625
774	2235	209192.140625
775	2236	289248.625000
776	2237	363796.593750
777	2238	204500.312500
778	2239	121964.796875
779	2240	159769.281250
780	2241	163114.812500
781	2242	130962.796875
782	2243	129722.054688

	Id	SalePrice
783	2244	107215.156250
784	2245	100256.539062
785	2246	144859.281250
786	2247	106267.773438
787	2248	126043.148438
788	2249	124101.867188
789	2250	134542.781250
790	2251	119865.078125
791	2252	171529.796875
792	2253	160003.609375
793	2254	180687.437500
794	2255	188622.562500
795	2256	184082.875000
796	2257	192015.250000
797	2258	170046.484375
798	2259	178191.578125
799	2260	158489.734375
800	2261	190075.828125
801	2262	208870.312500
802	2263	335192.062500
803	2264	414168.093750
804	2265	197741.421875
805	2266	291601.875000
806	2267	364779.625000
807	2268	372357.562500



	Id	SalePrice
808	2269	156965.781250
809	2270	182236.109375
810	2271	231436.218750
811	2272	200025.531250
812	2273	161298.890625
813	2274	173019.296875
814	2275	168187.765625
815	2276	186499.281250
816	2277	179795.984375
817	2278	154267.437500
818	2279	122298.000000
819	2280	121871.828125
820	2281	169793.171875
821	2282	181562.796875
822	2283	96954.125000
823	2284	105719.789062
824	2285	151356.359375
825	2286	127391.296875
826	2287	351892.500000
827	2288	270847.281250
828	2289	423546.187500
829	2290	460018.218750
830	2291	311503.781250
831	2292	428729.062500
832	2293	524480.875000

	Id	SalePrice
833	2294	466398.750000
834	2295	444407.437500
835	2296	289508.718750
836	2297	308217.781250
837	2298	307250.718750
838	2299	421495.156250
839	2300	333322.437500
840	2301	265998.718750
841	2302	232345.781250
842	2303	255747.312500
843	2304	242342.375000
844	2305	181417.031250
845	2306	180650.843750
846	2307	188552.015625
847	2308	225201.109375
848	2309	279297.343750
849	2310	209537.953125
850	2311	196677.328125
851	2312	173462.656250
852	2313	172339.687500
853	2314	169563.796875
854	2315	174304.515625
855	2316	188225.609375
856	2317	181375.453125
857	2318	176504.531250

	Id	SalePrice
858	2319	171896.093750
859	2320	185455.937500
860	2321	255371.812500
861	2322	173669.078125
862	2323	181046.062500
863	2324	168264.031250
864	2325	207192.921875
865	2326	164560.375000
866	2327	216760.468750
867	2328	224768.859375
868	2329	182380.921875
869	2330	175760.484375
870	2331	359991.000000
871	2332	464589.406250
872	2333	321472.031250
873	2334	261613.031250
874	2335	252654.187500
875	2336	339212.406250
876	2337	204404.406250
877	2338	289735.156250
878	2339	223273.250000
879	2340	396326.343750
880	2341	204470.203125
881	2342	238295.812500
882	2343	225250.984375

	Id	SalePrice
883	2344	234196.781250
884	2345	230659.593750
885	2346	216483.421875
886	2347	207203.437500
887	2348	235188.234375
888	2349	159811.640625
889	2350	267292.500000
890	2351	249911.140625
891	2352	253391.609375
892	2353	229390.781250
893	2354	135382.515625
894	2355	154279.390625
895	2356	151207.984375
896	2357	194438.734375
897	2358	194453.921875
898	2359	125314.039062
899	2360	118900.523438
900	2361	144261.781250
901	2362	276825.406250
902	2363	138031.531250
903	2364	162337.875000
904	2365	222264.031250
905	2366	190481.015625
906	2367	216348.140625
907	2368	203712.625000

