

CROSS VALIDATION 20

iteration: 0 HingeLoss: 21.046507266414338
iteration: 1 HingeLoss: 1.6371070800645002
iteration: 2 HingeLoss: 1.102836884187078
iteration: 3 HingeLoss: 0.3086003042197427
iteration: 4 HingeLoss: 0.302126198359513
iteration: 5 HingeLoss: 0.29578791234818264
iteration: 6 HingeLoss: 0.28958259682990983
iteration: 7 HingeLoss: 0.28350746222530465
iteration: 8 HingeLoss: 0.27755977747738303
iteration: 9 HingeLoss: 0.2717368688238295
iteration: 10 HingeLoss: 0.26603611859501525
iteration: 11 HingeLoss: 0.2604549640372338
iteration: 12 HingeLoss: 0.25499089616062315
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iteration: 14 HingeLoss: 0.24440424656690202
iteration: 15 HingeLoss: 0.23927690565593154
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iteration: 46 HingeLoss: 0.12400919964990983
iteration: 47 HingeLoss: 0.12140761865599023
iteration: 48 HingeLoss: 0.11886061606179449
iteration: 49 HingeLoss: 0.11636704687059811
iteration: 50 HingeLoss: 0.11392579010648907

Output_ROI.txt

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iteration: 98 HingeLoss: 0.04117558562851232
iteration: 99 HingeLoss: 0.04031176567574219
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 4.72392452e-04 7.07149782e-05]

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CROSS VALIDATION 21

Output_ROI.txt

iteration: 0 HingeLoss: 21.046507266414338
iteration: 1 HingeLoss: 1.6371070800645002
iteration: 2 HingeLoss: 1.102836884187078
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iteration: 50 HingeLoss: 0.11392579010648907
iteration: 51 HingeLoss: 0.11153574831043643

Output_ROI.txt

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iteration: 52 HingeLoss: 0.10919584704693175
iteration: 53 HingeLoss: 0.1069050344209795
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[-1.02917761e-03 -1.03769365e-04 -1.84274226e-04 ... 7.82773867e-04
 4.72392452e-04 7.07149782e-05]
CROSS VALIDATION 22
iteration: 0 HingeLoss: 21.046507266414338
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Output_ROI.txt

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iteration: 53 HingeLoss: 0.1069050344209795
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[-1.02917761e-03 -1.03769365e-04 -1.84274226e-04 ... 7.82773867e-04
 4.72392452e-04 7.07149782e-05]
CROSS VALIDATION 23
iteration: 0 HingeLoss: 24.31245019538759
iteration: 1 HingeLoss: 19.929486901314874

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Output_ROI.txt

iteration: 2 HingeLoss: 0.33783696867892643
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Output_ROI.txt

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iteration: 54 HingeLoss: 0.11217421829660432
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[-0.00145382 -0.00032994 -0.00058449 ... 0.00065603 0.00041546
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CROSS VALIDATION 24
iteration: 0 HingeLoss: 21.049571397762453
iteration: 1 HingeLoss: 1.6370593684692527
iteration: 2 HingeLoss: 1.1024810519043897

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Output_ROI.txt

iteration: 3 HingeLoss: 0.3086054402450847
iteration: 4 HingeLoss: 0.30213122663651076
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iteration: 9 HingeLoss: 0.2717413913321537
iteration: 10 HingeLoss: 0.26604054622592926
iteration: 11 HingeLoss: 0.2604592987811647
iteration: 12 HingeLoss: 0.2549951399662408
iteration: 13 HingeLoss: 0.2496456133863512
iteration: 14 HingeLoss: 0.2444083141792371
iteration: 15 HingeLoss: 0.23928088793409005
iteration: 16 HingeLoss: 0.2342610296331339
iteration: 17 HingeLoss: 0.22934648261541163
iteration: 18 HingeLoss: 0.22453503756231075
iteration: 19 HingeLoss: 0.2198245315043712
iteration: 20 HingeLoss: 0.21521284684892997
iteration: 21 HingeLoss: 0.2106979104281633
iteration: 22 HingeLoss: 0.2062776925671018
iteration: 23 HingeLoss: 0.2019502061711959
iteration: 24 HingeLoss: 0.1977135058330246
iteration: 25 HingeLoss: 0.1935656869577434
iteration: 26 HingeLoss: 0.18950488490688028
iteration: 27 HingeLoss: 0.18552927416009307
iteration: 28 HingeLoss: 0.18163706749451328
iteration: 29 HingeLoss: 0.17782651518130554
iteration: 30 HingeLoss: 0.1740959041990826
iteration: 31 HingeLoss: 0.1704435574638224
iteration: 32 HingeLoss: 0.16686783307494044
iteration: 33 HingeLoss: 0.1633671235771784
iteration: 34 HingeLoss: 0.1599398552379781
iteration: 35 HingeLoss: 0.15658448734001523
iteration: 36 HingeLoss: 0.15329951148857465
iteration: 37 HingeLoss: 0.15008345093345665
iteration: 38 HingeLoss: 0.1469348599051085
iteration: 39 HingeLoss: 0.14385232296468364
iteration: 40 HingeLoss: 0.14083445436773578
iteration: 41 HingeLoss: 0.1378798974412618
iteration: 42 HingeLoss: 0.13498732397381402
iteration: 43 HingeLoss: 0.13215543361840684
iteration: 44 HingeLoss: 0.12938295330795035
iteration: 45 HingeLoss: 0.12666863668294667
iteration: 46 HingeLoss: 0.12401126353119354
iteration: 47 HingeLoss: 0.12140963923924177
iteration: 48 HingeLoss: 0.11886259425536044
iteration: 49 HingeLoss: 0.11636898356376896
iteration: 50 HingeLoss: 0.11392768616989889
iteration: 51 HingeLoss: 0.11153760459645443
iteration: 52 HingeLoss: 0.10919766439004519
iteration: 53 HingeLoss: 0.10690681363816905
iteration: 54 HingeLoss: 0.10466402249632847

Output_ROI.txt

```

iteration: 55 HingeLoss: 0.10246828272506694
iteration: 56 HingeLoss: 0.10031860723671858
iteration: 57 HingeLoss: 0.09821402965166579
iteration: 58 HingeLoss: 0.09615360386390685
iteration: 59 HingeLoss: 0.09413640361573643
iteration: 60 HingeLoss: 0.09216152208135
iteration: 61 HingeLoss: 0.09022807145918312
iteration: 62 HingeLoss: 0.08833518257280285
iteration: 63 HingeLoss: 0.08648200448017263
iteration: 64 HingeLoss: 0.08466770409111397
iteration: 65 HingeLoss: 0.0828914657927934
iteration: 66 HingeLoss: 0.08115249108306656
iteration: 67 HingeLoss: 0.07944999821151377
iteration: 68 HingeLoss: 0.07778322182800725
iteration: 69 HingeLoss: 0.07615141263864986
iteration: 70 HingeLoss: 0.07455383706893298
iteration: 71 HingeLoss: 0.07298977693396012
iteration: 72 HingeLoss: 0.07145852911558943
iteration: 73 HingeLoss: 0.06995940524634912
iteration: 74 HingeLoss: 0.06849173139998421
iteration: 75 HingeLoss: 0.06705484778849502
iteration: 76 HingeLoss: 0.06564810846553185
iteration: 77 HingeLoss: 0.06427088103601172
iteration: 78 HingeLoss: 0.06292254637182715
iteration: 79 HingeLoss: 0.06160249833351947
iteration: 80 HingeLoss: 0.06031014349779046
iteration: 81 HingeLoss: 0.05904490089073097
iteration: 82 HingeLoss: 0.05780620172664598
iteration: 83 HingeLoss: 0.0565934891523589
iteration: 84 HingeLoss: 0.05540621799687993
iteration: 85 HingeLoss: 0.05424385452632628
iteration: 86 HingeLoss: 0.053105876203983896
iteration: 87 HingeLoss: 0.05199177145540258
iteration: 88 HingeLoss: 0.050901039438419664
iteration: 89 HingeLoss: 0.04983318981800773
iteration: 90 HingeLoss: 0.04878774254584632
iteration: 91 HingeLoss: 0.04776422764451774
iteration: 92 HingeLoss: 0.04676218499623011
iteration: 93 HingeLoss: 0.045781164135973065
iteration: 94 HingeLoss: 0.04482072404901257
iteration: 95 HingeLoss: 0.043880432972634255
iteration: 96 HingeLoss: 0.042959868202045885
iteration: 97 HingeLoss: 0.042058615900351724
iteration: 98 HingeLoss: 0.04117627091251357
iteration: 99 HingeLoss: 0.04031243658321462
[-1.02911210e-03 -1.03766398e-04 -1.84247476e-04 ... 7.82772652e-04
 4.72390873e-04 7.07080165e-05]
CROSS VALIDATION 25
iteration: 0 HingeLoss: 21.049571397762453
iteration: 1 HingeLoss: 1.6370593684692527
iteration: 2 HingeLoss: 1.1024810519043897
iteration: 3 HingeLoss: 0.3086054402450847

```

Output_ROI.txt

iteration: 4 HingeLoss: 0.30213122663651076
iteration: 5 HingeLoss: 0.29579283513728216
iteration: 6 HingeLoss: 0.2895874163441346
iteration: 7 HingeLoss: 0.28351218063125144
iteration: 8 HingeLoss: 0.27756439689619633
iteration: 9 HingeLoss: 0.2717413913321537
iteration: 10 HingeLoss: 0.26604054622592926
iteration: 11 HingeLoss: 0.2604592987811647
iteration: 12 HingeLoss: 0.2549951399662408
iteration: 13 HingeLoss: 0.2496456133863512
iteration: 14 HingeLoss: 0.2444083141792371
iteration: 15 HingeLoss: 0.23928088793409005
iteration: 16 HingeLoss: 0.2342610296331339
iteration: 17 HingeLoss: 0.22934648261541163
iteration: 18 HingeLoss: 0.22453503756231075
iteration: 19 HingeLoss: 0.2198245315043712
iteration: 20 HingeLoss: 0.21521284684892997
iteration: 21 HingeLoss: 0.2106979104281633
iteration: 22 HingeLoss: 0.2062776925671018
iteration: 23 HingeLoss: 0.2019502061711959
iteration: 24 HingeLoss: 0.1977135058330246
iteration: 25 HingeLoss: 0.1935656869577434
iteration: 26 HingeLoss: 0.18950488490688028
iteration: 27 HingeLoss: 0.18552927416009307
iteration: 28 HingeLoss: 0.18163706749451328
iteration: 29 HingeLoss: 0.17782651518130554
iteration: 30 HingeLoss: 0.1740959041990826
iteration: 31 HingeLoss: 0.1704435574638224
iteration: 32 HingeLoss: 0.16686783307494044
iteration: 33 HingeLoss: 0.1633671235771784
iteration: 34 HingeLoss: 0.1599398552379781
iteration: 35 HingeLoss: 0.15658448734001523
iteration: 36 HingeLoss: 0.15329951148857465
iteration: 37 HingeLoss: 0.15008345093345665
iteration: 38 HingeLoss: 0.1469348599051085
iteration: 39 HingeLoss: 0.14385232296468364
iteration: 40 HingeLoss: 0.14083445436773578
iteration: 41 HingeLoss: 0.1378798974412618
iteration: 42 HingeLoss: 0.13498732397381402
iteration: 43 HingeLoss: 0.13215543361840684
iteration: 44 HingeLoss: 0.12938295330795035
iteration: 45 HingeLoss: 0.12666863668294667
iteration: 46 HingeLoss: 0.12401126353119354
iteration: 47 HingeLoss: 0.12140963923924177
iteration: 48 HingeLoss: 0.11886259425536044
iteration: 49 HingeLoss: 0.11636898356376896
iteration: 50 HingeLoss: 0.11392768616989889
iteration: 51 HingeLoss: 0.11153760459645443
iteration: 52 HingeLoss: 0.10919766439004519
iteration: 53 HingeLoss: 0.10690681363816905
iteration: 54 HingeLoss: 0.10466402249632847
iteration: 55 HingeLoss: 0.10246828272506694

Output_ROI.txt

```

iteration: 56 HingeLoss: 0.10031860723671858
iteration: 57 HingeLoss: 0.09821402965166579
iteration: 58 HingeLoss: 0.09615360386390685
iteration: 59 HingeLoss: 0.09413640361573643
iteration: 60 HingeLoss: 0.09216152208135
iteration: 61 HingeLoss: 0.09022807145918312
iteration: 62 HingeLoss: 0.08833518257280285
iteration: 63 HingeLoss: 0.08648200448017263
iteration: 64 HingeLoss: 0.08466770409111397
iteration: 65 HingeLoss: 0.0828914657927934
iteration: 66 HingeLoss: 0.08115249108306656
iteration: 67 HingeLoss: 0.07944999821151377
iteration: 68 HingeLoss: 0.07778322182800725
iteration: 69 HingeLoss: 0.07615141263864986
iteration: 70 HingeLoss: 0.07455383706893298
iteration: 71 HingeLoss: 0.07298977693396012
iteration: 72 HingeLoss: 0.07145852911558943
iteration: 73 HingeLoss: 0.06995940524634912
iteration: 74 HingeLoss: 0.06849173139998421
iteration: 75 HingeLoss: 0.06705484778849502
iteration: 76 HingeLoss: 0.06564810846553185
iteration: 77 HingeLoss: 0.06427088103601172
iteration: 78 HingeLoss: 0.06292254637182715
iteration: 79 HingeLoss: 0.06160249833351947
iteration: 80 HingeLoss: 0.06031014349779046
iteration: 81 HingeLoss: 0.05904490089073097
iteration: 82 HingeLoss: 0.05780620172664598
iteration: 83 HingeLoss: 0.0565934891523589
iteration: 84 HingeLoss: 0.05540621799687993
iteration: 85 HingeLoss: 0.05424385452632628
iteration: 86 HingeLoss: 0.053105876203983896
iteration: 87 HingeLoss: 0.05199177145540258
iteration: 88 HingeLoss: 0.050901039438419664
iteration: 89 HingeLoss: 0.04983318981800773
iteration: 90 HingeLoss: 0.04878774254584632
iteration: 91 HingeLoss: 0.04776422764451774
iteration: 92 HingeLoss: 0.04676218499623011
iteration: 93 HingeLoss: 0.045781164135973065
iteration: 94 HingeLoss: 0.04482072404901257
iteration: 95 HingeLoss: 0.043880432972634255
iteration: 96 HingeLoss: 0.042959868202045885
iteration: 97 HingeLoss: 0.042058615900351724
iteration: 98 HingeLoss: 0.04117627091251357
iteration: 99 HingeLoss: 0.04031243658321462
[-1.02911210e-03 -1.03766398e-04 -1.84247476e-04 ... 7.82772652e-04
 4.72390873e-04 7.07080165e-05]
CROSS VALIDATION 26
iteration: 0 HingeLoss: 21.049571397762453
iteration: 1 HingeLoss: 1.6370593684692527
iteration: 2 HingeLoss: 1.1024810519043897
iteration: 3 HingeLoss: 0.3086054402450847
iteration: 4 HingeLoss: 0.30213122663651076

