```
/usr/bin/python /Users/LT/Documents/Uni/MA/increOCSVM/evaluation 2.py
 2 haberman: nu=0.75, gamma=1
 3 data size: 306
 4 break_count: 286
   train_size: 193.0
   singular matrix
    Confusion matrix:
   [[ 23 58]
    [ 61 164]]
   precision: 0.738738738739, recall: 0.728888888889, f1-score: 0.733780760626
11
12
    Confusion matrix:
13
    Prediction -1 1
14
   Target
15
            18 63
   -1
16
    1
           52 173
17
   precision: 0.733050847458, recall: 0.76888888889, f1-score: 0.750542299349
18
19
   Confusion matrix:
20 Prediction -1
21
22
   Target
            21 60
   -1
23
    1
           58 167
24
    precision: 0.735682819383, recall: 0.742222222222, f1-score: 0.738938053097
25
26
    *** PROFILER RESULTS ***
27
    incremental_ocsvm (/Users/LT/Documents/Uni/MA/increOCSVM/evaluation_2.py:145
28
29
    function called 1 times
30
         12140 function calls in 0.562 seconds
31
32
      Ordered by: cumulative time, internal time, call count
33
     List reduced from 136 to 40 due to restriction <40>
34
35
     ncalls tottime percall cumtime percall filename:lineno(function)
36
            0.000 0.000 0.562 0.562 evaluation_2.py:145(incremental_ocsvm)
        1
37
                                  0.526 ocsvm.py:98(increment)
        1
            0.502
                   0.502 0.526
38
            0.000
         1
                   0.000 0.036
                                   0.036 ocsvm.py:35(fit)
39
            0.001
                           0.036
                                   0.036 ocsvm.py:62(alpha)
        1
                   0.001
40
                   0.000
                          0.033
                                   0.033 coneprog.py:4159(qp)
        1
            0.000
41
        1
            0.003
                   0.003
                           0.033
                                   0.033 coneprog.py:1441(coneqp)
                                   0.001 coneprog.py:1984(kktsolver)
0.001 misc.py:1389(factor)
42
        13
            0.000
                   0.000 0.019
43
                           0.019
        13
            0.002
                    0.000
                                   0.001 {cvxopt.base.syrk}
44
        13
                            800.0
            800.0
                    0.001
45
       1310
             0.007 \quad 0.000
                            0.007
                                    0.000 \{ \min \}
46
        26
            0.006 0.000 0.006
                                   0.000 {cvxopt.lapack.potrf}
       1090 0.005 0.000 0.005
47
                                    0.000 {method 'dot' of 'numpy.ndarray' objects}
           0.004 0.004 0.004 0.004 misc.py:20(<module>)
48
        1
49
            0.003 0.000 0.003
       152
                                    0.000 {cvxopt.base.gemv}
50
            0.000 0.000 0.003
                                   0.000 coneprog.py:2333(f4)
        24
51
        24
            0.000 0.000 0.003
                                   0.000 coneprog.py:2291(f4_no_ir)
                                   0.000 misc.py:1489(solve)
        25
52
            0.000
                   0.000 0.003
        2
2
2
2
53
            0.000
                   0.000 0.003
                                   0.001 ocsvm.py:58(gram)
54
                          0.003
            0.000
                   0.000
                                   0.001 pairwise.py:1164(pairwise_kernels)
55
                                   0.001 pairwise.py:949(_parallel_pairwise)
            0.000
                   0.000
                           0.003
56
                                   0.001 pairwise.py:740(rbf_kernel)
            0.001
                   0.000
                           0.003
57
        118
            0.002 0.000 0.002
                                    0.000 numeric.py:966(outer)
58
        13
            0.002
                    0.000
                           0.002
                                   0.000 {cvxopt.base.gemm}
```

File - unknown

```
1262
              0.002
                     0.000
                             0.002
                                     0.000 {numpy.core.multiarray.where}
 59
 60
         26
             0.000
                    0.000
                             0.002
                                     0.000 coneprog.py:1900(fG)
 61
        220
             0.000
                     0.000
                             0.002
                                     0.000 numeric.py:136(ones)
                     0.000
                             0.002
 62
         26
             0.000
                                     0.000 misc.py:801(sgemv)
                    0.000
                           0.001
 63
            0.001
                                    0.001 pairwise.py:136(euclidean_distances)
                                     0.000 {range}
 64
        1975
              0.001
                      0.000
                             0.001
 65
        564
                     0.000
                             0.001
              0.001
                                     0.000 {numpy.core.multiarray.empty}
 66
        436
              0.001
                     0.000
                             0.001
