

GBRT

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GBRT

1. 西班牙数据集

train index: [6426, 10427] train_len: 4000 test index: [14389, 15390] test_len: 1000

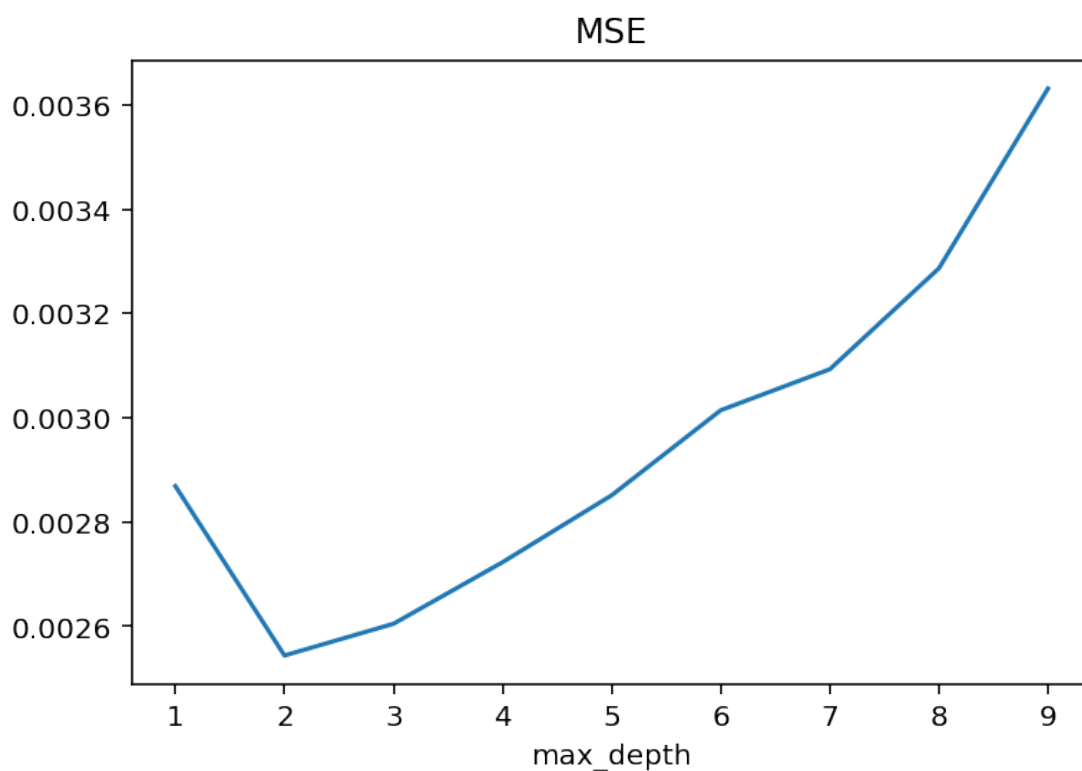
- 输入特征:

```
1 'wind_speed', 'sin(wd)', 'cos(wd)', 【t期】
2 'wind_speed-1', 'sin(wd)-1', 'cos(wd)-1', 'wind_power-1' 【t-1期】
```