	Id	SalePrice
908	2369	222307.328125
909	2370	174007.671875
910	2371	173552.515625
911	2372	188645.500000
912	2373	273008.437500
913	2374	312666.062500
914	2375	259716.625000
915	2376	297068.468750
916	2377	383541.937500
917	2378	139988.609375
918	2379	187701.656250
919	2380	141346.984375
920	2381	156333.015625
921	2382	190886.453125
922	2383	201295.609375
923	2384	245966.953125
924	2385	158989.046875
925	2386	134852.484375
926	2387	136149.828125
927	2388	101980.257812
928	2389	126598.796875
929	2390	142913.109375
930	2391	142414.140625
931	2392	118054.781250
932	2393	169798.265625

	Id	SalePrice
933	2394	148365.234375
934	2395	206188.234375
935	2396	142986.484375
936	2397	215524.250000
937	2398	124461.804688
938	2399	48794.250000
939	2400	57280.148438
940	2401	115998.656250
941	2402	142236.328125
942	2403	128035.578125
943	2404	147880.593750
944	2405	157686.062500
945	2406	138318.703125
946	2407	128836.039062
947	2408	139679.484375
948	2409	130473.296875
949	2410	171649.984375
950	2411	121113.953125
951	2412	162863.750000
952	2413	138324.687500
953	2414	135863.781250
954	2415	124007.914062
955	2416	131369.187500
956	2417	129714.617188
957	2418	126387.453125

	Id	SalePrice
958	2419	124883.093750
959	2420	123443.929688
960	2421	150706.593750
961	2422	120133.914062
962	2423	129503.093750
963	2424	152974.500000
964	2425	217780.921875
965	2426	125020.562500
966	2427	134281.328125
967	2428	169550.593750
968	2429	123541.937500
969	2430	127913.500000
970	2431	108040.328125
971	2432	142848.781250
972	2433	150910.750000
973	2434	141840.375000
974	2435	144117.031250
975	2436	110961.445312
976	2437	113359.304688
977	2438	125838.039062
978	2439	107319.335938
979	2440	122519.453125
980	2441	103334.890625
981	2442	104302.757812
982	2443	115384.976562

	Id	SalePrice
983	2444	126318.484375
984	2445	81108.164062
985	2446	127061.781250
986	2447	182274.953125
987	2448	141496.234375
988	2449	111038.695312
989	2450	151482.421875
990	2451	124598.875000
991	2452	202152.968750
992	2453	100406.343750
993	2454	126708.015625
994	2455	112414.773438
995	2456	136012.421875
996	2457	127113.796875
997	2458	114378.375000
998	2459	107472.625000
999	2460	148903.828125
1000	2461	118223.054688
1001	2462	136950.140625
1002	2463	121726.648438
1003	2464	171606.531250
1004	2465	127083.789062
1005	2466	110149.820312
1006	2467	148462.343750
1007	2468	79712.750000



	Id	SalePrice
1008	2469	70605.500000
1009	2470	171096.843750
1010	2471	209661.953125
1011	2472	174880.015625
1012	2473	121326.757812
1013	2474	87564.390625
1014	2475	226590.234375
1015	2476	116439.226562
1016	2477	128107.250000
1017	2478	158178.390625
1018	2479	109481.914062
1019	2480	144381.562500
1020	2481	117571.554688
1021	2482	131038.562500
1022	2483	118063.562500
1023	2484	120640.343750
1024	2485	125625.664062
1025	2486	150142.343750
1026	2487	176550.234375
1027	2488	153395.062500
1028	2489	144449.046875
1029	2490	150129.531250
1030	2491	89842.507812
1031	2492	171538.062500
1032	2493	147172.656250

	Id	SalePrice
1033	2494	161807.843750
1034	2495	86242.125000
1035	2496	238381.296875
1036	2497	150915.703125
1037	2498	113701.867188
1038	2499	100072.625000
1039	2500	125878.523438
1040	2501	135025.468750
1041	2502	152713.703125
1042	2503	96337.031250
1043	2504	187083.578125
1044	2505	223662.515625
1045	2506	265783.437500
1046	2507	329604.437500
1047	2508	261047.390625
1048	2509	212664.609375
1049	2510	232958.500000
1050	2511	181267.781250
1051	2512	215883.375000
1052	2513	219930.359375
1053	2514	249916.562500
1054	2515	150608.625000
1055	2516	163697.250000
1056	2517	140539.500000
1057	2518	147177.734375