                                     0.000 {method 'remove' of 'list' objects}
                                     0.000 misc.py:422(update_scaling)
 67
         12
             0.001
                     0.000
                             0.001
 68
        220
             0.001
                     0.000
                             0.001
                                     0.000 {numpy.core.multiarray.copyto}
 69
             0.000
                    0.000
                            0.001
         2
                                    0.000 extmath.py:171(safe_sparse_dot)
         2
 70
             0.001
                     0.000
                            0.001
                                    0.000 {numpy.core._dotblas.dot}
         2
                                    0.000 linalg.py:454(inv)
 71
                            0.001
             0.001
                    0.000
 72
        261
             0.000 0.000
                             0.000
                                     0.000 {numpy.core.multiarray.array}
 73
             0.000
         50
                     0.000
                             0.000
                                     0.000 {cvxopt.blas.trsv}
 74
        242
             0.000
                     0.000
                             0.000
                                     0.000 numeric.py:392(asarray)
 75
         13
             0.000
                     0.000
                             0.000
                                     0.000 {cvxopt.blas.trsm}
 76
 77
 78
 79
     *** PROFILER RESULTS ***
 80
     cvxopt_ocsvm (/Users/LT/Documents/Uni/MA/increOCSVM/evaluation_2.py:141)
 81
     function called 1 times
 82
 83
          2026 function calls in 0.196 seconds
 84
 85
      Ordered by: cumulative time, internal time, call count
 86
      List reduced from 117 to 40 due to restriction <40>
 87
 88
      ncalls tottime percall cumtime percall filename:lineno(function)
 89
             0.000
                    0.000
                            0.196
                                    0.196 evaluation_2.py:141(cvxopt_ocsvm)
 90
         1
             0.001
                    0.001
                            0.196
                                    0.196 ocsvm.py:35(fit)
 91
             0.009
                    0.009
                            0.193
         1
                                    0.193 ocsvm.py:62(alpha)
 92
                            0.176
             0.000
                    0.000
                                    0.176 coneprog.py:4159(qp)
         1
 93
                            0.176
         1
             0.002
                    0.002
                                    0.176 coneprog.py:1441(coneqp)
 94
         10
             0.000
                     0.000
                             0.154
                                    0.015 coneprog.py:1984(kktsolver)
 95
             0.006
                     0.001
                             0.154
                                     0.015 misc.py:1389(factor)
         10
 96
         10
             0.073
                     0.007
                             0.073
                                     0.007 {cvxopt.base.gemm}
 97
         10
             0.058
                     0.006
                             0.058
                                     0.006 {cvxopt.base.syrk}
 98
         20
             0.016
                     0.001
                             0.016
                                     0.001 {cvxopt.lapack.potrf}
 99
         116
             0.013
                             0.013
                     0.000
                                     0.000 {cvxopt.base.gemv}
100
         18
             0.000
                     0.000
                             0.012
                                     0.001 coneprog.py:2333(f4)
         19
101
             0.000
                     0.000
                             0.012
                                     0.001 misc.py:1489(solve)
102
         18
             0.000
                     0.000
                             0.011
                                     0.001 coneprog.py:2291(f4_no_ir)
103
         2
                            0.006
                                    0.003 ocsvm.py:58(gram)
             0.000
                    0.000
         2
104
             0.000
                    0.000
                            0.006
                                    0.003 pairwise.py:1164(pairwise_kernels)
         2
105
             0.000
                    0.000
                            0.006
                                    0.003 pairwise.py:949(_parallel_pairwise)
         2
106
             0.003
                    0.001
                            0.006
                                    0.003 pairwise.py:740(rbf_kernel)
         20
107
             0.000
                     0.000
                             0.004
                                    0.000 coneprog.py:1900(fG)
                             0.004
108
         20
             0.000
                     0.000
                                    0.000 misc.py:801(sgemv)
109
         2
                            0.003
             0.001
                    0.001
                                    0.002 pairwise.py:136(euclidean_distances)
