```
/usr/bin/python /Users/LT/Documents/Uni/MA/increOCSVM/evaluation.py
    increment evaluation
             error f1-score precision recall
    incremental 0.597396 0.505349 0.355644 0.876119
 6
              0.562500 0.442757 0.352705 0.720149
    batch
 8
    *** PROFILER RESULTS ***
 9
    increment (/Users/LT/Documents/Uni/MA/increOCSVM/ocsvm.py:109)
10
    function called 1022 times
11
12
         357370 function calls in 337.520 seconds
13
14
      Ordered by: cumulative time, internal time, call count
15
      List reduced from 73 to 40 due to restriction <40>
16
17
      ncalls tottime percall cumtime percall filename:lineno(function)
18
       1022
             25.749
                      0.025 337.520 0.330 ocsvm.py:109(increment)
19
       1022 302.000 0.295 302.963
                                       0.296 linalg.py:454(inv)
20
       2044
              0.016
                      0.000
                             6.569
                                     0.003 ocsvm.py:74(gram)
21
22
       2044
              0.016
                      0.000
                             6.553
                                     0.003 pairwise.py:1164(pairwise_kernels)
       2044
              0.008
                      0.000
                             6.537
                                     0.003 pairwise.py:949(_parallel_pairwise)
23
       2044
              2.633
                      0.001
                             6.529
                                     0.003 pairwise.py:740(rbf_kernel)
24
       2044
              1.853
                      0.001
                             3.550
                                     0.002 pairwise.py:136(euclidean_distances)
25
       2044
              0.009
                      0.000
                             1.419
                                     0.001 extmath.py:171(safe_sparse_dot)
26
       2044
              1.406
                      0.001
                              1.406
                                     0.001 {numpy.core._dotblas.dot}
27
       1022
              0.891
                             0.891
                                     0.001 {method 'astype' of 'numpy.ndarray' objects}
                      0.001
28
       6132
              0.029
                      0.000
                             0.685
                                     0.000 numeric.py:136(ones)
29
       4088
                      0.000
              0.673
                             0.673
                                     0.000 {method 'dot' of 'numpy.ndarray' objects}
30
       4088
              0.024
                             0.562
                      0.000
                                     0.000 pairwise.py:57(check_pairwise_arrays)
31
       6132
              0.527
                      0.000
                             0.527
                                     0.000 {numpy.core.multiarray.copyto}
32
       6122
              0.061
                      0.000
                             0.493
                                     0.000 validation.py:268(check_array)
33
       5105
              0.480
                      0.000
                             0.480
                                     0.000 {numpy.core.multiarray.zeros}
              0.235
34
      11232
                             0.235
                      0.000
                                      0.000 {method 'reduce' of 'numpy.ufunc' objects}
35
       6122
              0.062
                             0.208
                      0.000
                                     0.000 validation.py:43(_assert_all_finite)
                      0.000
36
      16332
              0.029
                              0.167
                                      0.000 numeric.py:462(asanyarray)
37
      25520
              0.158
                      0.000
                             0.158
                                     0.000 {numpy.core.multiarray.array}
38
       2044
              0.009
                             0.144
                                     0.000 fromnumeric.py:1762(any)
                      0.000
39
       6122
              0.009
                      0.000
                             0.136
                                     0.000 {method 'sum' of 'numpy.ndarray' objects}
40
       6132
              0.130
                      0.000
                             0.130
                                     0.000 {numpy.core.multiarray.empty}
41
       6122
              0.012
                      0.000
                             0.127
                                     0.000 _methods.py:23(_sum)
42
       6122
              0.030
                             0.109
                                     0.000 validation.py:126(_shape_repr)
                      0.000
43
       1022
              0.009
                      0.000
                             0.108
                                     0.000 fromnumeric.py:2632(mean)
44
       1022
              0.030
                      0.000
                             0.100
                                     0.000 _methods.py:49(_mean)
45
       1022
              0.008
                             0.087
                      0.000
                                     0.000 fromnumeric.py:1842(all)
46
       6122
              0.033
                      0.000
                             0.076
                                     0.000 {method 'join' of 'str' objects}
47
       6122
              0.034
                      0.000
                             0.063
                                     0.000 shape_base.py:60(atleast_2d)
48
       3061
              0.008
                      0.000
                             0.063
                                     0.000 extmath.py:57(row_norms)
49
       2044
              0.006
                      0.000
                             0.055
                                     0.000 {method 'any' of 'numpy.ndarray' objects}
50
       3061
              0.051
                      0.000
                             0.051
                                     0.000 {numpy.core.multiarray.einsum}
       2044
                      0.000
                             0.049
51
              0.007
                                     0.000 _methods.py:31(_any)
52
       4088
              0.026
                      0.000
                             0.045
                                     0.000 pairwise.py:33(_return_float_dtype)
53
              0.043
                                     0.000 validation.py:153(<genexpr>)
       18366
                      0.000
                              0.043
54
       6122
              0.016
                      0.000
                             0.037
                                     0.000 validation.py:105(_num_samples)
       1022
55
                             0.036
              0.003
                      0.000
                                     0.000 {method 'all' of 'numpy.ndarray' objects}
       1022
56
              0.005
                      0.000
                              0.033
                                     0.000 _methods.py:35(_all)
57
       1022
              0.005
                      0.000