	Id	SalePrice
1058	2519	224107.343750
1059	2520	209897.828125
1060	2521	185300.578125
1061	2522	219787.437500
1062	2523	123102.851562
1063	2524	134722.812500
1064	2525	148425.187500
1065	2526	138205.859375
1066	2527	112860.625000
1067	2528	127940.765625
1068	2529	132802.421875
1069	2530	125408.718750
1070	2531	244036.140625
1071	2532	230498.531250
1072	2533	198466.531250
1073	2534	232938.984375
1074	2535	323960.875000
1075	2536	229301.796875
1076	2537	233263.109375
1077	2538	180114.937500
1078	2539	188630.703125
1079	2540	171139.953125
1080	2541	180845.218750
1081	2542	158630.000000
1082	2543	129900.164062

	Id	SalePrice
1083	2544	131822.234375
1084	2545	130829.976562
1085	2546	129692.671875
1086	2547	135192.296875
1087	2548	148572.281250
1088	2549	165930.078125
1089	2550	222754.562500
1090	2551	146109.484375
1091	2552	123002.468750
1092	2553	79401.906250
1093	2554	117979.812500
1094	2555	114005.812500
1095	2556	100686.789062
1096	2557	97249.335938
1097	2558	162485.031250
1098	2559	135214.250000
1099	2560	141653.078125
1100	2561	141914.843750
1101	2562	134987.031250
1102	2563	154746.046875
1103	2564	182923.703125
1104	2565	137377.109375
1105	2566	165099.109375
1106	2567	129991.070312
1107	2568	195191.750000

	Id	SalePrice
1108	2569	205647.062500
1109	2570	125451.140625
1110	2571	171000.359375
1111	2572	175504.312500
1112	2573	228440.890625
1113	2574	264221.406250
1114	2575	126833.125000
1115	2576	124505.078125
1116	2577	158322.296875
1117	2578	89823.945312
1118	2579	72643.585938
1119	2580	133389.953125
1120	2581	133807.187500
1121	2582	120187.960938
1122	2583	280377.906250
1123	2584	160816.390625
1124	2585	182366.546875
1125	2586	211443.234375
1126	2587	198073.109375
1127	2588	160339.765625
1128	2589	144986.968750
1129	2590	218738.265625
1130	2591	219421.125000
1131	2592	218603.921875
1132	2593	246513.046875

	Id	SalePrice
1133	2594	179884.828125
1134	2595	193787.687500
1135	2596	342618.687500
1136	2597	185773.390625
1137	2598	275303.593750
1138	2599	321250.375000
1139	2600	141327.671875
1140	2601	141202.500000
1141	2602	83879.898438
1142	2603	96697.992188
1143	2604	85236.968750
1144	2605	75931.578125
1145	2606	144056.546875
1146	2607	179102.921875
1147	2608	209556.234375
1148	2609	165556.875000
1149	2610	115656.757812
1150	2611	146520.109375
1151	2612	150113.890625
1152	2613	132967.781250
1153	2614	128932.367188
1154	2615	149354.953125
1155	2616	140564.734375
1156	2617	171253.015625
1157	2618	190238.375000

	Id	SalePrice
1158	2619	203513.187500
1159	2620	186749.671875
1160	2621	174916.531250
1161	2622	187653.781250
1162	2623	250201.250000
1163	2624	298925.312500
1164	2625	300211.250000
1165	2626	168499.859375
1166	2627	172601.265625
1167	2628	436049.500000
1168	2629	555910.375000
1169	2630	366792.000000
1170	2631	448234.343750
1171	2632	447192.968750
1172	2633	314204.906250
1173	2634	397264.656250
1174	2635	150619.984375
1175	2636	185023.328125
1176	2637	174889.296875
1177	2638	252102.937500
1178	2639	191138.906250
1179	2640	150262.312500
1180	2641	107521.640625
1181	2642	194453.609375
1182	2643	110564.882812