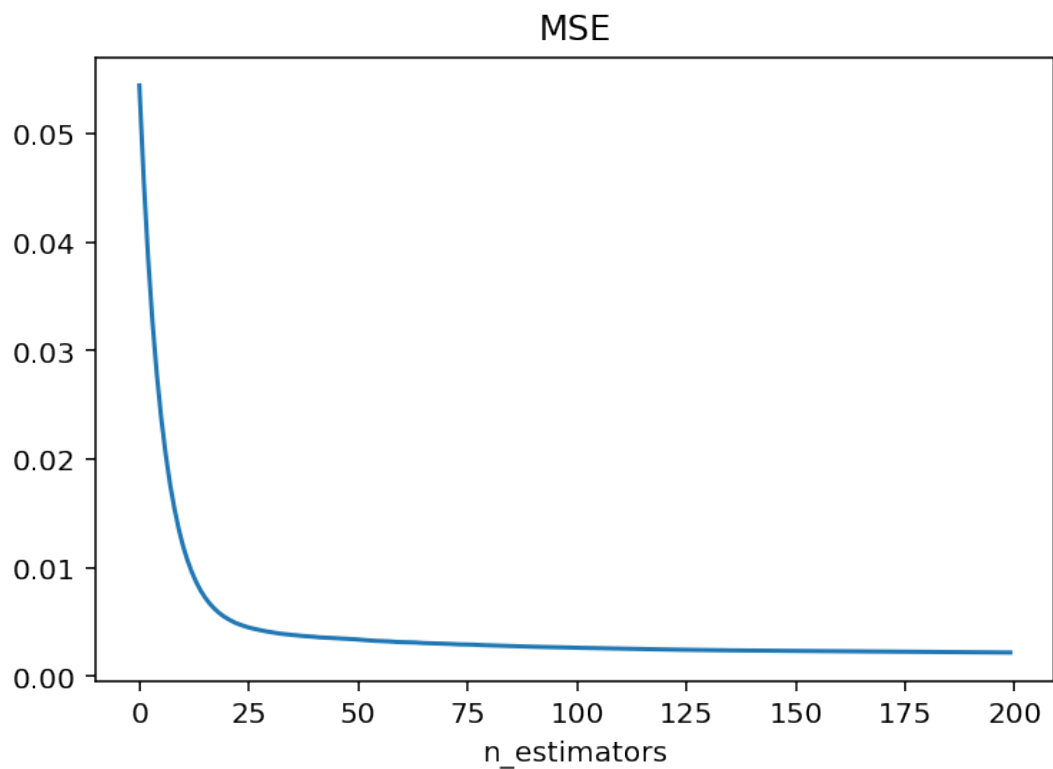
- 输出: wind_power

1.1 寻找最大深度

max_depth = 2



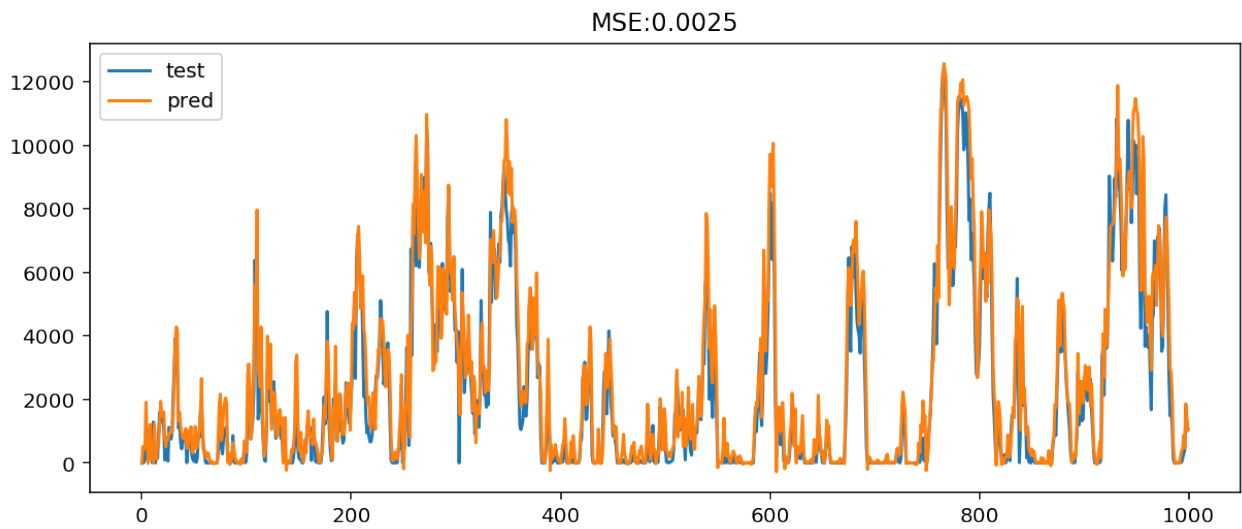
1.2 n_estimators



最终设置:

```
1 GradientBoostingRegressor(alpha=0.9, criterion='mse', init=None,
2                             learning_rate=0.1, loss='ls', max_depth=2,
3                             max_features=None, max_leaf_nodes=None,
4                             min_impurity_decrease=0.0,
5                             min_impurity_split=None,
6                             min_samples_leaf=1, min_samples_split=2,
7                             min_weight_fraction_leaf=0.0, n_estimators=200,
8                             n_iter_no_change=None, presort='auto',
9                             random_state=None, subsample=1.0, tol=0.0001,
10                            validation_fraction=0.1, verbose=0,
11                            warm_start=False)
```

test mse: 0.0025435651610870007



2. 美国数据集

train index: [3001, 7002] train_len: 4000 test index: [2000, 3001] test_len: 1000

