参数：

num\_filt\_1 = 15 # Number of filters in first conv layer

num\_filt\_2 = 8 # Number of filters in second conv layer

num\_filt\_3 = 8 # Number of filters in thirs conv layer

num\_fc\_1 = 40 # Number of neurons in hully connected layer

max\_iterations = 20000

batch\_size = 100

dropout = 0.5 # Dropout rate in the fully connected layer

regularization = 1e-4

learning\_rate = 2e-3

input\_norm = False

|  |  |  |  |
| --- | --- | --- | --- |
| Input | Max iterations | Train(Test) Cost | Train(Test) accuracy |
| 2012涨跌（-1，1） | 1000 | 0.325/1.437 | 0.997/0.510 |
| 2012涨跌（-1，1） | 3000 | 0.034/2.734 | 1.000/0.570 |
| 2012涨跌（-1，1） | 5000 | 0.041/3.787 | 1.000/0.550 |
| 2012股价差 | 1000 | 0.406/2.489 | 0.996/0.440 |
| 2012股价差 | 3000 | 0.037/4.619 | 1.000/0.480 |
| 2012股价差 | 5000 | 0.028/5.790 | 1.000/0.470 |
| 2012涨跌幅（-1~1） | 1000 | 0.224/2.083 | 0.998/0.560 |
| 2012涨跌幅（-1~1） | 3000 | 0.057/3.475 | 0.999/0.540 |
| 2012涨跌幅（-1~1） | 5000 | 0.026/4.913 | 1.000/0.540 |
| 2012股价 | 1000 | 4.478/0.828 | 0.823/0.570 |
| 2012股价 | 3000 | 0.510/2.461 | 0.993/0.520 |
| 2012股价 | 5000 | 0.105/3.562 | 1.000/0.550 |
| 2014涨跌（-1，1） | 1000 | 0.042/2.577 | 1.000/0.560 |
| 2014涨跌（-1，1） | 3000 | 0.021/4.025 | 1.000/0.550 |
| 2014涨跌（-1，1） | 5000 | 0.017/4.917 | 1.000/0.520 |
| 2014股价差 | 1000 | 0.029/4.199 | 1.000/0.510 |
| 2014股价差 | 3000 | 0.013/6.760 | 1.000/0.490 |
| 2014股价差 | 5000 | 0.015/7.512 | 1.000/0.510 |
| 2014涨跌幅（-1~1） | 1000 | 0.082/2.704 | 0.999/0.540 |
| 2014涨跌幅（-1~1） | 3000 | 0.017/5.776 | 1.000/0.410 |
| 2014涨跌幅（-1~1） | 5000 | 0.014/7.051 | 1.000/0.510 |
| 2014股价 | 1000 | 0.374/1.863 | 0.997/0.490 |
| 2014股价 | 3000 | 0.047/4.717 | 1.000/0.470 |
| 2014股价 | 5000 | 0.030/5.076 | 1.000/0.490 |
| 涨跌（-1，1） | 5000 | 11.307/1.086 | 0.948/0.530 |
| 涨跌（-1，1） | 10000 | 7.003/1.568 | 0.969/0.530 |
| 涨跌（-1，1） | 20000 | 5.126/1.755 | 0.979/0.560 |
| 股价差 | 5000 | 15.317/1.397 | 0.901/0.480 |
| 股价差 | 10000 | 10.431/1.774 | 0.938/0.530 |
| 股价差 | 20000 | 7.747/2.261 | 0.956/0.570 |
| 涨跌幅（-1~1） | 5000 | 12.020/1.232 | 0.936/0.490 |
| 涨跌幅（-1~1） | 10000 | 8.089/1.591 | 0.961/0.520 |
| 涨跌幅（-1~1） | 20000 | 5.447/2.250 | 0.974/0.510 |
| 股价 | 5000 | 40.924/0.693 | 0.519/0.510(all 0) |
| 股价 | 10000 | 40.904/0.693 | 0.519/0.510(all 0) |
| 股价 | 20000 | 40.074/0.778 | 0.564/0.500 |
| 2014股价，交易量 | 10000 | 17.522/1.375 | 0.858/0.510 |
| 2014股价，交易量 | 30000 | 13.339/1.702 | 0.894/0.550 |
| 2014股价，交易量 | 50000 | 11.526/2.244 | 0.908/0.540 |
| 2014涨跌，交易量 | 5000 | 11.687/1.144 | 0.947/0.500 |
| 2014涨跌，交易量 | 10000 | 7.003/1.537 | 0.969/0.540 |
| 2014涨跌，交易量 | 20000 | 5.169/1.733 | 0.978/0.590 |