110
         38
             0.002
                     0.000
                             0.002
                                    0.000 {cvxopt.blas.trsv}
             0.000
                    0.000
                            0.002
111
         1
                                    0.002 ocsvm.py:45(rho)
         2
112
             0.000
                    0.000
                            0.002
                                    0.001 shape_base.py:179(vstack)
             0.002
113
                    0.001
                            0.002
                                    0.001 {numpy.core.multiarray.concatenate}
         2
2
114
             0.000
                    0.000
                            0.002
                                    0.001 extmath.py:171(safe_sparse_dot)
                            0.001
115
             0.001
                     0.001
                                    0.001 {numpy.core._dotblas.dot}
         10
                     0.000
                             0.001
116
             0.001
                                    0.000 {cvxopt.blas.trsm}
117
         9
             0.001
                     0.000
                            0.001
                                    0.000 misc.py:422(update_scaling)
```

File - unknown

```
0.001
                     0.000
                             0.001
118
                                     0.000 twodim base.py:221(diag)
          10
119
              0.000
                      0.000
                              0.001
                                      0.000 coneprog.py:1847(fP)
120
         10
              0.001
                      0.000
                              0.001
                                      0.000 {cvxopt.base.symv}
121
          4
             0.000
                     0.000
                             0.001
                                     0.000 pairwise.py:57(check_pairwise_arrays)
122
                             0.000
          6
             0.000
                     0.000
                                     0.000 validation.py:268(check_array)
123
         54
              0.000
                      0.000
                              0.000
                                      0.000 {cvxopt.misc_solvers.scale2}
124
         28
              0.000
                      0.000
                              0.000
                                      0.000 {numpy.core.multiarray.array}
125
         167
              0.000
                      0.000
                              0.000
                                      0.000 {cvxopt.blas.axpy}
126
         69
              0.000
                      0.000
                              0.000
                                      0.000 {range}
127
         19
              0.000
                      0.000
                              0.000
                                      0.000 numeric.py:462(asanyarray)
128
                              0.000
         10
              0.000
                      0.000
                                      0.000 shape_base.py:60(atleast_2d)
129
130
131
132
     *** PROFILER RESULTS ***
133
     sklearn_ocsvm (/Users/LT/Documents/Uni/MA/increOCSVM/evaluation_2.py:137)
134
     function called 1 times
135
136
          57 function calls in 0.004 seconds
137
138
       Ordered by: cumulative time, internal time, call count
139
140
       ncalls tottime percall cumtime percall filename:lineno(function)
141
          1
             0.000
                     0.000
                             0.004
                                     0.004 evaluation_2.py:137(sklearn_ocsvm)
142
          1
             0.000
                     0.000
                             0.004
                                     0.004 classes.py:941(fit)
143
          1
             0.000
                     0.000
                             0.004
                                     0.004 base.py:99(fit)
144
                                     0.004 base.py:211(_dense_fit)
          1
             0.000
                     0.000
                             0.004
145
          1
             0.003
                     0.003
                             0.003
                                     0.003 {sklearn.svm.libsvm.fit}
146
          1
             0.001
                             0.001
                     0.001
                                     0.001 {sklearn.svm.libsvm.set_verbosity_wrap}
147
          1
             0.000
                     0.000
                             0.000
                                     0.000 validation.py:268(check_array)
148
          1
             0.000
                     0.000
                             0.000
                                     0.000 validation.py:43(_assert_all_finite)
149
          1
             0.000
                     0.000
                             0.000
                                     0.000 numeric.py:136(ones)
150
             0.000
                     0.000
                             0.000
          1
                                     0.000 validation.py:126(_shape_repr)
151
          1
             0.000
                     0.000
                             0.000