                             0.033
                                     0.000 {method 'min' of 'numpy.ndarray' objects}
58
59
```

```
60
     *** PROFILER RESULTS ***
 61
     train (/Users/LT/Documents/Uni/MA/increOCSVM/ocsvm.py:35)
 62
     function called 10 times
 63
 64
 65
          8481 function calls in 1.443 seconds
 66
 67
       Ordered by: cumulative time, internal time, call count
 68
       List reduced from 117 to 40 due to restriction <40>
 69
 70
       ncalls tottime percall cumtime percall filename:lineno(function)
 71
                     0.003
                              1.443
                                     0.144 ocsvm.py:35(train)
         10
              0.025
 72
         10
              0.205
                              1.352
                     0.021
                                     0.135 ocsvm.py:78(alpha)
 73
         10
              0.006
                     0.001
                             1.044
                                     0.104 coneprog.py:4159(qp)
 74
         10
              0.009
                     0.001
                             1.037
                                     0.104 coneprog.py:1441(coneqp)
 75
         30
              0.000
                     0.000
                             0.922
                                     0.031 coneprog.py:1984(kktsolver)
 76
                             0.922
         30
              0.060
                     0.002
                                     0.031 misc.py:1389(factor)
 77
         30
              0.360
                     0.012
                             0.360
                                     0.012 {cvxopt.base.syrk}
 78
         30
              0.357
                     0.012
                             0.357
                                     0.012 {cvxopt.base.gemm}
 79
                             0.129
              0.129
                     0.002
                                     0.002 {cvxopt.lapack.potrf}
         60
 80
         20
              0.000
                     0.000
                             0.120
                                     0.006 ocsvm.py:74(gram)
 81
         20
              0.000
                     0.000
                             0.120
                                     0.006 pairwise.py:1164(pairwise_kernels)
 82
         20
              0.000
                     0.000
                             0.120
                                     0.006 pairwise.py:949(_parallel_pairwise)
 83
         20
              0.051
                     0.003
                             0.120
                                     0.006 pairwise.py:740(rbf_kernel)
 84
         10
              0.000
                     0.000
                             0.066
                                     0.007 ocsvm.py:46(rho)
 85
         20
              0.033
                     0.002
                             0.065
                                     0.003 pairwise.py:136(euclidean_distances)
 86
         320
              0.064
                      0.000
                             0.064
                                     0.000 {cvxopt.base.gemv}
 87
         50
              0.002
                      0.000
                             0.063
                                     0.001 misc.py:1489(solve)
 88
         40
              0.000
                     0.000
                             0.051
                                     0.001 coneprog.py:2333(f4)
 89
         40
                     0.000
                             0.051
              0.001
                                     0.001 coneprog.py:2291(f4_no_ir)
 90
                             0.029
         20
              0.000
                     0.000
                                     0.001 extmath.py:171(safe_sparse_dot)
 91
         20
              0.029
                     0.001
                             0.029
                                     0.001 {numpy.core._dotblas.dot}
 92
                     0.000
                             0.024
         60
              0.000
                                     0.000 coneprog.py:1900(fG)
 93
              0.001
                     0.000
                             0.024
                                     0.000 misc.py:801(sgemv)
         60
 94
         20
              0.000
                             0.022
                     0.000
                                     0.001 shape_base.py:179(vstack)
 95
         20
              0.019
                     0.001
                             0.019
                                     0.001 {numpy.core.multiarray.concatenate}
 96
         100
              0.019
                      0.000
                             0.019
                                     0.000 {cvxopt.blas.trsv}
 97
              0.015
                             0.015
         30
                     0.001
                                     0.001 {cvxopt.blas.trsm}
         20
 98
              0.007
                     0.000
                             0.014
                                     0.001 twodim_base.py:221(diag)
 99
         40
              0.007
                     0.000
                             0.007
                                     0.000 {numpy.core.multiarray.zeros}
100
         40
              0.000
                     0.000
                             0.006
                                     0.000 pairwise.py:57(check_pairwise_arrays)
         30
              0.000
                     0.000
                             0.006
101
                                     0.000 coneprog.py:1847(fP)
102
         30
              0.006
                      0.000
                             0.006
                                     0.000 {cvxopt.base.symv}
         280
              0.002
103
                      0.000
                              0.006
                                     0.000 {numpy.core.multiarray.array}
                     0.000
                             0.005
104
         60
              0.001
                                     0.000 validation.py:268(check_array)
105
         20
              0.002
                     0.000
                             0.004
                                     0.000 \text{ data.py:} 29(Xs)
106
         190
              0.000
                      0.000
                              0.004
                                     0.000 numeric.py:462(asanyarray)
107
         10
              0.004
                     0.000
                             0.004
                                     0.000 {method 'dot' of 'numpy.ndarray' objects}
108
         100
              0.000
                      0.000
                             0.004
                                     0.000 shape_base.py:60(atleast_2d)
109
         50
              0.003
                     0.000
                             0.003
                                     0.000 _internal.py:361(_dtype_from_pep3118)
110
         20
              0.002
                     0.000
                             0.003
                                     0.000 misc.py:422(update_scaling)
111
112
113
114
     Process finished with exit code 0
115
```