参数：

num\_filt\_1 = 16 #Number of filters in first conv layer

num\_filt\_2 = 14 #Number of filters in second conv layer

num\_filt\_3 = 8 #Number of filters in thirs conv layer

num\_fc\_1 = 40 #Number of neurons in hully connected layer

max\_iterations = 50000

batch\_size = 100

dropout = 1.0 #Dropout rate in the fully connected layer

plot\_row = 5 #How many rows do you want to plot in the visualization

learning\_rate = 2e-5

input\_norm = False # Do you want z-score input normalization?

regularization = 1e-4

|  |  |  |  |
| --- | --- | --- | --- |
| Input | Max iterations | Train(Test) Cost | Train(Test) accuracy |
| 2012涨跌（-1，1） | 5000 | 5.733/0.754 | 0.792/0.530 |
| 2012涨跌（-1，1） | 10000 | 3.701/0.861 | 0.907/0.510 |
| 2012涨跌（-1，1） | 20000 | 0.872/1.249 | 1.000/0.500 |
| 2012股价差 | 5000 | 5.568/0.794 | 0.768/0.560 |
| 2012股价差 | 10000 | 3.525/1.028 | 0.903/0.530 |
| 2012股价差 | 20000 | 0.822/1.869 | 0.998/0.470 |
| 2012涨跌幅（-1~1） | 5000 | 5.854/0.745 | 0.790/0.520 |
| 2012涨跌幅（-1~1） | 10000 | 3.672/0.890 | 0.900/0.540 |
| 2012涨跌幅（-1~1） | 20000 | 0.779/1.648 | 1.000/0.480 |
| 2012股价 | 5000 | 7.573/0.696 | 0.614/0.530 |
| 2012股价 | 10000 | 6.864/0.706 | 0.684/0.520 |
| 2012股价 | 20000 | 5.108/0.714 | 0.807/0.610 |
| 2014涨跌（-1，1） | 3000 | 3.287/0.759 | 0.814/0.520 |
| 2014涨跌（-1，1） | 5000 | 2.466/0.849 | 0.888/0.520 |
| 2014涨跌（-1，1） | 10000 | 0.878/1.202 | 0.999/0.520 |
| 2014股价差 | 5000 | 2.642/0.953 | 0.850/0.450 |
| 2014股价差 | 10000 | 1.092/1.487 | 0.970/0.490 |
| 2014股价差 | 20000 | 0.050/3.243 | 1.000/0.500 |
| 2014涨跌幅（-1~1） | 5000 | 2.683/0.825 | 0.865/0.540 |
| 2014涨跌幅（-1~1） | 10000 | 0.999/1.296 | 0.980/0.570 |
| 2014涨跌幅（-1~1） | 20000 | 0.039/3.143 | 1.000/0.560 |
| 2014股价 | 5000 | 4.283/0.743 | 0.660/0.440 |
| 2014股价 | 10000 | 3.470/0.810 | 0.760/0.530 |
| 2014股价 | 20000 | 2.004/0.916 | 0.902/0.440 |
| 涨跌（-1，1） | 10000 | 40.226/0.759 | 0.563/0.480 |
| 涨跌（-1，1） | 30000 | 38.492/0.888 | 0.620/0.490 |
| 涨跌（-1，1） | 50000 | 36.327/1.058 | 0.657/0.480 |
| 股价差 | 10000 | 37.602/0.691 | 0.633/0.570 |
| 股价差 | 30000 | 30.713/0.725 | 0.744/0.520 |
| 股价差 | 50000 | 24.472/0.885 | 0.813/0.480 |
| 涨跌幅（-1~1） | 10000 | 37.733/0.701 | 0.644/0.550 |
| 涨跌幅（-1~1） | 30000 | 29.354/0.754 | 0.784/0.550 |
| 涨跌幅（-1~1） | 50000 | 20.819/0.840 | 0.872/0.570 |
| 股价 | 10000 | 40.226/0.759 | 0.563/0.480 |
| 股价 | 30000 | 38.492/0.888 | 0.620/0.490 |
| 股价 | 50000 | 36.327/1.058 | 0.657/0.480 |