```

Output_ROI.txt

iteration: 5 HingeLoss: 0.29579283513728216
iteration: 6 HingeLoss: 0.2895874163441346
iteration: 7 HingeLoss: 0.28351218063125144
iteration: 8 HingeLoss: 0.27756439689619633
iteration: 9 HingeLoss: 0.2717413913321537
iteration: 10 HingeLoss: 0.26604054622592926
iteration: 11 HingeLoss: 0.2604592987811647
iteration: 12 HingeLoss: 0.2549951399662408
iteration: 13 HingeLoss: 0.2496456133863512
iteration: 14 HingeLoss: 0.2444083141792371
iteration: 15 HingeLoss: 0.23928088793409005
iteration: 16 HingeLoss: 0.2342610296331339
iteration: 17 HingeLoss: 0.22934648261541163
iteration: 18 HingeLoss: 0.22453503756231075
iteration: 19 HingeLoss: 0.2198245315043712
iteration: 20 HingeLoss: 0.21521284684892997
iteration: 21 HingeLoss: 0.2106979104281633
iteration: 22 HingeLoss: 0.2062776925671018
iteration: 23 HingeLoss: 0.2019502061711959
iteration: 24 HingeLoss: 0.1977135058330246
iteration: 25 HingeLoss: 0.1935656869577434
iteration: 26 HingeLoss: 0.18950488490688028
iteration: 27 HingeLoss: 0.18552927416009307
iteration: 28 HingeLoss: 0.18163706749451328
iteration: 29 HingeLoss: 0.17782651518130554
iteration: 30 HingeLoss: 0.1740959041990826
iteration: 31 HingeLoss: 0.1704435574638224
iteration: 32 HingeLoss: 0.16686783307494044
iteration: 33 HingeLoss: 0.1633671235771784
iteration: 34 HingeLoss: 0.1599398552379781
iteration: 35 HingeLoss: 0.15658448734001523
iteration: 36 HingeLoss: 0.15329951148857465
iteration: 37 HingeLoss: 0.15008345093345665
iteration: 38 HingeLoss: 0.1469348599051085
iteration: 39 HingeLoss: 0.14385232296468364
iteration: 40 HingeLoss: 0.14083445436773578
iteration: 41 HingeLoss: 0.1378798974412618
iteration: 42 HingeLoss: 0.13498732397381402
iteration: 43 HingeLoss: 0.13215543361840684
iteration: 44 HingeLoss: 0.12938295330795035
iteration: 45 HingeLoss: 0.12666863668294667
iteration: 46 HingeLoss: 0.12401126353119354
iteration: 47 HingeLoss: 0.12140963923924177
iteration: 48 HingeLoss: 0.11886259425536044
iteration: 49 HingeLoss: 0.11636898356376896
iteration: 50 HingeLoss: 0.11392768616989889
iteration: 51 HingeLoss: 0.11153760459645443
iteration: 52 HingeLoss: 0.10919766439004519
iteration: 53 HingeLoss: 0.10690681363816905
iteration: 54 HingeLoss: 0.10466402249632847
iteration: 55 HingeLoss: 0.10246828272506694
iteration: 56 HingeLoss: 0.10031860723671858

Output_ROI.txt

```

iteration: 57 HingeLoss: 0.09821402965166579
iteration: 58 HingeLoss: 0.09615360386390685
iteration: 59 HingeLoss: 0.09413640361573643
iteration: 60 HingeLoss: 0.09216152208135
iteration: 61 HingeLoss: 0.09022807145918312
iteration: 62 HingeLoss: 0.08833518257280285
iteration: 63 HingeLoss: 0.08648200448017263
iteration: 64 HingeLoss: 0.08466770409111397
iteration: 65 HingeLoss: 0.0828914657927934
iteration: 66 HingeLoss: 0.08115249108306656
iteration: 67 HingeLoss: 0.07944999821151377
iteration: 68 HingeLoss: 0.07778322182800725
iteration: 69 HingeLoss: 0.07615141263864986
iteration: 70 HingeLoss: 0.07455383706893298
iteration: 71 HingeLoss: 0.07298977693396012
iteration: 72 HingeLoss: 0.07145852911558943
iteration: 73 HingeLoss: 0.06995940524634912
iteration: 74 HingeLoss: 0.06849173139998421
iteration: 75 HingeLoss: 0.06705484778849502
iteration: 76 HingeLoss: 0.06564810846553185
iteration: 77 HingeLoss: 0.06427088103601172
iteration: 78 HingeLoss: 0.06292254637182715
iteration: 79 HingeLoss: 0.06160249833351947
iteration: 80 HingeLoss: 0.06031014349779046
iteration: 81 HingeLoss: 0.05904490089073097
iteration: 82 HingeLoss: 0.05780620172664598
iteration: 83 HingeLoss: 0.0565934891523589
iteration: 84 HingeLoss: 0.05540621799687993
iteration: 85 HingeLoss: 0.05424385452632628
iteration: 86 HingeLoss: 0.053105876203983896
iteration: 87 HingeLoss: 0.05199177145540258
iteration: 88 HingeLoss: 0.050901039438419664
iteration: 89 HingeLoss: 0.04983318981800773
iteration: 90 HingeLoss: 0.04878774254584632
iteration: 91 HingeLoss: 0.04776422764451774
iteration: 92 HingeLoss: 0.04676218499623011
iteration: 93 HingeLoss: 0.045781164135973065
iteration: 94 HingeLoss: 0.04482072404901257
iteration: 95 HingeLoss: 0.043880432972634255
iteration: 96 HingeLoss: 0.042959868202045885
iteration: 97 HingeLoss: 0.042058615900351724
iteration: 98 HingeLoss: 0.04117627091251357
iteration: 99 HingeLoss: 0.04031243658321462
[-1.02911210e-03 -1.03766398e-04 -1.84247476e-04 ... 7.82772652e-04
 4.72390873e-04 7.07080165e-05]

```

CROSS VALIDATION 27

```

iteration: 0 HingeLoss: 21.049571397762453
iteration: 1 HingeLoss: 1.6370593684692527
iteration: 2 HingeLoss: 1.1024810519043897
iteration: 3 HingeLoss: 0.3086054402450847
iteration: 4 HingeLoss: 0.30213122663651076
iteration: 5 HingeLoss: 0.29579283513728216

```

Output_ROI.txt

```

iteration: 6 HingeLoss: 0.2895874163441346
iteration: 7 HingeLoss: 0.28351218063125144
iteration: 8 HingeLoss: 0.27756439689619633
iteration: 9 HingeLoss: 0.2717413913321537
iteration: 10 HingeLoss: 0.26604054622592926
iteration: 11 HingeLoss: 0.2604592987811647
iteration: 12 HingeLoss: 0.2549951399662408
iteration: 13 HingeLoss: 0.2496456133863512
iteration: 14 HingeLoss: 0.2444083141792371
iteration: 15 HingeLoss: 0.23928088793409005
iteration: 16 HingeLoss: 0.2342610296331339
iteration: 17 HingeLoss: 0.22934648261541163
iteration: 18 HingeLoss: 0.22453503756231075
iteration: 19 HingeLoss: 0.2198245315043712
iteration: 20 HingeLoss: 0.21521284684892997
iteration: 21 HingeLoss: 0.2106979104281633
iteration: 22 HingeLoss: 0.2062776925671018
iteration: 23 HingeLoss: 0.2019502061711959
iteration: 24 HingeLoss: 0.1977135058330246
iteration: 25 HingeLoss: 0.1935656869577434
iteration: 26 HingeLoss: 0.18950488490688028
iteration: 27 HingeLoss: 0.18552927416009307
iteration: 28 HingeLoss: 0.18163706749451328
iteration: 29 HingeLoss: 0.17782651518130554
iteration: 30 HingeLoss: 0.1740959041990826
iteration: 31 HingeLoss: 0.1704435574638224
iteration: 32 HingeLoss: 0.16686783307494044
iteration: 33 HingeLoss: 0.1633671235771784
iteration: 34 HingeLoss: 0.1599398552379781
iteration: 35 HingeLoss: 0.15658448734001523
iteration: 36 HingeLoss: 0.15329951148857465
iteration: 37 HingeLoss: 0.15008345093345665
iteration: 38 HingeLoss: 0.1469348599051085
iteration: 39 HingeLoss: 0.14385232296468364
iteration: 40 HingeLoss: 0.14083445436773578
iteration: 41 HingeLoss: 0.1378798974412618
iteration: 42 HingeLoss: 0.13498732397381402
iteration: 43 HingeLoss: 0.13215543361840684
iteration: 44 HingeLoss: 0.12938295330795035
iteration: 45 HingeLoss: 0.12666863668294667
iteration: 46 HingeLoss: 0.12401126353119354
iteration: 47 HingeLoss: 0.12140963923924177
iteration: 48 HingeLoss: 0.11886259425536044
iteration: 49 HingeLoss: 0.11636898356376896
iteration: 50 HingeLoss: 0.11392768616989889
iteration: 51 HingeLoss: 0.11153760459645443
iteration: 52 HingeLoss: 0.10919766439004519
iteration: 53 HingeLoss: 0.10690681363816905
iteration: 54 HingeLoss: 0.10466402249632847
iteration: 55 HingeLoss: 0.10246828272506694
iteration: 56 HingeLoss: 0.10031860723671858
iteration: 57 HingeLoss: 0.09821402965166579

```

Output_ROI.txt

```

iteration: 58 HingeLoss: 0.09615360386390685
iteration: 59 HingeLoss: 0.09413640361573643
iteration: 60 HingeLoss: 0.09216152208135
iteration: 61 HingeLoss: 0.09022807145918312
iteration: 62 HingeLoss: 0.08833518257280285
iteration: 63 HingeLoss: 0.08648200448017263
iteration: 64 HingeLoss: 0.08466770409111397
iteration: 65 HingeLoss: 0.0828914657927934
iteration: 66 HingeLoss: 0.08115249108306656
iteration: 67 HingeLoss: 0.07944999821151377
iteration: 68 HingeLoss: 0.07778322182800725
iteration: 69 HingeLoss: 0.07615141263864986
iteration: 70 HingeLoss: 0.07455383706893298
iteration: 71 HingeLoss: 0.07298977693396012
iteration: 72 HingeLoss: 0.07145852911558943
iteration: 73 HingeLoss: 0.06995940524634912
iteration: 74 HingeLoss: 0.06849173139998421
iteration: 75 HingeLoss: 0.06705484778849502
iteration: 76 HingeLoss: 0.06564810846553185
iteration: 77 HingeLoss: 0.06427088103601172
iteration: 78 HingeLoss: 0.06292254637182715
iteration: 79 HingeLoss: 0.06160249833351947
iteration: 80 HingeLoss: 0.06031014349779046
iteration: 81 HingeLoss: 0.05904490089073097
iteration: 82 HingeLoss: 0.05780620172664598
iteration: 83 HingeLoss: 0.0565934891523589
iteration: 84 HingeLoss: 0.05540621799687993
iteration: 85 HingeLoss: 0.05424385452632628
iteration: 86 HingeLoss: 0.053105876203983896
iteration: 87 HingeLoss: 0.05199177145540258
iteration: 88 HingeLoss: 0.050901039438419664
iteration: 89 HingeLoss: 0.04983318981800773
iteration: 90 HingeLoss: 0.04878774254584632
iteration: 91 HingeLoss: 0.04776422764451774
iteration: 92 HingeLoss: 0.04676218499623011
iteration: 93 HingeLoss: 0.045781164135973065
iteration: 94 HingeLoss: 0.04482072404901257
iteration: 95 HingeLoss: 0.043880432972634255
iteration: 96 HingeLoss: 0.042959868202045885
iteration: 97 HingeLoss: 0.042058615900351724
iteration: 98 HingeLoss: 0.04117627091251357
iteration: 99 HingeLoss: 0.04031243658321462
[-1.02911210e-03 -1.03766398e-04 -1.84247476e-04 ... 7.82772652e-04
 4.72390873e-04 7.07080165e-05]

```

CROSS VALIDATION 28

```

iteration: 0 HingeLoss: 19.67505977349833
iteration: 1 HingeLoss: 1.6370593684692527
iteration: 2 HingeLoss: 1.1024810519043897
iteration: 3 HingeLoss: 0.3086054402450847
iteration: 4 HingeLoss: 0.30213122663651076
iteration: 5 HingeLoss: 0.29579283513728216
iteration: 6 HingeLoss: 0.2895874163441346

```


Output_ROI.txt

```

iteration: 7 HingeLoss: 0.28351218063125144
iteration: 8 HingeLoss: 0.27756439689619633
iteration: 9 HingeLoss: 0.2717413913321537
iteration: 10 HingeLoss: 0.26604054622592926
iteration: 11 HingeLoss: 0.2604592987811647
iteration: 12 HingeLoss: 0.2549951399662408
iteration: 13 HingeLoss: 0.2496456133863512
iteration: 14 HingeLoss: 0.2444083141792371
iteration: 15 HingeLoss: 0.23928088793409005
iteration: 16 HingeLoss: 0.2342610296331339
iteration: 17 HingeLoss: 0.22934648261541163
iteration: 18 HingeLoss: 0.22453503756231075
iteration: 19 HingeLoss: 0.2198245315043712
iteration: 20 HingeLoss: 0.21521284684892997
iteration: 21 HingeLoss: 0.2106979104281633
iteration: 22 HingeLoss: 0.2062776925671018
iteration: 23 HingeLoss: 0.2019502061711959
iteration: 24 HingeLoss: 0.1977135058330246
iteration: 25 HingeLoss: 0.1935656869577434
iteration: 26 HingeLoss: 0.18950488490688028
iteration: 27 HingeLoss: 0.18552927416009307
iteration: 28 HingeLoss: 0.18163706749451328
iteration: 29 HingeLoss: 0.17782651518130554
iteration: 30 HingeLoss: 0.1740959041990826
iteration: 31 HingeLoss: 0.1704435574638224
iteration: 32 HingeLoss: 0.16686783307494044
iteration: 33 HingeLoss: 0.1633671235771784
iteration: 34 HingeLoss: 0.1599398552379781
iteration: 35 HingeLoss: 0.15658448734001523
iteration: 36 HingeLoss: 0.15329951148857465
iteration: 37 HingeLoss: 0.15008345093345665
iteration: 38 HingeLoss: 0.1469348599051085
iteration: 39 HingeLoss: 0.14385232296468364
iteration: 40 HingeLoss: 0.14083445436773578
iteration: 41 HingeLoss: 0.1378798974412618
iteration: 42 HingeLoss: 0.13498732397381402
iteration: 43 HingeLoss: 0.13215543361840684
iteration: 44 HingeLoss: 0.12938295330795035
iteration: 45 HingeLoss: 0.12666863668294667
iteration: 46 HingeLoss: 0.12401126353119354
iteration: 47 HingeLoss: 0.12140963923924177
iteration: 48 HingeLoss: 0.11886259425536044
iteration: 49 HingeLoss: 0.11636898356376896
iteration: 50 HingeLoss: 0.11392768616989889
iteration: 51 HingeLoss: 0.11153760459645443
iteration: 52 HingeLoss: 0.10919766439004519
iteration: 53 HingeLoss: 0.10690681363816905
iteration: 54 HingeLoss: 0.10466402249632847
iteration: 55 HingeLoss: 0.10246828272506694
iteration: 56 HingeLoss: 0.10031860723671858
iteration: 57 HingeLoss: 0.09821402965166579
iteration: 58 HingeLoss: 0.09615360386390685