	Id	SalePrice
1183	2644	123129.343750
1184	2645	99945.382812
1185	2646	94181.968750
1186	2647	100779.179688
1187	2648	137616.218750
1188	2649	148097.281250
1189	2650	146993.937500
1190	2651	143719.015625
1191	2652	422813.562500
1192	2653	245845.625000
1193	2654	249054.156250
1194	2655	367540.312500
1195	2656	305967.343750
1196	2657	342378.062500
1197	2658	287818.187500
1198	2659	320985.000000
1199	2660	328182.968750
1200	2661	353803.562500
1201	2662	343531.781250
1202	2663	282701.406250
1203	2664	264089.375000
1204	2665	333619.531250
1205	2666	286139.531250
1206	2667	164035.140625
1207	2668	179154.375000



	Id	SalePrice
1208	2669	172589.046875
1209	2670	309932.312500
1210	2671	180405.375000
1211	2672	183972.859375
1212	2673	206791.062500
1213	2674	203717.796875
1214	2675	170956.671875
1215	2676	183523.781250
1216	2677	193900.828125
1217	2678	267268.250000
1218	2679	294738.125000
1219	2680	274079.781250
1220	2681	475423.375000
1221	2682	367046.750000
1222	2683	511183.812500
1223	2684	312919.406250
1224	2685	353100.281250
1225	2686	255379.796875
1226	2687	342062.093750
1227	2688	227837.250000
1228	2689	212073.343750
1229	2690	485575.281250
1230	2691	191781.812500
1231	2692	134571.531250
1232	2693	199397.671875

	Id	SalePrice
1233	2694	125465.882812
1234	2695	187351.562500
1235	2696	180282.609375
1236	2697	191412.562500
1237	2698	179496.031250
1238	2699	178021.984375
1239	2700	160795.796875
1240	2701	147540.156250
1241	2702	111262.242188
1242	2703	139634.968750
1243	2704	141531.843750
1244	2705	125714.859375
1245	2706	119363.890625
1246	2707	126476.890625
1247	2708	140912.984375
1248	2709	116073.226562
1249	2710	129596.281250
1250	2711	262272.687500
1251	2712	390404.750000
1252	2713	174304.421875
1253	2714	151739.500000
1254	2715	172881.156250
1255	2716	156390.750000
1256	2717	182707.218750
1257	2718	229043.750000

Id		SalePrice
1258	2719	153432.859375
1259	2720	177983.250000
1260	2721	137951.703125
1261	2722	151171.875000
1262	2723	148693.937500
1263	2724	129860.085938
1264	2725	137366.171875
1265	2726	144516.671875
1266	2727	174237.875000
1267	2728	165281.796875
1268	2729	150471.312500
1269	2730	141572.281250
1270	2731	125854.460938
1271	2732	125737.843750
1272	2733	162083.437500
1273	2734	137323.562500
1274	2735	137474.171875
1275	2736	138871.046875
1276	2737	125284.304688
1277	2738	129368.414062
1278	2739	154608.421875
1279	2740	137697.625000
1280	2741	148546.078125
1281	2742	151323.328125
1282	2743	151952.093750

	Id	SalePrice
1283	2744	155384.484375
1284	2745	137861.906250
1285	2746	141871.703125
1286	2747	160193.859375
1287	2748	119677.195312
1288	2749	128375.859375
1289	2750	138477.625000
1290	2751	140670.093750
1291	2752	189292.343750
1292	2753	149103.359375
1293	2754	204764.109375
1294	2755	127285.640625
1295	2756	93626.476562
1296	2757	65624.781250
1297	2758	85693.523438
1298	2759	162543.500000
1299	2760	130048.851562
1300	2761	141852.312500
1301	2762	146559.781250
1302	2763	193977.437500
1303	2764	163109.562500
1304	2765	270031.187500
1305	2766	140423.093750
1306	2767	87413.757812
1307	2768	128568.953125

	Id	SalePrice
1308	2769	122255.132812
1309	2770	149873.593750
1310	2771	119602.632812
1311	2772	123613.085938
1312	2773	147462.562500
1313	2774	139209.812500
1314	2775	131180.890625
1315	2776	148127.171875
1316	2777	141645.640625
1317	2778	120221.507812
1318	2779	120492.679688
1319	2780	103543.531250
1320	2781	100649.476562
1321	2782	94552.132812
1322	2783	106267.453125
1323	2784	127620.156250
1324	2785	133122.750000
1325	2786	75585.625000
1326	2787	123484.054688
1327	2788	82318.382812
1328	2789	207647.031250
1329	2790	92228.046875
1330	2791	113240.414062
1331	2792	57600.238281
1332	2793	176650.812500