learning\_rate = 2e-4

|  |  |  |  |
| --- | --- | --- | --- |
| Input | Max iterations | Train(Test) Cost | Train(Test) accuracy |
| 涨跌（-1，1） | 5000 | 21.380/0.847 | 0.868/0.560 |
| 涨跌（-1，1） | 10000 | 6.878/1.304 | 0.986/0.640 |
| 涨跌（-1，1） | 20000 | 0.373/2.828 | 1.000/0.630 |
| 股价差 | 5000 | 23.700/0.987 | 0.819/0.540 |
| 股价差 | 10000 | 12.160/1.577 | 0.931/0.530 |
| 股价差 | 20000 | 3.310/2.584 | 0.988/0.600 |
| 涨跌幅（-1~1） | 5000 | 24.134/1.000 | 0.823/0.490 |
| 涨跌幅（-1~1） | 10000 | 10.505/1.545 | 0.954/0.480 |
| 涨跌幅（-1~1） | 20000 | 0.827/3.334 | 1.000/0.490 |
| 股价 | 10000 | 30.676/1.070 | 0.723/0.500 |
| 股价 | 20000 | 20.564/1.430 | 0.841/0.430 |
| 股价 | 50000 | 7.987/4.121 | 0.947/0.420 |
| 2014股价，交易量 | 10000 | 21.265/1.750 | 0.825/0.540 |
| 2014股价，交易量 | 30000 | 9.580/3.878 | 0.923/0.520 |
| 2014股价，交易量 | 50000 | 6.691/6.183 | 0.945/0.530 |
| 2014涨跌，交易量 | 5000 | 21.325/0.814 | 0.862/0.620 |
| 2014涨跌，交易量 | 10000 | 7.203/1.289 | 0.976/0.580 |
| 2014涨跌，交易量 | 20000 | 0.538/2.477 | 1.000/0.590 |

参数：

num\_filt\_1 = 16 #Number of filters in first conv layer

num\_filt\_2 = 14 #Number of filters in second conv layer

num\_filt\_3 = 8 #Number of filters in thirs conv layer

num\_fc\_1 = 40 #Number of neurons in hully connected layer

max\_iterations = 20000

batch\_size = 100

dropout = 0.5 #Dropout rate in the fully connected layer

plot\_row = 5 #How many rows do you want to plot in the visualization

learning\_rate = 2e-5

input\_norm = False # Do you want z-score input normalization?