```

Output_ROI.txt

```

iteration: 59 HingeLoss: 0.09413640361573643
iteration: 60 HingeLoss: 0.09216152208135
iteration: 61 HingeLoss: 0.09022807145918312
iteration: 62 HingeLoss: 0.08833518257280285
iteration: 63 HingeLoss: 0.08648200448017263
iteration: 64 HingeLoss: 0.08466770409111397
iteration: 65 HingeLoss: 0.0828914657927934
iteration: 66 HingeLoss: 0.08115249108306656
iteration: 67 HingeLoss: 0.07944999821151377
iteration: 68 HingeLoss: 0.07778322182800725
iteration: 69 HingeLoss: 0.07615141263864986
iteration: 70 HingeLoss: 0.07455383706893298
iteration: 71 HingeLoss: 0.07298977693396012
iteration: 72 HingeLoss: 0.07145852911558943
iteration: 73 HingeLoss: 0.06995940524634912
iteration: 74 HingeLoss: 0.06849173139998421
iteration: 75 HingeLoss: 0.06705484778849502
iteration: 76 HingeLoss: 0.06564810846553185
iteration: 77 HingeLoss: 0.06427088103601172
iteration: 78 HingeLoss: 0.06292254637182715
iteration: 79 HingeLoss: 0.06160249833351947
iteration: 80 HingeLoss: 0.06031014349779046
iteration: 81 HingeLoss: 0.05904490089073097
iteration: 82 HingeLoss: 0.05780620172664598
iteration: 83 HingeLoss: 0.0565934891523589
iteration: 84 HingeLoss: 0.05540621799687993
iteration: 85 HingeLoss: 0.05424385452632628
iteration: 86 HingeLoss: 0.053105876203983896
iteration: 87 HingeLoss: 0.05199177145540258
iteration: 88 HingeLoss: 0.050901039438419664
iteration: 89 HingeLoss: 0.04983318981800773
iteration: 90 HingeLoss: 0.04878774254584632
iteration: 91 HingeLoss: 0.04776422764451774
iteration: 92 HingeLoss: 0.04676218499623011
iteration: 93 HingeLoss: 0.045781164135973065
iteration: 94 HingeLoss: 0.04482072404901257
iteration: 95 HingeLoss: 0.043880432972634255
iteration: 96 HingeLoss: 0.042959868202045885
iteration: 97 HingeLoss: 0.042058615900351724
iteration: 98 HingeLoss: 0.04117627091251357
iteration: 99 HingeLoss: 0.04031243658321462
[-1.02911210e-03 -1.03766398e-04 -1.84247476e-04 ... 7.82772652e-04
 4.72390873e-04 7.07080165e-05]

```

CROSS VALIDATION 29

```

iteration: 0 HingeLoss: 21.049571397762453
iteration: 1 HingeLoss: 1.6370593684692527
iteration: 2 HingeLoss: 1.1024810519043897
iteration: 3 HingeLoss: 0.3086054402450847
iteration: 4 HingeLoss: 0.30213122663651076
iteration: 5 HingeLoss: 0.29579283513728216
iteration: 6 HingeLoss: 0.2895874163441346
iteration: 7 HingeLoss: 0.28351218063125144

```

Output_ROI.txt

```

iteration: 8 HingeLoss: 0.27756439689619633
iteration: 9 HingeLoss: 0.2717413913321537
iteration: 10 HingeLoss: 0.26604054622592926
iteration: 11 HingeLoss: 0.2604592987811647
iteration: 12 HingeLoss: 0.2549951399662408
iteration: 13 HingeLoss: 0.2496456133863512
iteration: 14 HingeLoss: 0.2444083141792371
iteration: 15 HingeLoss: 0.23928088793409005
iteration: 16 HingeLoss: 0.2342610296331339
iteration: 17 HingeLoss: 0.22934648261541163
iteration: 18 HingeLoss: 0.22453503756231075
iteration: 19 HingeLoss: 0.2198245315043712
iteration: 20 HingeLoss: 0.21521284684892997
iteration: 21 HingeLoss: 0.2106979104281633
iteration: 22 HingeLoss: 0.2062776925671018
iteration: 23 HingeLoss: 0.2019502061711959
iteration: 24 HingeLoss: 0.1977135058330246
iteration: 25 HingeLoss: 0.1935656869577434
iteration: 26 HingeLoss: 0.18950488490688028
iteration: 27 HingeLoss: 0.18552927416009307
iteration: 28 HingeLoss: 0.18163706749451328
iteration: 29 HingeLoss: 0.17782651518130554
iteration: 30 HingeLoss: 0.1740959041990826
iteration: 31 HingeLoss: 0.1704435574638224
iteration: 32 HingeLoss: 0.16686783307494044
iteration: 33 HingeLoss: 0.1633671235771784
iteration: 34 HingeLoss: 0.1599398552379781
iteration: 35 HingeLoss: 0.15658448734001523
iteration: 36 HingeLoss: 0.15329951148857465
iteration: 37 HingeLoss: 0.15008345093345665
iteration: 38 HingeLoss: 0.1469348599051085
iteration: 39 HingeLoss: 0.14385232296468364
iteration: 40 HingeLoss: 0.14083445436773578
iteration: 41 HingeLoss: 0.1378798974412618
iteration: 42 HingeLoss: 0.13498732397381402
iteration: 43 HingeLoss: 0.13215543361840684
iteration: 44 HingeLoss: 0.12938295330795035
iteration: 45 HingeLoss: 0.12666863668294667
iteration: 46 HingeLoss: 0.12401126353119354
iteration: 47 HingeLoss: 0.12140963923924177
iteration: 48 HingeLoss: 0.11886259425536044
iteration: 49 HingeLoss: 0.11636898356376896
iteration: 50 HingeLoss: 0.11392768616989889
iteration: 51 HingeLoss: 0.11153760459645443
iteration: 52 HingeLoss: 0.10919766439004519
iteration: 53 HingeLoss: 0.10690681363816905
iteration: 54 HingeLoss: 0.10466402249632847
iteration: 55 HingeLoss: 0.10246828272506694
iteration: 56 HingeLoss: 0.10031860723671858
iteration: 57 HingeLoss: 0.09821402965166579
iteration: 58 HingeLoss: 0.09615360386390685
iteration: 59 HingeLoss: 0.09413640361573643

```

Output_ROI.txt

```

iteration: 60 HingeLoss: 0.09216152208135
iteration: 61 HingeLoss: 0.09022807145918312
iteration: 62 HingeLoss: 0.08833518257280285
iteration: 63 HingeLoss: 0.08648200448017263
iteration: 64 HingeLoss: 0.08466770409111397
iteration: 65 HingeLoss: 0.0828914657927934
iteration: 66 HingeLoss: 0.08115249108306656
iteration: 67 HingeLoss: 0.07944999821151377
iteration: 68 HingeLoss: 0.07778322182800725
iteration: 69 HingeLoss: 0.07615141263864986
iteration: 70 HingeLoss: 0.07455383706893298
iteration: 71 HingeLoss: 0.07298977693396012
iteration: 72 HingeLoss: 0.07145852911558943
iteration: 73 HingeLoss: 0.06995940524634912
iteration: 74 HingeLoss: 0.06849173139998421
iteration: 75 HingeLoss: 0.06705484778849502
iteration: 76 HingeLoss: 0.06564810846553185
iteration: 77 HingeLoss: 0.06427088103601172
iteration: 78 HingeLoss: 0.06292254637182715
iteration: 79 HingeLoss: 0.06160249833351947
iteration: 80 HingeLoss: 0.06031014349779046
iteration: 81 HingeLoss: 0.05904490089073097
iteration: 82 HingeLoss: 0.05780620172664598
iteration: 83 HingeLoss: 0.0565934891523589
iteration: 84 HingeLoss: 0.05540621799687993
iteration: 85 HingeLoss: 0.05424385452632628
iteration: 86 HingeLoss: 0.053105876203983896
iteration: 87 HingeLoss: 0.05199177145540258
iteration: 88 HingeLoss: 0.050901039438419664
iteration: 89 HingeLoss: 0.04983318981800773
iteration: 90 HingeLoss: 0.04878774254584632
iteration: 91 HingeLoss: 0.04776422764451774
iteration: 92 HingeLoss: 0.04676218499623011
iteration: 93 HingeLoss: 0.045781164135973065
iteration: 94 HingeLoss: 0.04482072404901257
iteration: 95 HingeLoss: 0.043880432972634255
iteration: 96 HingeLoss: 0.042959868202045885
iteration: 97 HingeLoss: 0.042058615900351724
iteration: 98 HingeLoss: 0.04117627091251357
iteration: 99 HingeLoss: 0.04031243658321462
[-1.02911210e-03 -1.03766398e-04 -1.84247476e-04 ... 7.82772652e-04
 4.72390873e-04 7.07080165e-05]

```

CROSS VALIDATION 30

```

iteration: 0 HingeLoss: 32.16587286049037
iteration: 1 HingeLoss: 0.27015832193466416
iteration: 2 HingeLoss: 0.2644906879391331
iteration: 3 HingeLoss: 0.2589419548713146
iteration: 4 HingeLoss: 0.25350962831632196
iteration: 5 HingeLoss: 0.24819126618943735
iteration: 6 HingeLoss: 0.2429844776382804
iteration: 7 HingeLoss: 0.23788692196800892
iteration: 8 HingeLoss: 0.23289630758906643

```

Output_ROI.txt

```

iteration: 9 HingeLoss: 0.2280103909870056
iteration: 10 HingeLoss: 0.22322697571392425
iteration: 11 HingeLoss: 0.21854391140105892
iteration: 12 HingeLoss: 0.21395909279209335
iteration: 13 HingeLoss: 0.20947045879674775
iteration: 14 HingeLoss: 0.20507599156422232
iteration: 15 HingeLoss: 0.20077371557607882
iteration: 16 HingeLoss: 0.19656169675815305
iteration: 17 HingeLoss: 0.19243804161109743
iteration: 18 HingeLoss: 0.1884008963591653
iteration: 19 HingeLoss: 0.18444844611685157
iteration: 20 HingeLoss: 0.18057891407301707
iteration: 21 HingeLoss: 0.17679056069212862
iteration: 22 HingeLoss: 0.17308168293225704
iteration: 23 HingeLoss: 0.16945061347947965
iteration: 24 HingeLoss: 0.16589571999834463
iteration: 25 HingeLoss: 0.16241540439806082
iteration: 26 HingeLoss: 0.1590081021140801
iteration: 27 HingeLoss: 0.1556722814047532
iteration: 28 HingeLoss: 0.15240644266274017
iteration: 29 HingeLoss: 0.14920911774086648
iteration: 30 HingeLoss: 0.14607886929212216
iteration: 31 HingeLoss: 0.1430142901235078
iteration: 32 HingeLoss: 0.140014002563435
iteration: 33 HingeLoss: 0.13707665784239834
iteration: 34 HingeLoss: 0.1342009354866412
iteration: 35 HingeLoss: 0.13138554272454034
iteration: 36 HingeLoss: 0.12862921390544513
iteration: 37 HingeLoss: 0.12593070993070826
iteration: 38 HingeLoss: 0.12328881769665287
iteration: 39 HingeLoss: 0.12070234954922567
iteration: 40 HingeLoss: 0.11817014275009138
iteration: 41 HingeLoss: 0.11569105895392703
iteration: 42 HingeLoss: 0.1132639836966827
iteration: 43 HingeLoss: 0.11088782589457793
iteration: 44 HingeLoss: 0.10856151735360828
iteration: 45 HingeLoss: 0.10628401228934245
iteration: 46 HingeLoss: 0.10405428685679333
iteration: 47 HingeLoss: 0.10187133869015152
iteration: 48 HingeLoss: 0.09973418645217531
iteration: 49 HingeLoss: 0.09764186939303365
iteration: 50 HingeLoss: 0.0955934469184041
iteration: 51 HingeLoss: 0.09358799816663195
iteration: 52 HingeLoss: 0.09162462159475948
iteration: 53 HingeLoss: 0.08970243457324059
iteration: 54 HingeLoss: 0.08782057298915745
iteration: 55 HingeLoss: 0.08597819085776146
iteration: 56 HingeLoss: 0.08417445994216316
iteration: 57 HingeLoss: 0.0824085693810016
iteration: 58 HingeLoss: 0.08067972532392381
iteration: 59 HingeLoss: 0.07898715057471226
iteration: 60 HingeLoss: 0.07733008424189858

```

Output_ROI.txt

```

iteration: 61 HingeLoss: 0.07570778139670746
iteration: 62 HingeLoss: 0.07411951273817625
iteration: 63 HingeLoss: 0.07256456426530009
iteration: 64 HingeLoss: 0.07104223695605522
iteration: 65 HingeLoss: 0.06955184645315562
iteration: 66 HingeLoss: 0.06809272275640273
iteration: 67 HingeLoss: 0.0666642099214889
iteration: 68 HingeLoss: 0.06526566576511961
iteration: 69 HingeLoss: 0.06389646157632245
iteration: 70 HingeLoss: 0.06255598183381171
iteration: 71 HingeLoss: 0.061243623929283154
iteration: 72 HingeLoss: 0.059958797896513066
iteration: 73 HingeLoss: 0.05870092614614131
iteration: 74 HingeLoss: 0.05746944320601746
iteration: 75 HingeLoss: 0.05626379546699486
iteration: 76 HingeLoss: 0.055083440934057454
iteration: 77 HingeLoss: 0.05392784898266757
iteration: 78 HingeLoss: 0.05279650012022555
iteration: 79 HingeLoss: 0.05168888575253332
iteration: 80 HingeLoss: 0.05060450795515781
iteration: 81 HingeLoss: 0.04954287924959034
iteration: 82 HingeLoss: 0.04850352238410249
iteration: 83 HingeLoss: 0.047485970119199014
iteration: 84 HingeLoss: 0.046489765017571835
iteration: 85 HingeLoss: 0.04551445923846073
iteration: 86 HingeLoss: 0.04455961433632774
iteration: 87 HingeLoss: 0.043624801063755665
iteration: 88 HingeLoss: 0.04270959917848108
iteration: 89 HingeLoss: 0.04181359725447593
iteration: 90 HingeLoss: 0.04093639249699217
iteration: 91 HingeLoss: 0.04007759056148687
iteration: 92 HingeLoss: 0.03923680537634572
iteration: 93 HingeLoss: 0.03841365896932594
iteration: 94 HingeLoss: 0.03760778129764
iteration: 95 HingeLoss: 0.03681881008160414
iteration: 96 HingeLoss: 0.03604639064177667
iteration: 97 HingeLoss: 0.03529017573951305
iteration: 98 HingeLoss: 0.03454982542086581
iteration: 99 HingeLoss: 0.03382500686375944
[-9.58101994e-04 -1.42795238e-04 -2.74520679e-04 ... 4.90014772e-04
 2.62467876e-04 -7.63320070e-07]

```

CROSS VALIDATION 31

```

iteration: 0 HingeLoss: 21.050258091648175
iteration: 1 HingeLoss: 1.6384026847562398
iteration: 2 HingeLoss: 1.1029992905147148
iteration: 3 HingeLoss: 0.3086111046022702
iteration: 4 HingeLoss: 0.3021367721615126
iteration: 5 HingeLoss: 0.2957982643230729
iteration: 6 HingeLoss: 0.28959273163138705
iteration: 7 HingeLoss: 0.28351738440943575
iteration: 8 HingeLoss: 0.277569491504654
iteration: 9 HingeLoss: 0.2717463790611495

