neural_network_find_hyperparameter

January 30, 2019

In [1]:
```
import numpy
X = numpy.loadtxt("./data/Train/X_train.txt")
y = numpy.loadtxt("./data/Train/y_train.txt")
```

In [2]:
```
from models import neural_network
best_model = neural_network.find_hyperparameter(X,y)
```

```
cross validation scores of best moddel are : [0.97047497 0.97429306 0.97619048 0.97743391 0.9767
mean of cross validation scores of best model is: 0.9750273205749304
```

In [3]:
```
best_model.get_params()
```

Out[3]:
```
{'activation': 'tanh',
 'alpha': 0,
 'batch_size': 'auto',
 'beta_1': 0.9,
 'beta_2': 0.999,
 'early_stopping': False,
 'epsilon': 1e-08,
 'hidden_layer_sizes': 56,
 'learning_rate': 'constant',
 'learning_rate_init': 0.001,
 'max_iter': 1000,
 'momentum': 0.9,
 'n_iter_no_change': 10,
 'nesterovs_momentum': True,
 'power_t': 0.5,
 'random_state': None,
 'shuffle': True,
 'solver': 'adam',
 'tol': 0.0001,
 'validation_fraction': 0.1,
 'verbose': False,
 'warm_start': False}
```

In [4]:
```
best_model.hidden_layer_sizes
```

Out[4]:
```
56
```