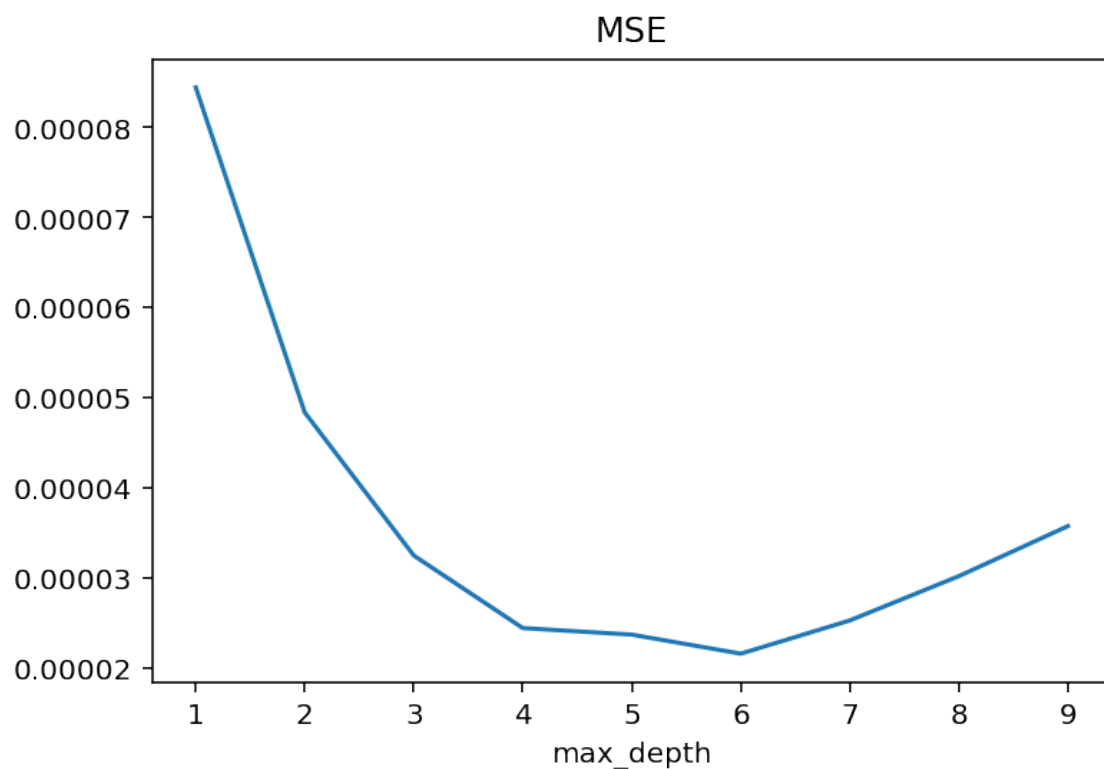
- 输入特征:

```
1 'wind_speed', 'sin(wd)', 'cos(wd)', 【t期】  
2 'wind_speed-1', 'sin(wd)-1', 'cos(wd)-1', 'wind_power-1' 【t-1期】
```

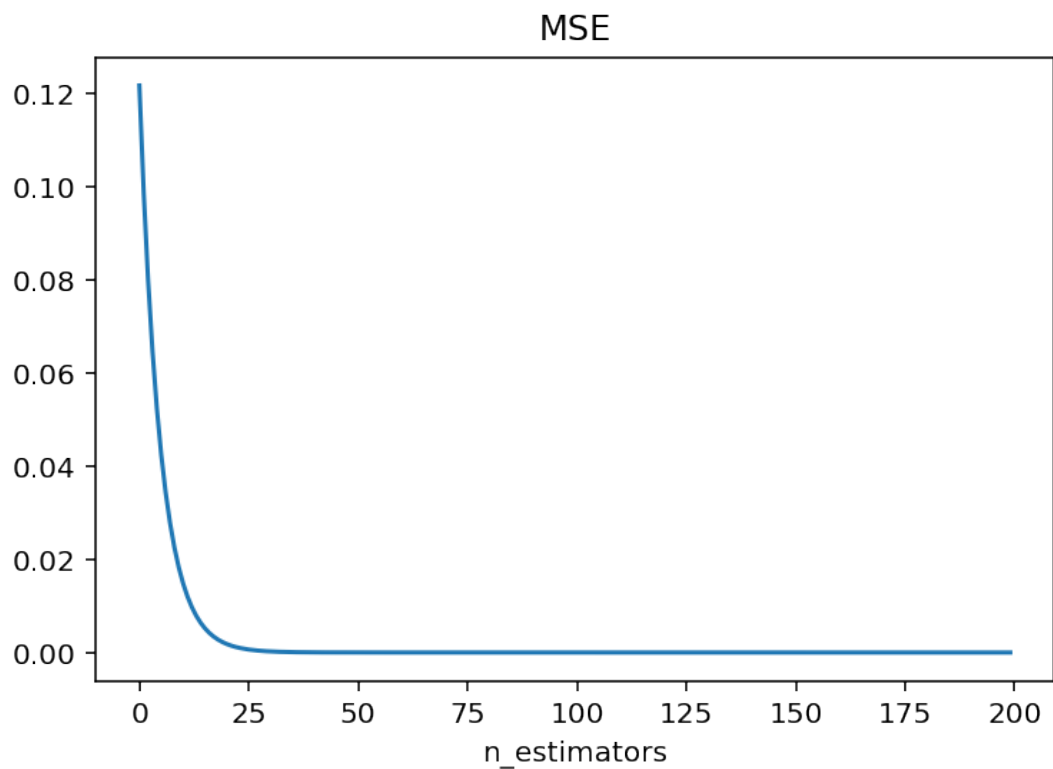
- 输出: wind_power

2.1 寻找最大深度

max depth = 6



2.2 n_estimators



最终设置:

```
1 GradientBoostingRegressor(alpha=0.9, criterion='mse', init=None,
2                             learning_rate=0.1, loss='ls', max_depth=6,
3                             max_features=None, max_leaf_nodes=None,
4                             min_impurity_decrease=0.0,
5                             min_impurity_split=None,
6                             min_samples_leaf=1, min_samples_split=2,
7                             min_weight_fraction_leaf=0.0, n_estimators=200,
8                             n_iter_no_change=None, presort='auto',
9                             random_state=None, subsample=1.0, tol=0.0001,
10                            validation_fraction=0.1, verbose=0,
11                            warm_start=False)
```

test mse : 2.1468578057334267e-05

MSE:0.0