```

Output_ROI.txt

```

iteration: 10 HingeLoss: 0.26604542931768044
iteration: 11 HingeLoss: 0.26046407943084915
iteration: 12 HingeLoss: 0.25499982032298435
iteration: 13 HingeLoss: 0.24965019555419277
iteration: 14 HingeLoss: 0.2444128002180752
iteration: 15 HingeLoss: 0.23928527986060905
iteration: 16 HingeLoss: 0.2342653294217098
iteration: 17 HingeLoss: 0.22935069219900073
iteration: 18 HingeLoss: 0.22453915883331743
iteration: 19 HingeLoss: 0.21982856631549952
iteration: 20 HingeLoss: 0.215216797014016
iteration: 21 HingeLoss: 0.2107017777229911
iteration: 22 HingeLoss: 0.20628147873020103
iteration: 23 HingeLoss: 0.2019539129046239
iteration: 24 HingeLoss: 0.19771713480313136
iteration: 25 HingeLoss: 0.19356923979592067
iteration: 26 HingeLoss: 0.18950836321029468
iteration: 27 HingeLoss: 0.18553267949240473
iteration: 28 HingeLoss: 0.18164040138657825
iteration: 29 HingeLoss: 0.17782977913186404
iteration: 30 HingeLoss: 0.17409909967543302
iteration: 31 HingeLoss: 0.17044668590248072
iteration: 32 HingeLoss: 0.16687089588228612
iteration: 33 HingeLoss: 0.16337012213008648
iteration: 34 HingeLoss: 0.15994279088443836
iteration: 35 HingeLoss: 0.1565873613997379
iteration: 36 HingeLoss: 0.15330232525358403
iteration: 37 HingeLoss: 0.15008620566867142
iteration: 38 HingeLoss: 0.14693755684891102
iteration: 39 HingeLoss: 0.14385496332947628
iteration: 40 HingeLoss: 0.14083703934048583
iteration: 41 HingeLoss: 0.13788242818403543
iteration: 42 HingeLoss: 0.1349898016242984
iteration: 43 HingeLoss: 0.13215785929042168
iteration: 44 HingeLoss: 0.12938532809194853
iteration: 45 HingeLoss: 0.12667096164650465
iteration: 46 HingeLoss: 0.12401353971949121
iteration: 47 HingeLoss: 0.12141186767553205
iteration: 48 HingeLoss: 0.1188647759414296
iteration: 49 HingeLoss: 0.1163711194803869
iteration: 50 HingeLoss: 0.11392977727725995
iteration: 51 HingeLoss: 0.1115396518346092
iteration: 52 HingeLoss: 0.10919966867932288
iteration: 53 HingeLoss: 0.10690877587959145
iteration: 54 HingeLoss: 0.10466594357201468
iteration: 55 HingeLoss: 0.10247016349863033
iteration: 56 HingeLoss: 0.1003204485536548
iteration: 57 HingeLoss: 0.09821583233973293
iteration: 58 HingeLoss: 0.09615536873349737
iteration: 59 HingeLoss: 0.09413813146024169
iteration: 60 HingeLoss: 0.09216321367751695
iteration: 61 HingeLoss: 0.09022972756746334

```

Output_ROI.txt

```

iteration: 62 HingeLoss: 0.08833680393769429
iteration: 63 HingeLoss: 0.08648359183055475
iteration: 64 HingeLoss: 0.08466925814057483
iteration: 65 HingeLoss: 0.08289298723995099
iteration: 66 HingeLoss: 0.08115398061188239
iteration: 67 HingeLoss: 0.07945145649160076
iteration: 68 HingeLoss: 0.07778464951493042
iteration: 69 HingeLoss: 0.07615281037422128
iteration: 70 HingeLoss: 0.07455520548150008
iteration: 71 HingeLoss: 0.07299111663868832
iteration: 72 HingeLoss: 0.0714598407147386
iteration: 73 HingeLoss: 0.06996068932954441
iteration: 74 HingeLoss: 0.06849298854448105
iteration: 75 HingeLoss: 0.06705607855943863
iteration: 76 HingeLoss: 0.0656493134162113
iteration: 77 HingeLoss: 0.06427206070810859
iteration: 78 HingeLoss: 0.06292370129565929
iteration: 79 HingeLoss: 0.061603629028279094
iteration: 80 HingeLoss: 0.06031125047177772
iteration: 81 HingeLoss: 0.059045984641582394
iteration: 82 HingeLoss: 0.05780726274155827
iteration: 83 HingeLoss: 0.05659452790830783
iteration: 84 HingeLoss: 0.055407234960834884
iteration: 85 HingeLoss: 0.0542448501554601
iteration: 86 HingeLoss: 0.053106850945878345
iteration: 87 HingeLoss: 0.05199272574824977
iteration: 88 HingeLoss: 0.0509019737112188
iteration: 89 HingeLoss: 0.04983410449075814
iteration: 90 HingeLoss: 0.04878863802973614
iteration: 91 HingeLoss: 0.04776510434210886
iteration: 92 HingeLoss: 0.046763043301639065
iteration: 93 HingeLoss: 0.045782004435048235
iteration: 94 HingeLoss: 0.04482154671950767
iteration: 95 HingeLoss: 0.04388123838437819
iteration: 96 HingeLoss: 0.042960656717108824
iteration: 97 HingeLoss: 0.04205938787320806
iteration: 98 HingeLoss: 0.04117702669020119
iteration: 99 HingeLoss: 0.040313176505490926
[-1.02914392e-03 -1.03745346e-04 -1.84240165e-04 ... 7.82772652e-04
4.72390873e-04 7.07080165e-05]

```

CROSS VALIDATION 32

```

iteration: 0 HingeLoss: 9.390219511392763
iteration: 1 HingeLoss: 2.854573240449894
iteration: 2 HingeLoss: 0.3123370931232992
iteration: 3 HingeLoss: 0.30578459340989383
iteration: 4 HingeLoss: 0.29936955816497285
iteration: 5 HingeLoss: 0.29308910353032624
iteration: 6 HingeLoss: 0.286940406148019
iteration: 7 HingeLoss: 0.2809207018911599
iteration: 8 HingeLoss: 0.27502728462129766
iteration: 9 HingeLoss: 0.2692575049718843
iteration: 10 HingeLoss: 0.26360876915726233

```


Output_ROI.txt

```

iteration: 11 HingeLoss: 0.2580785378066355
iteration: 12 HingeLoss: 0.252664324822504
iteration: 13 HingeLoss: 0.24736369626304677
iteration: 14 HingeLoss: 0.2421742692479511
iteration: 15 HingeLoss: 0.2370937108871966
iteration: 16 HingeLoss: 0.23211973723231166
iteration: 17 HingeLoss: 0.22725011224963304
iteration: 18 HingeLoss: 0.22248264681510263
iteration: 19 HingeLoss: 0.21781519773015473
iteration: 20 HingeLoss: 0.21324566675824813
iteration: 21 HingeLoss: 0.20877199968161064
iteration: 22 HingeLoss: 0.20439218537777198
iteration: 23 HingeLoss: 0.20010425491547032
iteration: 24 HingeLoss: 0.19590628066952567
iteration: 25 HingeLoss: 0.19179637545428238
iteration: 26 HingeLoss: 0.1877726916752308
iteration: 27 HingeLoss: 0.18383342049842682
iteration: 28 HingeLoss: 0.17997679103733766
iteration: 29 HingeLoss: 0.17620106955674414
iteration: 30 HingeLoss: 0.1725045586933467
iteration: 31 HingeLoss: 0.16888559669272038
iteration: 32 HingeLoss: 0.16534255666227962
iteration: 33 HingeLoss: 0.16187384583991318
iteration: 34 HingeLoss: 0.15847790487796293
iteration: 35 HingeLoss: 0.15515320714222525
iteration: 36 HingeLoss: 0.15189825802565643
iteration: 37 HingeLoss: 0.14871159427647762
iteration: 38 HingeLoss: 0.1455917833403747
iteration: 39 HingeLoss: 0.14253742271649777
iteration: 40 HingeLoss: 0.13954713932697194
iteration: 41 HingeLoss: 0.13661958889963427
iteration: 42 HingeLoss: 0.13375345536372082
iteration: 43 HingeLoss: 0.1309474502582312
iteration: 44 HingeLoss: 0.1282003121527052
iteration: 45 HingeLoss: 0.1255108060801508
iteration: 46 HingeLoss: 0.12287772298186889
iteration: 47 HingeLoss: 0.12029987916392462
iteration: 48 HingeLoss: 0.11777611576502173
iteration: 49 HingeLoss: 0.11530529823554035
iteration: 50 HingeLoss: 0.11288631582750386
iteration: 51 HingeLoss: 0.11051808109524586
iteration: 52 HingeLoss: 0.10819952940655209
iteration: 53 HingeLoss: 0.10592961846405916
iteration: 54 HingeLoss: 0.10370732783669243
iteration: 55 HingeLoss: 0.101531658500935
iteration: 56 HingeLoss: 0.09940163239172
iteration: 57 HingeLoss: 0.09731629196274427
iteration: 58 HingeLoss: 0.09527469975600683
iteration: 59 HingeLoss: 0.09327593798037752
iteration: 60 HingeLoss: 0.09131910809900713
iteration: 61 HingeLoss: 0.08940333042539292
iteration: 62 HingeLoss: 0.08752774372791852

```

Output_ROI.txt

```

iteration: 63 HingeLoss: 0.08569150484269011
iteration: 64 HingeLoss: 0.08389378829449477
iteration: 65 HingeLoss: 0.08213378592571059
iteration: 66 HingeLoss: 0.08041070653300246
iteration: 67 HingeLoss: 0.07872377551163888
iteration: 68 HingeLoss: 0.07707223450727098
iteration: 69 HingeLoss: 0.07545534107501684
iteration: 70 HingeLoss: 0.07387236834569788
iteration: 71 HingeLoss: 0.07232260469907686
iteration: 72 HingeLoss: 0.07080535344395182
iteration: 73 HingeLoss: 0.06931993250496038
iteration: 74 HingeLoss: 0.06786567411595529
iteration: 75 HingeLoss: 0.06644192451981201
iteration: 76 HingeLoss: 0.06504804367453465
iteration: 77 HingeLoss: 0.06368340496552707
iteration: 78 HingeLoss: 0.062347394923900123
iteration: 79 HingeLoss: 0.06103941295068906
iteration: 80 HingeLoss: 0.05975887104685591
iteration: 81 HingeLoss: 0.05850519354895661
iteration: 82 HingeLoss: 0.057277816870353375
iteration: 83 HingeLoss: 0.05607618924785605
iteration: 84 HingeLoss: 0.05489977049367885
iteration: 85 HingeLoss: 0.05374803175260068
iteration: 86 HingeLoss: 0.05262045526421992
iteration: 87 HingeLoss: 0.05151653413019709
iteration: 88 HingeLoss: 0.05043577208638025
iteration: 89 HingeLoss: 0.04937768327971093
iteration: 90 HingeLoss: 0.04834179204981082
iteration: 91 HingeLoss: 0.04732763271514977
iteration: 92 HingeLoss: 0.04633474936370055
iteration: 93 HingeLoss: 0.04536269564798478
iteration: 94 HingeLoss: 0.04441103458441917
iteration: 95 HingeLoss: 0.04347933835687065
iteration: 96 HingeLoss: 0.04256718812433333
iteration: 97 HingeLoss: 0.04167417383263966
iteration: 98 HingeLoss: 0.040799894030122
iteration: 99 HingeLoss: 0.03994395568714137
[-9.23787000e-04 -1.16482153e-04 -2.87974339e-05 ... 7.37686944e-04
 5.88057205e-04 7.02666526e-05]

```

CROSS VALIDATION 33

```

iteration: 0 HingeLoss: 21.050258091648175
iteration: 1 HingeLoss: 1.6380151772194562
iteration: 2 HingeLoss: 1.102689735194056
iteration: 3 HingeLoss: 0.3086128561300009
iteration: 4 HingeLoss: 0.302138486944056
iteration: 5 HingeLoss: 0.2957999431313041
iteration: 6 HingeLoss: 0.28959437522000864
iteration: 7 HingeLoss: 0.2835189935173178
iteration: 8 HingeLoss: 0.27757106685516575
iteration: 9 HingeLoss: 0.27174792136248455
iteration: 10 HingeLoss: 0.26604693926317524
iteration: 11 HingeLoss: 0.26046555769929497

```

Output_ROI.txt

```

iteration: 12 HingeLoss: 0.2550012675789319
iteration: 13 HingeLoss: 0.24965161244825118
iteration: 14 HingeLoss: 0.24441418738720466
iteration: 15 HingeLoss: 0.23928663792840685
iteration: 16 HingeLoss: 0.23426665899869098
iteration: 17 HingeLoss: 0.2293519938828722
iteration: 18 HingeLoss: 0.224540433209247
iteration: 19 HingeLoss: 0.21982981395637874
iteration: 20 HingeLoss: 0.21521801848071778
iteration: 21 HingeLoss: 0.21070297356462175
iteration: 22 HingeLoss: 0.20628264948434732
iteration: 23 HingeLoss: 0.20195505909759454
iteration: 24 HingeLoss: 0.19771825695019365
iteration: 25 HingeLoss: 0.19357033840153215
iteration: 26 HingeLoss: 0.18950943876832999
iteration: 27 HingeLoss: 0.18553373248637745
iteration: 28 HingeLoss: 0.1816414322898584
iteration: 29 HingeLoss: 0.17783078840789082
iteration: 30 HingeLoss: 0.1741000877779232
iteration: 31 HingeLoss: 0.17044765327563252
iteration: 32 HingeLoss: 0.16687184296097904
iteration: 33 HingeLoss: 0.16337104934007662
iteration: 34 HingeLoss: 0.15994369864254995
iteration: 35 HingeLoss: 0.1565882501140507
iteration: 36 HingeLoss: 0.1533031953236166
iteration: 37 HingeLoss: 0.150087057485561
iteration: 38 HingeLoss: 0.146938390795589
iteration: 39 HingeLoss: 0.1438557797808408
iteration: 40 HingeLoss: 0.14083783866356983
iteration: 41 HingeLoss: 0.13788321073817209
iteration: 42 HingeLoss: 0.13499056776128235
iteration: 43 HingeLoss: 0.13215860935466733
iteration: 44 HingeLoss: 0.12938606242064477
iteration: 45 HingeLoss: 0.12667168056976658
iteration: 46 HingeLoss: 0.1240142435605084
iteration: 47 HingeLoss: 0.121412556750714
iteration: 48 HingeLoss: 0.11886545056054784
iteration: 49 HingeLoss: 0.11637177994671419
iteration: 50 HingeLoss: 0.1139304238877068
iteration: 51 HingeLoss: 0.1115402848798572
iteration: 52 HingeLoss: 0.10920028844395549
iteration: 53 HingeLoss: 0.10690938264222184
iteration: 54 HingeLoss: 0.10466653760541103
iteration: 55 HingeLoss: 0.10247074506983841
iteration: 56 HingeLoss: 0.10032101792411802
iteration: 57 HingeLoss: 0.09821638976540999
iteration: 58 HingeLoss: 0.0961559144649771
iteration: 59 HingeLoss: 0.09413866574285598
iteration: 60 HingeLoss: 0.09216373675145079
iteration: 61 HingeLoss: 0.09023023966786282
iteration: 62 HingeLoss: 0.08833730529477256
iteration: 63 HingeLoss: 0.08648408266969523