regularization = 1e-4

|  |  |  |  |
| --- | --- | --- | --- |
| Input | Max iterations | Train(Test) Cost | Train(Test) accuracy |
| 2012涨跌（-1，1） | 5000 | 6.739/0.696 | 0.731/0.540 |
| 2012涨跌（-1，1） | 10000 | 5.447/0.725 | 0.820/0.580 |
| 2012涨跌（-1，1） | 20000 | 3.191/0.809 | 0.943/0.600 |
| 2012股价差 | 5000 | 6.888/0.718 | 0.729/0.480 |
| 2012股价差 | 10000 | 5.517/0.777 | 0.816/0.500 |
| 2012股价差 | 20000 | 3.261/1.008 | 0.923/0.500 |
| 2012涨跌幅（-1~1） | 5000 | 6.734/0.728 | 0.757/0.460 |
| 2012涨跌幅（-1~1） | 10000 | 5.209/0.790 | 0.843/0.470 |
| 2012涨跌幅（-1~1） | 20000 | 2.701/0.950 | 0.945/0.550 |
| 2012股价 | 10000 | 7.170/0.697 | 0.681/0.570 |
| 2012股价 | 30000 | 4.307/1.124 | 0.862/0.500 |
| 2012股价 | 50000 | 2.392/1.780 | 0.946/0.490(all 1) |
| 2014涨跌（-1，1） | 5000 | 3.377/0.699 | 0.826/0.580 |
| 2014涨跌（-1，1） | 10000 | 2.126/0.780 | 0.922/0.570 |
| 2014涨跌（-1，1） | 20000 | 0.617/1.041 | 1.000/0.540 |
| 2014股价差 | 5000 | 3.474/0.733 | 0.810/0.550 |
| 2014股价差 | 10000 | 2.150/0.849 | 0.903/0.610 |
| 2014股价差 | 20000 | 0.576/1.290 | 0.991/0.590 |
| 2014涨跌幅（-1~1） | 5000 | 3.469/0.732 | 0.841/0.540 |
| 2014涨跌幅（-1~1） | 10000 | 2.054/0.799 | 0.934/0.530 |
| 2014涨跌幅（-1~1） | 20000 | 0.494/1.201 | 1.000/0.490 |
| 2014股价 | 10000 | 4.123/0.685 | 0.676/0.580 |
| 2014股价 | 30000 | 2.003/0.847 | 0.908/0.550 |
| 2014股价 | 50000 | 0.831/1.116 | 0.970/0.530 |
| 涨跌（-1，1） | 20000 | 37.538/0.698 | 0.673/0.590 |
| 涨跌（-1，1） | 50000 | 31.649/0.744 | 0.777/0.540 |
| 涨跌（-1，1） | 100000 | 23.107/0.833 | 0.889/0.500 |
| 股价差 | 20000 | 37.560/0.755 | 0.651/0.470 |
| 股价差 | 50000 | 31.718/0.836 | 0.737/0.490 |
| 股价差 | 100000 | 24.306/0.999 | 0.828/0.520 |
| 涨跌幅（-1~1） | 20000 | 37.182/0.699 | 0.666/0.500 |
| 涨跌幅（-1~1） | 50000 | 30.526/0.720 | 0.786/0.570 |
| 涨跌幅（-1~1） | 100000 | 21.387/0.790 | 0.888/0.540 |
| 股价 | 20000 | 40.214/0.698 | 0.565/0.480 |
| 股价 | 50000 | 38.297/0.703 | 0.624/0.460 |
| 股价 | 100000 | 34.146/0.715 | 0.706/0.490 |

learning\_rate = 2e-4

|  |  |  |  |
| --- | --- | --- | --- |
| Input | Max iterations | Train(Test) Cost | Train(Test) accuracy |
| 涨跌（-1，1） | 5000 | 32.654/0.730 | 0.765/0.560 |
| 涨跌（-1，1） | 10000 | 24.506/0.800 | 0.868/0.610 |
| 涨跌（-1，1） | 20000 | 13.534/0.984 | 0.961/0.560 |
| 股价差 | 5000 | 31.575/0.745 | 0.748/0.540 |
| 股价差 | 10000 | 24.033/0.941 | 0.839/0.520 |
| 股价差 | 30000 | 11.153/1.702 | 0.945/0.510 |
| 涨跌幅（-1~1） | 5000 | 30.477/0.777 | 0.781/0.510 |
| 涨跌幅（-1~1） | 10000 | 21.004/0.904 | 0.886/0.530 |
| 涨跌幅（-1~1） | 20000 | 10.922/1.101 | 0.968/0.530 |
| 股价 | 10000 | 37.742/0.746 | 0.616/0.510 |
| 股价 | 20000 | 30.702/0.728 | 0.733/0.550 |
| 股价 | 50000 | 20.060/1.111 | 0.849/0.480 |
| 2014股价，交易量 | 10000 | 27.883/0.986 | 0.774/0.450 |
| 2014股价，交易量 | 30000 | 17.655/1.752 | 0.864/0.490 |
| 2014股价，交易量 | 50000 | 14.379/2.659 | 0.890/0.440 |
| 2014涨跌，交易量 | 10000 | 21.256/0.866 | 0.893/0.530 |
| 2014涨跌，交易量 | 20000 | 11.148/1.096 | 0.969/0.560 |
| 2014涨跌，交易量 | 30000 | 6.776/1.263 | 0.988/0.570 |