	Id	SalePrice
1333	2794	107678.570312
1334	2795	116766.351562
1335	2796	105232.859375
1336	2797	219691.015625
1337	2798	123032.414062
1338	2799	116632.960938
1339	2800	69425.671875
1340	2801	113150.984375
1341	2802	134301.000000
1342	2803	165462.531250
1343	2804	144532.078125
1344	2805	101186.578125
1345	2806	74511.773438
1346	2807	154769.984375
1347	2808	150122.468750
1348	2809	134182.515625
1349	2810	138740.796875
1350	2811	157350.734375
1351	2812	145589.968750
1352	2813	145381.656250
1353	2814	149738.734375
1354	2815	95547.601562
1355	2816	236583.812500
1356	2817	144054.906250
1357	2818	129829.265625

Id		SalePrice
1358	2819	171395.265625
1359	2820	131435.703125
1360	2821	101293.281250
1361	2822	197259.218750
1362	2823	262025.906250
1363	2824	171305.859375
1364	2825	159918.468750
1365	2826	126728.632812
1366	2827	140580.937500
1367	2828	209884.765625
1368	2829	180880.218750
1369	2830	232246.765625
1370	2831	185667.937500
1371	2832	230830.218750
1372	2833	291796.125000
1373	2834	217740.312500
1374	2835	217944.359375
1375	2836	189047.484375
1376	2837	164072.593750
1377	2838	147907.187500
1378	2839	179658.656250
1379	2840	205400.781250
1380	2841	202845.437500
1381	2842	221674.031250
1382	2843	146201.828125

	Id	SalePrice
1383	2844	156649.046875
1384	2845	122861.804688
1385	2846	212124.109375
1386	2847	204238.656250
1387	2848	215041.640625
1388	2849	205705.953125
1389	2850	289824.625000
1390	2851	240747.000000
1391	2852	233788.765625
1392	2853	235566.625000
1393	2854	141126.890625
1394	2855	202774.703125
1395	2856	208787.484375
1396	2857	186332.781250
1397	2858	194844.062500
1398	2859	124523.312500
1399	2860	128558.851562
1400	2861	122548.585938
1401	2862	194116.546875
1402	2863	125386.750000
1403	2864	252185.453125
1404	2865	143736.968750
1405	2866	135341.546875
1406	2867	93643.812500
1407	2868	107343.890625



	Id	SalePrice
1408	2869	115828.343750
1409	2870	145882.515625
1410	2871	101125.867188
1411	2872	55078.808594
1412	2873	104658.515625
1413	2874	141678.328125
1414	2875	111792.507812
1415	2876	151027.015625
1416	2877	136781.218750
1417	2878	174255.421875
1418	2879	142940.375000
1419	2880	99637.335938
1420	2881	153612.796875
1421	2882	163693.046875
1422	2883	177678.750000
1423	2884	197832.140625
1424	2885	207997.765625
1425	2886	212018.906250
1426	2887	106782.328125
1427	2888	131837.718750
1428	2889	54461.425781
1429	2890	79791.609375
1430	2891	129674.257812
1431	2892	56855.742188
1432	2893	112883.539062

	Id	SalePrice
1433	2894	60061.296875
1434	2895	317143.468750
1435	2896	275290.750000
1436	2897	207167.921875
1437	2898	153453.890625
1438	2899	226918.296875
1439	2900	159375.421875
1440	2901	216625.734375
1441	2902	177362.750000
1442	2903	364325.843750
1443	2904	366003.250000
1444	2905	96110.023438
1445	2906	210426.390625
1446	2907	115125.140625
1447	2908	132428.125000
1448	2909	139901.218750
1449	2910	79133.554688
1450	2911	83788.218750
1451	2912	150602.515625
1452	2913	82143.851562
1453	2914	76411.046875
1454	2915	82260.953125
1455	2916	79204.109375
1456	2917	171715.171875
1457	2918	120263.085938

Id		SalePrice
1458	2919	225017.625000

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In [99]: dataset.to_csv('Sample_submission_data.csv',index=False)
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In [ ]:
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