```

Output_ROI.txt

```

iteration: 64 HingeLoss: 0.08466973868243272
iteration: 65 HingeLoss: 0.08289345770055224
iteration: 66 HingeLoss: 0.08115444120272106
iteration: 67 HingeLoss: 0.07945190741973396
iteration: 68 HingeLoss: 0.0777850909830714
iteration: 69 HingeLoss: 0.07615324258083064
iteration: 70 HingeLoss: 0.07455562862087488
iteration: 71 HingeLoss: 0.07299153090104948
iteration: 72 HingeLoss: 0.07146024628631645
iteration: 73 HingeLoss: 0.06996108639266232
iteration: 74 HingeLoss: 0.06849337727763743
iteration: 75 HingeLoss: 0.06705645913738723
iteration: 76 HingeLoss: 0.06564968601003969
iteration: 77 HingeLoss: 0.06427242548531509
iteration: 78 HingeLoss: 0.06292405842022833
iteration: 79 HingeLoss: 0.06160397866075487
iteration: 80 HingeLoss: 0.06031159276933634
iteration: 81 HingeLoss: 0.05904631975810264
iteration: 82 HingeLoss: 0.05780759082769066
iteration: 83 HingeLoss: 0.056594849111542424
iteration: 84 HingeLoss: 0.055407549425567554
iteration: 85 HingeLoss: 0.054245158023057446
iteration: 86 HingeLoss: 0.053107152354741255
iteration: 87 HingeLoss: 0.0519930208338756
iteration: 88 HingeLoss: 0.050902262606262336
iteration: 89 HingeLoss: 0.0498343873250912
iteration: 90 HingeLoss: 0.04878891493050598
iteration: 91 HingeLoss: 0.04776537543379533
iteration: 92 HingeLoss: 0.04676330870611054
iteration: 93 HingeLoss: 0.045782264271616434
iteration: 94 HingeLoss: 0.044821801104981275
iteration: 95 HingeLoss: 0.04388148743311538
iteration: 96 HingeLoss: 0.04296090054106864
iteration: 97 HingeLoss: 0.04205962658200075
iteration: 98 HingeLoss: 0.04117726039113752
iteration: 99 HingeLoss: 0.0403134053036304
[-1.02919175e-03 -1.03760037e-04 -1.84294908e-04 ... 7.82772652e-04
 4.72390873e-04 7.07080165e-05]

```

CROSS VALIDATION 34

```

iteration: 0 HingeLoss: 35.67661078997634
iteration: 1 HingeLoss: 0.2727466466147679
iteration: 2 HingeLoss: 0.2670247123228648
iteration: 3 HingeLoss: 0.2614228181210865
iteration: 4 HingeLoss: 0.25593844569613133
iteration: 5 HingeLoss: 0.2505691295662304
iteration: 6 HingeLoss: 0.24531245597279702
iteration: 7 HingeLoss: 0.24016606179533065
iteration: 8 HingeLoss: 0.2351276334890829
iteration: 9 HingeLoss: 0.23019490604501114
iteration: 10 HingeLoss: 0.22536566197155136
iteration: 11 HingeLoss: 0.22063773029775224
iteration: 12 HingeLoss: 0.21600898559732137

```

Output_ROI.txt

```

iteration: 13 HingeLoss: 0.21147734703314774
iteration: 14 HingeLoss: 0.20704077742186752
iteration: 15 HingeLoss: 0.20269728231805528
iteration: 16 HingeLoss: 0.19844490911762735
iteration: 17 HingeLoss: 0.19428174618005498
iteration: 18 HingeLoss: 0.19020592196899272
iteration: 19 HingeLoss: 0.18621560421093572
iteration: 20 HingeLoss: 0.18230899907152595
iteration: 21 HingeLoss: 0.17848435034914126
iteration: 22 HingeLoss: 0.17473993868539936
iteration: 23 HingeLoss: 0.17107408079222708
iteration: 24 HingeLoss: 0.16748512869514268
iteration: 25 HingeLoss: 0.16397146899241435
iteration: 26 HingeLoss: 0.16053152212976202
iteration: 27 HingeLoss: 0.15716374169027206
iteration: 28 HingeLoss: 0.1538666136992119
iteration: 29 HingeLoss: 0.15063865594342674
iteration: 30 HingeLoss: 0.14747841730501624
iteration: 31 HingeLoss: 0.14438447710898852
iteration: 32 HingeLoss: 0.141355444484601
iteration: 33 HingeLoss: 0.13838995774009843
iteration: 34 HingeLoss: 0.13548668375056871
iteration: 35 HingeLoss: 0.13264431735864177
iteration: 36 HingeLoss: 0.1298615807877592
iteration: 37 HingeLoss: 0.12713722306775488
iteration: 38 HingeLoss: 0.12447001947248494
iteration: 39 HingeLoss: 0.12185877096925625
iteration: 40 HingeLoss: 0.11930230367980507
iteration: 41 HingeLoss: 0.116799468352584
iteration: 42 HingeLoss: 0.11434913984611972
iteration: 43 HingeLoss: 0.1119502166232092
iteration: 44 HingeLoss: 0.1096016202557273
iteration: 45 HingeLoss: 0.1073022949398228
iteration: 46 HingeLoss: 0.10505120702128544
iteration: 47 HingeLoss: 0.10284734453086997
iteration: 48 HingeLoss: 0.10068971672936833
iteration: 49 HingeLoss: 0.0985773536622266
iteration: 50 HingeLoss: 0.09650930572350482
iteration: 51 HingeLoss: 0.09448464322898459
iteration: 52 HingeLoss: 0.09250245599823281
iteration: 53 HingeLoss: 0.09056185294543297
iteration: 54 HingeLoss: 0.08866196167880022
iteration: 55 HingeLoss: 0.0868019281084009
iteration: 56 HingeLoss: 0.08498091606219857
iteration: 57 HingeLoss: 0.08319810691015633
iteration: 58 HingeLoss: 0.08145269919622378
iteration: 59 HingeLoss: 0.07974390827804534
iteration: 60 HingeLoss: 0.07807096597422668
iteration: 61 HingeLoss: 0.0764331202190014
iteration: 62 HingeLoss: 0.07482963472414222
iteration: 63 HingeLoss: 0.07325978864796517
iteration: 64 HingeLoss: 0.0717228762712772

```

Output_ROI.txt

```

iteration: 65 HingeLoss: 0.07021820668012294
iteration: 66 HingeLoss: 0.06874510345518603
iteration: 67 HingeLoss: 0.06730290436770747
iteration: 68 HingeLoss: 0.06589096108178254
iteration: 69 HingeLoss: 0.06450863886290362
iteration: 70 HingeLoss: 0.06315531629261743
iteration: 71 HingeLoss: 0.061830384989168194
iteration: 72 HingeLoss: 0.060533249334001726
iteration: 73 HingeLoss: 0.059263326204007184
iteration: 74 HingeLoss: 0.05802004470937565
iteration: 75 HingeLoss: 0.056802845936958724
iteration: 76 HingeLoss: 0.05561118269901086
iteration: 77 HingeLoss: 0.05444451928720294
iteration: 78 HingeLoss: 0.05330233123179622
iteration: 79 HingeLoss: 0.05218410506586878
iteration: 80 HingeLoss: 0.05108933809448815
iteration: 81 HingeLoss: 0.05001753816872641
iteration: 82 HingeLoss: 0.048968223464416046
iteration: 83 HingeLoss: 0.047940922265547886
iteration: 84 HingeLoss: 0.04693517275221236
iteration: 85 HingeLoss: 0.045950522792989966
iteration: 86 HingeLoss: 0.05225543128079589
iteration: 87 HingeLoss: 8.191568419106252
iteration: 88 HingeLoss: 0.12304164519413072
iteration: 89 HingeLoss: 0.1204603624626775
iteration: 90 HingeLoss: 0.1179332322950102
iteration: 91 HingeLoss: 0.11545911862798901
iteration: 92 HingeLoss: 0.11303690923186938
iteration: 93 HingeLoss: 0.11066551521030288
iteration: 94 HingeLoss: 0.10834387051082715
iteration: 95 HingeLoss: 0.10607093144562565
iteration: 96 HingeLoss: 0.10384567622234123
iteration: 97 HingeLoss: 0.1016671044847325
iteration: 98 HingeLoss: 0.09953423686296725
iteration: 99 HingeLoss: 0.09744611453334966
[-0.00152152 -0.00033293 -0.00026675 ... 0.00103262 0.00066118
0.00012261]

```

CROSS VALIDATION 35

```

iteration: 0 HingeLoss: 6.303351312095344
iteration: 1 HingeLoss: 13.699767958150712
iteration: 2 HingeLoss: 0.3138196018945285
iteration: 3 HingeLoss: 0.30723600072531654
iteration: 4 HingeLoss: 0.3007905165000224
iteration: 5 HingeLoss: 0.29448025167219605
iteration: 6 HingeLoss: 0.28830236948282756
iteration: 7 HingeLoss: 0.2822540926850902
iteration: 8 HingeLoss: 0.2763327022958404
iteration: 9 HingeLoss: 0.27053553637330535
iteration: 10 HingeLoss: 0.26485998882041756
iteration: 11 HingeLoss: 0.25930350821325115
iteration: 12 HingeLoss: 0.25386359665403846
iteration: 13 HingeLoss: 0.24853780864824748

```

Output_ROI.txt

iteration: 14 HingeLoss: 0.2433237500052187
iteration: 15 HingeLoss: 0.23821907676186327
iteration: 16 HingeLoss: 0.23322149412894314
iteration: 17 HingeLoss: 0.228328755459455
iteration: 18 HingeLoss: 0.22353866123865834
iteration: 19 HingeLoss: 0.21884905809529084
iteration: 20 HingeLoss: 0.214257837833526
iteration: 21 HingeLoss: 0.20976293648524197
iteration: 22 HingeLoss: 0.20536233338217078
iteration: 23 HingeLoss: 0.20105405024751366
iteration: 24 HingeLoss: 0.19683615030661308
iteration: 25 HingeLoss: 0.19270673741628203
iteration: 26 HingeLoss: 0.18866395521239882
iteration: 27 HingeLoss: 0.1847059862753852
iteration: 28 HingeLoss: 0.1808310513131905
iteration: 29 HingeLoss: 0.17703740836141751
iteration: 30 HingeLoss: 0.17332335200022742
iteration: 31 HingeLoss: 0.1696872125876742
iteration: 32 HingeLoss: 0.16612735550912228
iteration: 33 HingeLoss: 0.16264218044241124
iteration: 34 HingeLoss: 0.1592301206384358
iteration: 35 HingeLoss: 0.1558896422168192
iteration: 36 HingeLoss: 0.1526192434763618
iteration: 37 HingeLoss: 0.14941745421995659
iteration: 38 HingeLoss: 0.14628283509366688
iteration: 39 HingeLoss: 0.1432139769396692
iteration: 40 HingeLoss: 0.14020950016277103
iteration: 41 HingeLoss: 0.13726805411021847
iteration: 42 HingeLoss: 0.13438831646451446
iteration: 43 HingeLoss: 0.13156899264897537
iteration: 44 HingeLoss: 0.12880881524575832
iteration: 45 HingeLoss: 0.1261065434260973
iteration: 46 HingeLoss: 0.12346096239249321
iteration: 47 HingeLoss: 0.12087088283260498
iteration: 48 HingeLoss: 0.1183351403845985
iteration: 49 HingeLoss: 0.11585259511371146
iteration: 50 HingeLoss: 0.11342213099979913
iteration: 51 HingeLoss: 0.11104265543563156
iteration: 52 HingeLoss: 0.10871309873571527
iteration: 53 HingeLoss: 0.10643241365541974
iteration: 54 HingeLoss: 0.10419957492019197
iteration: 55 HingeLoss: 0.10201357876464728
iteration: 56 HingeLoss: 0.09987344248133072
iteration: 57 HingeLoss: 0.0977782039789432
iteration: 58 HingeLoss: 0.09572692134983708
iteration: 59 HingeLoss: 0.0937186724465844
iteration: 60 HingeLoss: 0.09175255446742862
iteration: 61 HingeLoss: 0.08982768355043287
iteration: 62 HingeLoss: 0.08794319437614281
iteration: 63 HingeLoss: 0.08609823977858513
iteration: 64 HingeLoss: 0.08429199036442678
iteration: 65 HingeLoss: 0.08252363414012384

Output_ROI.txt

```

iteration: 66 HingeLoss: 0.0807923761468926
iteration: 67 HingeLoss: 0.07909743810333823
iteration: 68 HingeLoss: 0.07743805805558121
iteration: 69 HingeLoss: 0.0758134900347232
iteration: 70 HingeLoss: 0.07422300372149919
iteration: 71 HingeLoss: 0.07266588411796486
iteration: 72 HingeLoss: 0.07114143122607171
iteration: 73 HingeLoss: 0.06964895973298504
iteration: 74 HingeLoss: 0.06818779870300389
iteration: 75 HingeLoss: 0.06675729127594399
iteration: 76 HingeLoss: 0.06535679437184859
iteration: 77 HingeLoss: 0.06398567840189372
iteration: 78 HingeLoss: 0.0626433269853588
iteration: 79 HingeLoss: 0.06132913667253459
iteration: 80 HingeLoss: 0.06004251667344422
iteration: 81 HingeLoss: 0.05878288859225579
iteration: 82 HingeLoss: 0.057549686167266044
iteration: 83 HingeLoss: 0.056342355016339524
iteration: 84 HingeLoss: 0.05516035238768792
iteration: 85 HingeLoss: 0.054003146915877445
iteration: 86 HingeLoss: 0.05287021838295551
iteration: 87 HingeLoss: 0.05176105748458845
iteration: 88 HingeLoss: 0.05067516560110526
iteration: 89 HingeLoss: 0.049612054573344846
iteration: 90 HingeLoss: 0.04857124648320563
iteration: 91 HingeLoss: 0.04755227343879906
iteration: 92 HingeLoss: 0.04655467736411029
iteration: 93 HingeLoss: 0.04557800979307163
iteration: 94 HingeLoss: 0.04462183166795601
iteration: 95 HingeLoss: 0.043685713142000204
iteration: 96 HingeLoss: 0.04276923338616839
iteration: 97 HingeLoss: 0.04187198039996991
iteration: 98 HingeLoss: 0.04099355082624581
iteration: 99 HingeLoss: 0.040133549769841015
[-1.22597913e-03 -2.18459223e-04 -4.11066629e-04 ... 8.16507797e-04
 6.17310888e-04 6.95543217e-05]