                                     0.000 {method 'sum' of 'numpy.ndarray' objects}
152
                             0.000
          1
             0.000
                     0.000
                                     0.000 _methods.py:23(_sum)
                                     0.000 {method 'randint' of 'mtrand.RandomState'
153
          1
             0.000
                     0.000
                             0.000
     objects}
154
             0.000
                     0.000
                             0.000
          1
                                     0.000 shape_base.py:60(atleast_2d)
155
          1
             0.000
                     0.000
                             0.000
                                     0.000 {method 'reduce' of 'numpy.ufunc' objects}
156
             0.000
                     0.000
                             0.000
          1
                                     0.000 base.py:193(_validate_targets)
157
          5
                             0.000
             0.000
                     0.000
                                     0.000 {numpy.core.multiarray.array}
          1
158
                             0.000
                                     0.000 {method 'join' of 'str' objects}
             0.000
                     0.000
159
          2
             0.000
                     0.000
                             0.000
                                     0.000 {numpy.core.multiarray.empty}
          1
160
             0.000
                     0.000
                             0.000
                                     0.000 getlimits.py:244(__init__)
          1
                             0.000
161
             0.000
                     0.000
                                     0.000 {numpy.core.multiarray.copyto}
          2
162
             0.000
                     0.000
                             0.000
                                     0.000 numeric.py:392(asarray)
163
          3
             0.000
                     0.000
                             0.000
                                     0.000 validation.py:153(<genexpr>)
          1
164
             0.000
                     0.000
                             0.000
                                     0.000 validation.py:105(_num_samples)
          2
165
             0.000
                     0.000
                             0.000
                                     0.000 numeric.py:462(asanyarray)
          2
166
             0.000
                     0.000
                             0.000
                                     0.000 base.py:702(isspmatrix)
          1
             0.000
                             0.000
167
                     0.000
                                     0.000 {method 'copy' of 'numpy.ndarray' objects}
          6
             0.000
                     0.000
                             0.000
168
                                     0.000 \{len\}
          3
169
             0.000
                     0.000
                             0.000
                                     0.000 {hasattr}
          1
170
             0.000
                     0.000
                             0.000
                                     0.000 base.py:203(_warn_from_fit_status)
             0.000
171
          1
                     0.000
                             0.000
                                     0.000 validation.py:503(check_random_state)
          3
172
             0.000
                     0.000
                             0.000
                                     0.000 {isinstance}
          2
                                     0.000 {callable}
173
                             0.000
             0.000
                     0.000
174
          1
                             0.000
             0.000
                     0.000
                                     0.000 getlimits.py:269(max)
175
          1
             0.000
                     0.000
                             0.000
                                     0.000 {method 'append' of 'list' objects}
```

| File - unknown           |         |          |             |        |   |
|--------------------------|---------|----------|-------------|--------|---|
| 176                      | 1       | 0.000    | 0.000 0.    | 000    | 0.000 {method 'index' of 'list' objects} 0.000 {method 'disable' of '_lsprof.Profiler' objects} profile:0(profiler) |
| 177                      | 1       | 0.000    | 0.000 0.    | 000    | 0.000 {method 'disable' of '_lsprof.Profiler' objects}  |
| 178                      | 0       | 0.000    | 0.00        | 0      | profile:0(profiler)   |
| 179                      |         |          |             |        |   |
| 180<br>181<br>182<br>183 |         |          |             |        |   |
| 181                      | D       | £''11    | '41'4 -     | - 1- 0 |   |
| 182                      | Process | finished | with exit c | ode U  |   |
| 183                      |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
| 1                        |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
|                          |         |          |             |        |   |
| 1                        |         |          |             |        |   |