```

CROSS VALIDATION 36

```

iteration: 0 HingeLoss: 21.048279354470203
iteration: 1 HingeLoss: 1.637223393638659
iteration: 2 HingeLoss: 1.0988610483899572
iteration: 3 HingeLoss: 0.30862568160312676
iteration: 4 HingeLoss: 0.3021510433524094
iteration: 5 HingeLoss: 0.29581223611957697
iteration: 6 HingeLoss: 0.28960641031447437
iteration: 7 HingeLoss: 0.2835307761283135
iteration: 8 HingeLoss: 0.277582602279526
iteration: 9 HingeLoss: 0.2717592147859219
iteration: 10 HingeLoss: 0.26605799576261147
iteration: 11 HingeLoss: 0.2604763822451433
iteration: 12 HingeLoss: 0.2550118650373316
iteration: 13 HingeLoss: 0.24966198758325517
iteration: 14 HingeLoss: 0.24442434486292122

```


Output_ROI.txt

```

iteration: 15 HingeLoss: 0.23929658231109607
iteration: 16 HingeLoss: 0.2342763947588179
iteration: 17 HingeLoss: 0.22936152539711577
iteration: 18 HingeLoss: 0.22454976476246857
iteration: 19 HingeLoss: 0.21983894974354767
iteration: 20 HingeLoss: 0.2152269626087975
iteration: 21 HingeLoss: 0.2107117300544158
iteration: 22 HingeLoss: 0.20629122227230723
iteration: 23 HingeLoss: 0.20196345203758928
iteration: 24 HingeLoss: 0.19772647381524214
iteration: 25 HingeLoss: 0.19357838288549917
iteration: 26 HingeLoss: 0.18951731448758724
iteration: 27 HingeLoss: 0.18554144298142883
iteration: 28 HingeLoss: 0.18164898102693183
iteration: 29 HingeLoss: 0.1778381787804965
iteration: 30 HingeLoss: 0.17410732310837906
iteration: 31 HingeLoss: 0.17045473681655782
iteration: 32 HingeLoss: 0.16687877789675654
iteration: 33 HingeLoss: 0.16337783878828416
iteration: 34 HingeLoss: 0.15995034565536187
iteration: 35 HingeLoss: 0.15659475767960992
iteration: 36 HingeLoss: 0.15330956636737805
iteration: 37 HingeLoss: 0.15009329487160666
iteration: 38 HingeLoss: 0.14694449732791562
iteration: 39 HingeLoss: 0.14386175820461983
iteration: 40 HingeLoss: 0.14084369166638244
iteration: 41 HingeLoss: 0.13788894095121654
iteration: 42 HingeLoss: 0.1349961777605571
iteration: 43 HingeLoss: 0.1321641016621295
iteration: 44 HingeLoss: 0.1293914395053432
iteration: 45 HingeLoss: 0.12667694484895237
iteration: 46 HingeLoss: 0.12401939740072099
iteration: 47 HingeLoss: 0.12141760246884545
iteration: 48 HingeLoss: 0.11887039042488433
iteration: 49 HingeLoss: 0.11637661617795568
iteration: 50 HingeLoss: 0.11393515865996529
iteration: 51 HingeLoss: 0.1115449203216341
iteration: 52 HingeLoss: 0.10920482663909864
iteration: 53 HingeLoss: 0.10691382563086198
iteration: 54 HingeLoss: 0.10467088738487935
iteration: 55 HingeLoss: 0.10247500359556402
iteration: 56 HingeLoss: 0.10032518711050738
iteration: 57 HingeLoss: 0.0982204714867072
iteration: 58 HingeLoss: 0.09615991055610676
iteration: 59 HingeLoss: 0.09414257800024783
iteration: 60 HingeLoss: 0.09216756693384738
iteration: 61 HingeLoss: 0.09023398949711016
iteration: 62 HingeLoss: 0.08834097645659422
iteration: 63 HingeLoss: 0.08648767681444997
iteration: 64 HingeLoss: 0.08467325742585669
iteration: 65 HingeLoss: 0.0828969026244851
iteration: 66 HingeLoss: 0.08115781385581715

```

Output_ROI.txt

```

iteration: 67 HingeLoss: 0.07945520931815846
iteration: 68 HingeLoss: 0.077788323611182
iteration: 69 HingeLoss: 0.07615640739184477
iteration: 70 HingeLoss: 0.07455872703752305
iteration: 71 HingeLoss: 0.0729945643162148
iteration: 72 HingeLoss: 0.07146321606366086
iteration: 73 HingeLoss: 0.06996399386723957
iteration: 74 HingeLoss: 0.0684962237564932
iteration: 75 HingeLoss: 0.06705924590014684
iteration: 76 HingeLoss: 0.06565241430948324
iteration: 77 HingeLoss: 0.06427509654794078
iteration: 78 HingeLoss: 0.06292667344680362
iteration: 79 HingeLoss: 0.06160653882685643
iteration: 80 HingeLoss: 0.06031409922587852
iteration: 81 HingeLoss: 0.05904877363185483
iteration: 82 HingeLoss: 0.057809993221783824
iteration: 83 HingeLoss: 0.056597201105965
iteration: 84 HingeLoss: 0.05540985207765098
iteration: 85 HingeLoss: 0.054247412367951435
iteration: 86 HingeLoss: 0.05310935940587928
iteration: 87 HingeLoss: 0.05199518158343027
iteration: 88 HingeLoss: 0.05090437802559158
iteration: 89 HingeLoss: 0.04983645836517492
iteration: 90 HingeLoss: 0.04879094252237347
iteration: 91 HingeLoss: 0.04776736048894392
iteration: 92 HingeLoss: 0.04676525211691532
iteration: 93 HingeLoss: 0.04578416691173138
iteration: 94 HingeLoss: 0.044823663829732116
iteration: 95 HingeLoss: 0.043883311079883906
iteration: 96 HingeLoss: 0.042962685929669314
iteration: 97 HingeLoss: 0.04206137451504923
iteration: 98 HingeLoss: 0.04117897165441144
iteration: 99 HingeLoss: 0.040315080666422566
[-1.02922151e-03 -1.03735633e-04 -1.84272758e-04 ... 7.82766835e-04
 4.72424339e-04 7.07219720e-05]

```

CROSS VALIDATION 37

```

iteration: 0 HingeLoss: 21.048279354470203
iteration: 1 HingeLoss: 1.637223393638659
iteration: 2 HingeLoss: 1.0988610483899572
iteration: 3 HingeLoss: 0.30862568160312676
iteration: 4 HingeLoss: 0.3021510433524094
iteration: 5 HingeLoss: 0.29581223611957697
iteration: 6 HingeLoss: 0.28960641031447437
iteration: 7 HingeLoss: 0.2835307761283135
iteration: 8 HingeLoss: 0.277582602279526
iteration: 9 HingeLoss: 0.2717592147859219
iteration: 10 HingeLoss: 0.26605799576261147
iteration: 11 HingeLoss: 0.2604763822451433
iteration: 12 HingeLoss: 0.2550118650373316
iteration: 13 HingeLoss: 0.24966198758325517
iteration: 14 HingeLoss: 0.24442434486292122
iteration: 15 HingeLoss: 0.23929658231109607

```

Output_ROI.txt

```

iteration: 16 HingeLoss: 0.2342763947588179
iteration: 17 HingeLoss: 0.22936152539711577
iteration: 18 HingeLoss: 0.22454976476246857
iteration: 19 HingeLoss: 0.21983894974354767
iteration: 20 HingeLoss: 0.2152269626087975
iteration: 21 HingeLoss: 0.2107117300544158
iteration: 22 HingeLoss: 0.20629122227230723
iteration: 23 HingeLoss: 0.20196345203758928
iteration: 24 HingeLoss: 0.19772647381524214
iteration: 25 HingeLoss: 0.19357838288549917
iteration: 26 HingeLoss: 0.18951731448758724
iteration: 27 HingeLoss: 0.18554144298142883
iteration: 28 HingeLoss: 0.18164898102693183
iteration: 29 HingeLoss: 0.1778381787804965
iteration: 30 HingeLoss: 0.17410732310837906
iteration: 31 HingeLoss: 0.17045473681655782
iteration: 32 HingeLoss: 0.16687877789675654
iteration: 33 HingeLoss: 0.16337783878828416
iteration: 34 HingeLoss: 0.15995034565536187
iteration: 35 HingeLoss: 0.15659475767960992
iteration: 36 HingeLoss: 0.15330956636737805
iteration: 37 HingeLoss: 0.15009329487160666
iteration: 38 HingeLoss: 0.14694449732791562
iteration: 39 HingeLoss: 0.14386175820461983
iteration: 40 HingeLoss: 0.14084369166638244
iteration: 41 HingeLoss: 0.13788894095121654
iteration: 42 HingeLoss: 0.1349961777605571
iteration: 43 HingeLoss: 0.1321641016621295
iteration: 44 HingeLoss: 0.1293914395053432
iteration: 45 HingeLoss: 0.12667694484895237
iteration: 46 HingeLoss: 0.12401939740072099
iteration: 47 HingeLoss: 0.12141760246884545
iteration: 48 HingeLoss: 0.11887039042488433
iteration: 49 HingeLoss: 0.11637661617795568
iteration: 50 HingeLoss: 0.11393515865996529
iteration: 51 HingeLoss: 0.1115449203216341
iteration: 52 HingeLoss: 0.10920482663909864
iteration: 53 HingeLoss: 0.10691382563086198
iteration: 54 HingeLoss: 0.10467088738487935
iteration: 55 HingeLoss: 0.10247500359556402
iteration: 56 HingeLoss: 0.10032518711050738
iteration: 57 HingeLoss: 0.0982204714867072
iteration: 58 HingeLoss: 0.09615991055610676
iteration: 59 HingeLoss: 0.09414257800024783
iteration: 60 HingeLoss: 0.09216756693384738
iteration: 61 HingeLoss: 0.09023398949711016
iteration: 62 HingeLoss: 0.08834097645659422
iteration: 63 HingeLoss: 0.08648767681444997
iteration: 64 HingeLoss: 0.08467325742585669
iteration: 65 HingeLoss: 0.0828969026244851
iteration: 66 HingeLoss: 0.08115781385581715
iteration: 67 HingeLoss: 0.07945520931815846

```

Output_ROI.txt

```

iteration: 68 HingeLoss: 0.077788323611182
iteration: 69 HingeLoss: 0.07615640739184477
iteration: 70 HingeLoss: 0.07455872703752305
iteration: 71 HingeLoss: 0.0729945643162148
iteration: 72 HingeLoss: 0.07146321606366086
iteration: 73 HingeLoss: 0.06996399386723957
iteration: 74 HingeLoss: 0.0684962237564932
iteration: 75 HingeLoss: 0.06705924590014684
iteration: 76 HingeLoss: 0.06565241430948324
iteration: 77 HingeLoss: 0.06427509654794078
iteration: 78 HingeLoss: 0.06292667344680362
iteration: 79 HingeLoss: 0.06160653882685643
iteration: 80 HingeLoss: 0.06031409922587852
iteration: 81 HingeLoss: 0.05904877363185483
iteration: 82 HingeLoss: 0.057809993221783824
iteration: 83 HingeLoss: 0.056597201105965
iteration: 84 HingeLoss: 0.05540985207765098
iteration: 85 HingeLoss: 0.054247412367951435
iteration: 86 HingeLoss: 0.05310935940587928
iteration: 87 HingeLoss: 0.05199518158343027
iteration: 88 HingeLoss: 0.05090437802559158
iteration: 89 HingeLoss: 0.04983645836517492
iteration: 90 HingeLoss: 0.04879094252237347
iteration: 91 HingeLoss: 0.04776736048894392
iteration: 92 HingeLoss: 0.04676525211691532
iteration: 93 HingeLoss: 0.04578416691173138
iteration: 94 HingeLoss: 0.044823663829732116
iteration: 95 HingeLoss: 0.043883311079883906
iteration: 96 HingeLoss: 0.042962685929669314
iteration: 97 HingeLoss: 0.04206137451504923
iteration: 98 HingeLoss: 0.04117897165441144
iteration: 99 HingeLoss: 0.040315080666422566
[-1.02922151e-03 -1.03735633e-04 -1.84272758e-04 ... 7.82766835e-04
 4.72424339e-04 7.07219720e-05]

```

CROSS VALIDATION 38

```

iteration: 0 HingeLoss: 21.048279354470203
iteration: 1 HingeLoss: 1.637223393638659
iteration: 2 HingeLoss: 1.0988610483899572
iteration: 3 HingeLoss: 0.30862568160312676
iteration: 4 HingeLoss: 0.3021510433524094
iteration: 5 HingeLoss: 0.29581223611957697
iteration: 6 HingeLoss: 0.28960641031447437
iteration: 7 HingeLoss: 0.2835307761283135
iteration: 8 HingeLoss: 0.277582602279526
iteration: 9 HingeLoss: 0.2717592147859219
iteration: 10 HingeLoss: 0.26605799576261147
iteration: 11 HingeLoss: 0.2604763822451433
iteration: 12 HingeLoss: 0.2550118650373316
iteration: 13 HingeLoss: 0.24966198758325517
iteration: 14 HingeLoss: 0.24442434486292122
iteration: 15 HingeLoss: 0.23929658231109607
iteration: 16 HingeLoss: 0.2342763947588179

```

Output_ROI.txt

```

iteration: 17 HingeLoss: 0.22936152539711577
iteration: 18 HingeLoss: 0.22454976476246857
iteration: 19 HingeLoss: 0.21983894974354767
iteration: 20 HingeLoss: 0.2152269626087975
iteration: 21 HingeLoss: 0.2107117300544158
iteration: 22 HingeLoss: 0.20629122227230723
iteration: 23 HingeLoss: 0.20196345203758928
iteration: 24 HingeLoss: 0.19772647381524214
iteration: 25 HingeLoss: 0.19357838288549917
iteration: 26 HingeLoss: 0.18951731448758724
iteration: 27 HingeLoss: 0.18554144298142883
iteration: 28 HingeLoss: 0.18164898102693183
iteration: 29 HingeLoss: 0.1778381787804965
iteration: 30 HingeLoss: 0.17410732310837906
iteration: 31 HingeLoss: 0.17045473681655782
iteration: 32 HingeLoss: 0.16687877789675654
iteration: 33 HingeLoss: 0.16337783878828416
iteration: 34 HingeLoss: 0.15995034565536187
iteration: 35 HingeLoss: 0.15659475767960992
iteration: 36 HingeLoss: 0.15330956636737805
iteration: 37 HingeLoss: 0.15009329487160666
iteration: 38 HingeLoss: 0.14694449732791562
iteration: 39 HingeLoss: 0.14386175820461983
iteration: 40 HingeLoss: 0.14084369166638244
iteration: 41 HingeLoss: 0.13788894095121654
iteration: 42 HingeLoss: 0.1349961777605571
iteration: 43 HingeLoss: 0.1321641016621295
iteration: 44 HingeLoss: 0.1293914395053432
iteration: 45 HingeLoss: 0.12667694484895237
iteration: 46 HingeLoss: 0.12401939740072099
iteration: 47 HingeLoss: 0.12141760246884545
iteration: 48 HingeLoss: 0.11887039042488433
iteration: 49 HingeLoss: 0.11637661617795568
iteration: 50 HingeLoss: 0.11393515865996529
iteration: 51 HingeLoss: 0.1115449203216341
iteration: 52 HingeLoss: 0.10920482663909864
iteration: 53 HingeLoss: 0.10691382563086198
iteration: 54 HingeLoss: 0.10467088738487935
iteration: 55 HingeLoss: 0.10247500359556402
iteration: 56 HingeLoss: 0.10032518711050738
iteration: 57 HingeLoss: 0.0982204714867072
iteration: 58 HingeLoss: 0.09615991055610676
iteration: 59 HingeLoss: 0.09414257800024783
iteration: 60 HingeLoss: 0.09216756693384738
iteration: 61 HingeLoss: 0.09023398949711016
iteration: 62 HingeLoss: 0.08834097645659422
iteration: 63 HingeLoss: 0.08648767681444997
iteration: 64 HingeLoss: 0.08467325742585669
iteration: 65 HingeLoss: 0.0828969026244851
iteration: 66 HingeLoss: 0.08115781385581715
iteration: 67 HingeLoss: 0.07945520931815846
iteration: 68 HingeLoss: 0.077788323611182

```

Output_ROI.txt

```

iteration: 69 HingeLoss: 0.07615640739184477
iteration: 70 HingeLoss: 0.07455872703752305
iteration: 71 HingeLoss: 0.0729945643162148
iteration: 72 HingeLoss: 0.07146321606366086
iteration: 73 HingeLoss: 0.06996399386723957
iteration: 74 HingeLoss: 0.0684962237564932
iteration: 75 HingeLoss: 0.06705924590014684
iteration: 76 HingeLoss: 0.06565241430948324
iteration: 77 HingeLoss: 0.06427509654794078
iteration: 78 HingeLoss: 0.06292667344680362
iteration: 79 HingeLoss: 0.06160653882685643
iteration: 80 HingeLoss: 0.06031409922587852
iteration: 81 HingeLoss: 0.05904877363185483
iteration: 82 HingeLoss: 0.057809993221783824
iteration: 83 HingeLoss: 0.056597201105965
iteration: 84 HingeLoss: 0.05540985207765098
iteration: 85 HingeLoss: 0.054247412367951435
iteration: 86 HingeLoss: 0.05310935940587928
iteration: 87 HingeLoss: 0.05199518158343027
iteration: 88 HingeLoss: 0.05090437802559158
iteration: 89 HingeLoss: 0.04983645836517492
iteration: 90 HingeLoss: 0.04879094252237347
iteration: 91 HingeLoss: 0.04776736048894392
iteration: 92 HingeLoss: 0.04676525211691532
iteration: 93 HingeLoss: 0.04578416691173138
iteration: 94 HingeLoss: 0.044823663829732116
iteration: 95 HingeLoss: 0.043883311079883906
iteration: 96 HingeLoss: 0.042962685929669314
iteration: 97 HingeLoss: 0.04206137451504923
iteration: 98 HingeLoss: 0.04117897165441144
iteration: 99 HingeLoss: 0.040315080666422566
[-1.02922151e-03 -1.03735633e-04 -1.84272758e-04 ... 7.82766835e-04
 4.72424339e-04 7.07219720e-05]

```

CROSS VALIDATION 39

```

iteration: 0 HingeLoss: 21.048279354470203
iteration: 1 HingeLoss: 1.637223393638659
iteration: 2 HingeLoss: 1.0988610483899572
iteration: 3 HingeLoss: 0.30862568160312676
iteration: 4 HingeLoss: 0.3021510433524094
iteration: 5 HingeLoss: 0.29581223611957697
iteration: 6 HingeLoss: 0.28960641031447437
iteration: 7 HingeLoss: 0.2835307761283135
iteration: 8 HingeLoss: 0.277582602279526
iteration: 9 HingeLoss: 0.2717592147859219
iteration: 10 HingeLoss: 0.26605799576261147
iteration: 11 HingeLoss: 0.2604763822451433
iteration: 12 HingeLoss: 0.2550118650373316
iteration: 13 HingeLoss: 0.24966198758325517
iteration: 14 HingeLoss: 0.24442434486292122
iteration: 15 HingeLoss: 0.23929658231109607
iteration: 16 HingeLoss: 0.2342763947588179
iteration: 17 HingeLoss: 0.22936152539711577

```

Output_ROI.txt

```

iteration: 18 HingeLoss: 0.22454976476246857
iteration: 19 HingeLoss: 0.21983894974354767
iteration: 20 HingeLoss: 0.2152269626087975
iteration: 21 HingeLoss: 0.2107117300544158
iteration: 22 HingeLoss: 0.20629122227230723
iteration: 23 HingeLoss: 0.20196345203758928
iteration: 24 HingeLoss: 0.19772647381524214
iteration: 25 HingeLoss: 0.19357838288549917
iteration: 26 HingeLoss: 0.18951731448758724
iteration: 27 HingeLoss: 0.18554144298142883
iteration: 28 HingeLoss: 0.18164898102693183
iteration: 29 HingeLoss: 0.1778381787804965
iteration: 30 HingeLoss: 0.17410732310837906
iteration: 31 HingeLoss: 0.17045473681655782
iteration: 32 HingeLoss: 0.16687877789675654
iteration: 33 HingeLoss: 0.16337783878828416
iteration: 34 HingeLoss: 0.15995034565536187
iteration: 35 HingeLoss: 0.15659475767960992
iteration: 36 HingeLoss: 0.15330956636737805
iteration: 37 HingeLoss: 0.15009329487160666
iteration: 38 HingeLoss: 0.14694449732791562
iteration: 39 HingeLoss: 0.14386175820461983
iteration: 40 HingeLoss: 0.14084369166638244
iteration: 41 HingeLoss: 0.13788894095121654
iteration: 42 HingeLoss: 0.1349961777605571
iteration: 43 HingeLoss: 0.1321641016621295
iteration: 44 HingeLoss: 0.1293914395053432
iteration: 45 HingeLoss: 0.12667694484895237
iteration: 46 HingeLoss: 0.12401939740072099
iteration: 47 HingeLoss: 0.12141760246884545
iteration: 48 HingeLoss: 0.11887039042488433
iteration: 49 HingeLoss: 0.11637661617795568
iteration: 50 HingeLoss: 0.11393515865996529
iteration: 51 HingeLoss: 0.1115449203216341
iteration: 52 HingeLoss: 0.10920482663909864
iteration: 53 HingeLoss: 0.10691382563086198
iteration: 54 HingeLoss: 0.10467088738487935
iteration: 55 HingeLoss: 0.10247500359556402
iteration: 56 HingeLoss: 0.10032518711050738
iteration: 57 HingeLoss: 0.0982204714867072
iteration: 58 HingeLoss: 0.09615991055610676
iteration: 59 HingeLoss: 0.09414257800024783
iteration: 60 HingeLoss: 0.09216756693384738
iteration: 61 HingeLoss: 0.09023398949711016
iteration: 62 HingeLoss: 0.08834097645659422
iteration: 63 HingeLoss: 0.08648767681444997
iteration: 64 HingeLoss: 0.08467325742585669
iteration: 65 HingeLoss: 0.0828969026244851
iteration: 66 HingeLoss: 0.08115781385581715
iteration: 67 HingeLoss: 0.07945520931815846
iteration: 68 HingeLoss: 0.077788323611182
iteration: 69 HingeLoss: 0.07615640739184477

```

Output_ROI.txt

```

iteration: 70 HingeLoss: 0.07455872703752305
iteration: 71 HingeLoss: 0.0729945643162148
iteration: 72 HingeLoss: 0.07146321606366086
iteration: 73 HingeLoss: 0.06996399386723957
iteration: 74 HingeLoss: 0.0684962237564932
iteration: 75 HingeLoss: 0.06705924590014684
iteration: 76 HingeLoss: 0.06565241430948324
iteration: 77 HingeLoss: 0.06427509654794078
iteration: 78 HingeLoss: 0.06292667344680362
iteration: 79 HingeLoss: 0.06160653882685643
iteration: 80 HingeLoss: 0.06031409922587852
iteration: 81 HingeLoss: 0.05904877363185483
iteration: 82 HingeLoss: 0.057809993221783824
iteration: 83 HingeLoss: 0.056597201105965
iteration: 84 HingeLoss: 0.05540985207765098
iteration: 85 HingeLoss: 0.054247412367951435
iteration: 86 HingeLoss: 0.05310935940587928
iteration: 87 HingeLoss: 0.05199518158343027
iteration: 88 HingeLoss: 0.05090437802559158
iteration: 89 HingeLoss: 0.04983645836517492
iteration: 90 HingeLoss: 0.04879094252237347
iteration: 91 HingeLoss: 0.04776736048894392
iteration: 92 HingeLoss: 0.04676525211691532
iteration: 93 HingeLoss: 0.04578416691173138
iteration: 94 HingeLoss: 0.044823663829732116
iteration: 95 HingeLoss: 0.043883311079883906
iteration: 96 HingeLoss: 0.042962685929669314
iteration: 97 HingeLoss: 0.04206137451504923
iteration: 98 HingeLoss: 0.04117897165441144
iteration: 99 HingeLoss: 0.040315080666422566
[-1.02922151e-03 -1.03735633e-04 -1.84272758e-04 ... 7.82766835e-04
 4.72424339e-04 7.07219720e-05]

```

CROSS VALIDATION 40

```

iteration: 0 HingeLoss: 21.048279354470203
iteration: 1 HingeLoss: 1.637223393638659
iteration: 2 HingeLoss: 1.0988610483899572
iteration: 3 HingeLoss: 0.30862568160312676
iteration: 4 HingeLoss: 0.3021510433524094
iteration: 5 HingeLoss: 0.29581223611957697
iteration: 6 HingeLoss: 0.28960641031447437
iteration: 7 HingeLoss: 0.2835307761283135
iteration: 8 HingeLoss: 0.277582602279526
iteration: 9 HingeLoss: 0.2717592147859219
iteration: 10 HingeLoss: 0.26605799576261147
iteration: 11 HingeLoss: 0.2604763822451433
iteration: 12 HingeLoss: 0.2550118650373316
iteration: 13 HingeLoss: 0.24966198758325517
iteration: 14 HingeLoss: 0.24442434486292122
iteration: 15 HingeLoss: 0.23929658231109607
iteration: 16 HingeLoss: 0.2342763947588179
iteration: 17 HingeLoss: 0.22936152539711577
iteration: 18 HingeLoss: 0.22454976476246857

```


Output_ROI.txt

```

iteration: 19 HingeLoss: 0.21983894974354767
iteration: 20 HingeLoss: 0.2152269626087975
iteration: 21 HingeLoss: 0.2107117300544158
iteration: 22 HingeLoss: 0.20629122227230723
iteration: 23 HingeLoss: 0.20196345203758928
iteration: 24 HingeLoss: 0.19772647381524214
iteration: 25 HingeLoss: 0.19357838288549917
iteration: 26 HingeLoss: 0.18951731448758724
iteration: 27 HingeLoss: 0.18554144298142883
iteration: 28 HingeLoss: 0.18164898102693183
iteration: 29 HingeLoss: 0.1778381787804965
iteration: 30 HingeLoss: 0.17410732310837906
iteration: 31 HingeLoss: 0.17045473681655782
iteration: 32 HingeLoss: 0.16687877789675654
iteration: 33 HingeLoss: 0.16337783878828416
iteration: 34 HingeLoss: 0.15995034565536187
iteration: 35 HingeLoss: 0.15659475767960992
iteration: 36 HingeLoss: 0.15330956636737805
iteration: 37 HingeLoss: 0.15009329487160666
iteration: 38 HingeLoss: 0.14694449732791562
iteration: 39 HingeLoss: 0.14386175820461983
iteration: 40 HingeLoss: 0.14084369166638244
iteration: 41 HingeLoss: 0.13788894095121654
iteration: 42 HingeLoss: 0.1349961777605571
iteration: 43 HingeLoss: 0.1321641016621295
iteration: 44 HingeLoss: 0.1293914395053432
iteration: 45 HingeLoss: 0.12667694484895237
iteration: 46 HingeLoss: 0.12401939740072099
iteration: 47 HingeLoss: 0.12141760246884545
iteration: 48 HingeLoss: 0.11887039042488433
iteration: 49 HingeLoss: 0.11637661617795568
iteration: 50 HingeLoss: 0.11393515865996529
iteration: 51 HingeLoss: 0.1115449203216341
iteration: 52 HingeLoss: 0.10920482663909864
iteration: 53 HingeLoss: 0.10691382563086198
iteration: 54 HingeLoss: 0.10467088738487935
iteration: 55 HingeLoss: 0.10247500359556402
iteration: 56 HingeLoss: 0.10032518711050738
iteration: 57 HingeLoss: 0.0982204714867072
iteration: 58 HingeLoss: 0.09615991055610676
iteration: 59 HingeLoss: 0.09414257800024783
iteration: 60 HingeLoss: 0.09216756693384738
iteration: 61 HingeLoss: 0.09023398949711016
iteration: 62 HingeLoss: 0.08834097645659422
iteration: 63 HingeLoss: 0.08648767681444997
iteration: 64 HingeLoss: 0.08467325742585669
iteration: 65 HingeLoss: 0.0828969026244851
iteration: 66 HingeLoss: 0.08115781385581715
iteration: 67 HingeLoss: 0.07945520931815846
iteration: 68 HingeLoss: 0.077788323611182
iteration: 69 HingeLoss: 0.07615640739184477
iteration: 70 HingeLoss: 0.07455872703752305

```

Output_ROI.txt

```

iteration: 71 HingeLoss: 0.0729945643162148
iteration: 72 HingeLoss: 0.07146321606366086
iteration: 73 HingeLoss: 0.06996399386723957
iteration: 74 HingeLoss: 0.0684962237564932
iteration: 75 HingeLoss: 0.06705924590014684
iteration: 76 HingeLoss: 0.06565241430948324
iteration: 77 HingeLoss: 0.06427509654794078
iteration: 78 HingeLoss: 0.06292667344680362
iteration: 79 HingeLoss: 0.06160653882685643
iteration: 80 HingeLoss: 0.06031409922587852
iteration: 81 HingeLoss: 0.05904877363185483
iteration: 82 HingeLoss: 0.057809993221783824
iteration: 83 HingeLoss: 0.056597201105965
iteration: 84 HingeLoss: 0.05540985207765098
iteration: 85 HingeLoss: 0.054247412367951435
iteration: 86 HingeLoss: 0.05310935940587928
iteration: 87 HingeLoss: 0.05199518158343027
iteration: 88 HingeLoss: 0.05090437802559158
iteration: 89 HingeLoss: 0.04983645836517492
iteration: 90 HingeLoss: 0.04879094252237347
iteration: 91 HingeLoss: 0.04776736048894392
iteration: 92 HingeLoss: 0.04676525211691532
iteration: 93 HingeLoss: 0.04578416691173138
iteration: 94 HingeLoss: 0.044823663829732116
iteration: 95 HingeLoss: 0.043883311079883906
iteration: 96 HingeLoss: 0.042962685929669314
iteration: 97 HingeLoss: 0.04206137451504923
iteration: 98 HingeLoss: 0.04117897165441144
iteration: 99 HingeLoss: 0.040315080666422566
[-1.02922151e-03 -1.03735633e-04 -1.84272758e-04 ... 7.82766835e-04
 4.72424339e-04 7.07219720e-05]

```

CROSS VALIDATION 41

```

iteration: 0 HingeLoss: 21.048279354470203
iteration: 1 HingeLoss: 1.637223393638659
iteration: 2 HingeLoss: 1.0988610483899572
iteration: 3 HingeLoss: 0.30862568160312676
iteration: 4 HingeLoss: 0.3021510433524094
iteration: 5 HingeLoss: 0.29581223611957697
iteration: 6 HingeLoss: 0.28960641031447437
iteration: 7 HingeLoss: 0.2835307761283135
iteration: 8 HingeLoss: 0.277582602279526
iteration: 9 HingeLoss: 0.2717592147859219
iteration: 10 HingeLoss: 0.26605799576261147
iteration: 11 HingeLoss: 0.2604763822451433
iteration: 12 HingeLoss: 0.2550118650373316
iteration: 13 HingeLoss: 0.24966198758325517
iteration: 14 HingeLoss: 0.24442434486292122
iteration: 15 HingeLoss: 0.23929658231109607
iteration: 16 HingeLoss: 0.2342763947588179
iteration: 17 HingeLoss: 0.22936152539711577
iteration: 18 HingeLoss: 0.22454976476246857
iteration: 19 HingeLoss: 0.21983894974354767

```

Output_ROI.txt

```

iteration: 20 HingeLoss: 0.2152269626087975
iteration: 21 HingeLoss: 0.2107117300544158
iteration: 22 HingeLoss: 0.20629122227230723
iteration: 23 HingeLoss: 0.20196345203758928
iteration: 24 HingeLoss: 0.19772647381524214
iteration: 25 HingeLoss: 0.19357838288549917
iteration: 26 HingeLoss: 0.18951731448758724
iteration: 27 HingeLoss: 0.18554144298142883
iteration: 28 HingeLoss: 0.18164898102693183
iteration: 29 HingeLoss: 0.1778381787804965
iteration: 30 HingeLoss: 0.17410732310837906
iteration: 31 HingeLoss: 0.17045473681655782
iteration: 32 HingeLoss: 0.16687877789675654
iteration: 33 HingeLoss: 0.16337783878828416
iteration: 34 HingeLoss: 0.15995034565536187
iteration: 35 HingeLoss: 0.15659475767960992
iteration: 36 HingeLoss: 0.15330956636737805
iteration: 37 HingeLoss: 0.15009329487160666
iteration: 38 HingeLoss: 0.14694449732791562
iteration: 39 HingeLoss: 0.14386175820461983
iteration: 40 HingeLoss: 0.14084369166638244
iteration: 41 HingeLoss: 0.13788894095121654
iteration: 42 HingeLoss: 0.1349961777605571
iteration: 43 HingeLoss: 0.1321641016621295
iteration: 44 HingeLoss: 0.1293914395053432
iteration: 45 HingeLoss: 0.12667694484895237
iteration: 46 HingeLoss: 0.12401939740072099
iteration: 47 HingeLoss: 0.12141760246884545
iteration: 48 HingeLoss: 0.11887039042488433
iteration: 49 HingeLoss: 0.11637661617795568
iteration: 50 HingeLoss: 0.11393515865996529
iteration: 51 HingeLoss: 0.1115449203216341
iteration: 52 HingeLoss: 0.10920482663909864
iteration: 53 HingeLoss: 0.10691382563086198
iteration: 54 HingeLoss: 0.10467088738487935
iteration: 55 HingeLoss: 0.10247500359556402
iteration: 56 HingeLoss: 0.10032518711050738
iteration: 57 HingeLoss: 0.0982204714867072
iteration: 58 HingeLoss: 0.09615991055610676
iteration: 59 HingeLoss: 0.09414257800024783
iteration: 60 HingeLoss: 0.09216756693384738
iteration: 61 HingeLoss: 0.09023398949711016
iteration: 62 HingeLoss: 0.08834097645659422
iteration: 63 HingeLoss: 0.08648767681444997
iteration: 64 HingeLoss: 0.08467325742585669
iteration: 65 HingeLoss: 0.0828969026244851
iteration: 66 HingeLoss: 0.08115781385581715
iteration: 67 HingeLoss: 0.07945520931815846
iteration: 68 HingeLoss: 0.077788323611182
iteration: 69 HingeLoss: 0.07615640739184477
iteration: 70 HingeLoss: 0.07455872703752305
iteration: 71 HingeLoss: 0.0729945643162148

```

Output_ROI.txt

```
iteration: 72 HingeLoss: 0.07146321606366086
iteration: 73 HingeLoss: 0.06996399386723957
iteration: 74 HingeLoss: 0.0684962237564932
iteration: 75 HingeLoss: 0.06705924590014684
iteration: 76 HingeLoss: 0.06565241430948324
iteration: 77 HingeLoss: 0.06427509654794078
iteration: 78 HingeLoss: 0.06292667344680362
iteration: 79 HingeLoss: 0.06160653882685643
iteration: 80 HingeLoss: 0.06031409922587852
iteration: 81 HingeLoss: 0.05904877363185483
iteration: 82 HingeLoss: 0.057809993221783824
iteration: 83 HingeLoss: 0.056597201105965
iteration: 84 HingeLoss: 0.05540985207765098
iteration: 85 HingeLoss: 0.054247412367951435
iteration: 86 HingeLoss: 0.05310935940587928
iteration: 87 HingeLoss: 0.05199518158343027
iteration: 88 HingeLoss: 0.05090437802559158
iteration: 89 HingeLoss: 0.04983645836517492
iteration: 90 HingeLoss: 0.04879094252237347
iteration: 91 HingeLoss: 0.04776736048894392
iteration: 92 HingeLoss: 0.04676525211691532
iteration: 93 HingeLoss: 0.04578416691173138
iteration: 94 HingeLoss: 0.044823663829732116
iteration: 95 HingeLoss: 0.043883311079883906
iteration: 96 HingeLoss: 0.042962685929669314
iteration: 97 HingeLoss: 0.04206137451504923
iteration: 98 HingeLoss: 0.04117897165441144
iteration: 99 HingeLoss: 0.040315080666422566
[-1.02922151e-03 -1.03735633e-04 -1.84272758e-04 ... 7.82766835e-04
 4.72424339e-04 7.07219720e-05]
```

CROSS VALIDATION 42

```
iteration: 0 HingeLoss: 17.39212603081801
iteration: 1 HingeLoss: 0.2440694774176672
iteration: 2 HingeLoss: 0.23894915960706714
iteration: 3 HingeLoss: 0.23393626061326858
iteration: 4 HingeLoss: 0.22902852690384828
iteration: 5 HingeLoss: 0.2242237522230943
iteration: 6 HingeLoss: 0.21951977660019084
iteration: 7 HingeLoss: 0.21491448537821076
iteration: 8 HingeLoss: 0.21040580826347724
iteration: 9 HingeLoss: 0.20599171839487163
iteration: 10 HingeLoss: 0.20167023143266377
iteration: 11 HingeLoss: 0.1974394046664581
iteration: 12 HingeLoss: 0.19329733614185546
iteration: 13 HingeLoss: 0.18924216380543513
iteration: 14 HingeLoss: 0.18527206466767498
iteration: 15 HingeLoss: 0.1813852539834322
iteration: 16 HingeLoss: 0.1775799844496173
iteration: 17 HingeLoss: 0.17385454541969933
iteration: 18 HingeLoss: 0.17020726213469065
iteration: 19 HingeLoss: 0.16663649497026425
iteration: 20 HingeLoss: 0.16314063869966597
```

Output_ROI.txt

```

iteration: 21 HingeLoss: 0.15971812177209008
iteration: 22 HingeLoss: 0.156367405606194
iteration: 23 HingeLoss: 0.1530869838984333
iteration: 24 HingeLoss: 0.14987538194590888
iteration: 25 HingeLoss: 0.1467311559834184
iteration: 26 HingeLoss: 0.14365289253441643
iteration: 27 HingeLoss: 0.14063920777559064
iteration: 28 HingeLoss: 0.13768874691476898
iteration: 29 HingeLoss: 0.13480018358187654
iteration: 30 HingeLoss: 0.13197221923267086
iteration: 31 HingeLoss: 0.12920358256498507
iteration: 32 HingeLoss: 0.12649302894721867
iteration: 33 HingeLoss: 0.12383933985881686
iteration: 34 HingeLoss: 0.12124132234248916
iteration: 35 HingeLoss: 0.11869780846791891
iteration: 36 HingeLoss: 0.11620765480672424
iteration: 37 HingeLoss: 0.11376974191843342
iteration: 38 HingeLoss: 0.11138297384724427
iteration: 39 HingeLoss: 0.10904627762934038
iteration: 40 HingeLoss: 0.10675860281054417
iteration: 41 HingeLoss: 0.10451892097408841
iteration: 42 HingeLoss: 0.10232622527829478
iteration: 43 HingeLoss: 0.10017953000395158
iteration: 44 HingeLoss: 0.09807787011118674
iteration: 45 HingeLoss: 0.09602030080563756
iteration: 46 HingeLoss: 0.0940058971137211
iteration: 47 HingeLoss: 2.615153336180135
iteration: 48 HingeLoss: 10.271293616472667
iteration: 49 HingeLoss: 0.1518882086184963
iteration: 50 HingeLoss: 0.14870175569518154
iteration: 51 HingeLoss: 0.14558215116204049
iteration: 52 HingeLoss: 0.14252799261101107
iteration: 53 HingeLoss: 0.13953790705505947
iteration: 54 HingeLoss: 0.1366105503109582
iteration: 55 HingeLoss: 0.13374460639501307
iteration: 56 HingeLoss: 0.1309387869314667
iteration: 57 HingeLoss: 0.12819183057331363
iteration: 58 HingeLoss: 0.1255025024352659
iteration: 59 HingeLoss: 0.12286959353861393
iteration: 60 HingeLoss: 0.12029192026773486
iteration: 61 HingeLoss: 0.1177683238380013
iteration: 62 HingeLoss: 0.1152976697748539
iteration: 63 HingeLoss: 0.11287884740380172
iteration: 64 HingeLoss: 0.11051076935112238
iteration: 65 HingeLoss: 0.10819237105503667
iteration: 66 HingeLoss: 0.10592261028713798
iteration: 67 HingeLoss: 0.10370046668386247
iteration: 68 HingeLoss: 0.10152494128778732
iteration: 69 HingeLoss: 0.0993950560985533
iteration: 70 HingeLoss: 0.09730985363320739
iteration: 71 HingeLoss: 0.09526839649576964
iteration: 72 HingeLoss: 0.09326976695582992

```

Output_ROI.txt

```

iteration: 73 HingeLoss: 0.09131306653598514
iteration: 74 HingeLoss: 0.08939741560793156
iteration: 75 HingeLoss: 0.08752195299703086
iteration: 76 HingeLoss: 0.08568583559517193
iteration: 77 HingeLoss: 0.08388823798175424
iteration: 78 HingeLoss: 0.08212835205262278
iteration: 79 HingeLoss: 0.08040538665678737
iteration: 80 HingeLoss: 0.07871856724076344
iteration: 81 HingeLoss: 0.07706713550037403
iteration: 82 HingeLoss: 0.07545034903985645
iteration: 83 HingeLoss: 0.07386748103812078
iteration: 84 HingeLoss: 0.07231781992200996
iteration: 85 HingeLoss: 0.07080066904641416
iteration: 86 HingeLoss: 0.06931534638109622
iteration: 87 HingeLoss: 0.0678611842040876
iteration: 88 HingeLoss: 0.06643752880151554
iteration: 89 HingeLoss: 0.06504374017372858
iteration: 90 HingeLoss: 0.06367919174758659
iteration: 91 HingeLoss: 0.06234327009478681
iteration: 92 HingeLoss: 0.06103537465609942
iteration: 93 HingeLoss: 0.05975491747138777
iteration: 94 HingeLoss: 0.058501322915293
iteration: 95 HingeLoss: 0.057274027438463535
iteration: 96 HingeLoss: 0.05607247931421317
iteration: 97 HingeLoss: 0.05489613839049441
iteration: 98 HingeLoss: 0.053744475847074424
iteration: 99 HingeLoss: 0.05261697395780613
[-1.18368821e-03 -1.21673319e-04 -3.73643623e-04 ... 7.95906385e-04
 3.96139969e-04 3.43842271e-05]

```

CROSS VALIDATION 43

```

iteration: 0 HingeLoss: 21.04993950349939
iteration: 1 HingeLoss: 1.6392374640225464
iteration: 2 HingeLoss: 1.1022223142995728
iteration: 3 HingeLoss: 0.30862985381204516
iteration: 4 HingeLoss: 0.302155128032826
iteration: 5 HingeLoss: 0.29581623510774696
iteration: 6 HingeLoss: 0.28961032540812964
iteration: 7 HingeLoss: 0.283534609087472
iteration: 8 HingeLoss: 0.27758635482728145
iteration: 9 HingeLoss: 0.2717628886092202
iteration: 10 HingeLoss: 0.26606159251300804
iteration: 11 HingeLoss: 0.2604799035395454
iteration: 12 HingeLoss: 0.25501531245872566
iteration: 13 HingeLoss: 0.24966536268141853
iteration: 14 HingeLoss: 0.24442764915511814
iteration: 15 HingeLoss: 0.2392998172827602
iteration: 16 HingeLoss: 0.23427956186422033
iteration: 17 HingeLoss: 0.22936462606001845
iteration: 18 HingeLoss: 0.22455280037676442
iteration: 19 HingeLoss: 0.21984192167388725
iteration: 20 HingeLoss: 0.2152298721912022
iteration: 21 HingeLoss: 0.21071457859687923

```

Output_ROI.txt

```

iteration: 22 HingeLoss: 0.20629401105538211
iteration: 23 HingeLoss: 0.20196618231496422
iteration: 24 HingeLoss: 0.19772914681430406
iteration: 25 HingeLoss: 0.19358099980788637
iteration: 26 HingeLoss: 0.18951987650972868
iteration: 27 HingeLoss: 0.18554395125507311
iteration: 28 HingeLoss: 0.18165143667966527
iteration: 29 HingeLoss: 0.17784058291624977
iteration: 30 HingeLoss: 0.17410967680792344
iteration: 31 HingeLoss: 0.1704570411379915
iteration: 32 HingeLoss: 0.16688103387597966
iteration: 33 HingeLoss: 0.16338004743946483
iteration: 34 HingeLoss: 0.15995250797139196
iteration: 35 HingeLoss: 0.15659687463255162
iteration: 36 HingeLoss: 0.15331163890890065
iteration: 37 HingeLoss: 0.1500953239334145
iteration: 38 HingeLoss: 0.14694648382216663
iteration: 39 HingeLoss: 0.1438637030243363
iteration: 40 HingeLoss: 0.14084559568585162
iteration: 41 HingeLoss: 0.13789080502638412
iteration: 42 HingeLoss: 0.13499800272941215
iteration: 43 HingeLoss: 0.13216588834508067
iteration: 44 HingeLoss: 0.12939318870558822
iteration: 45 HingeLoss: 0.12667865735283823
iteration: 46 HingeLoss: 0.12402107397809842
iteration: 47 HingeLoss: 0.12141924387341432
iteration: 48 HingeLoss: 0.11887199739453272
iteration: 49 HingeLoss: 0.11637818943509154
iteration: 50 HingeLoss: 0.11393669891184129
iteration: 51 HingeLoss: 0.11154642826066544
iteration: 52 HingeLoss: 0.10920630294317436
iteration: 53 HingeLoss: 0.10691527096364979
iteration: 54 HingeLoss: 0.10467230239612395
iteration: 55 HingeLoss: 0.10247638892137907
iteration: 56 HingeLoss: 0.10032654337366151
iteration: 57 HingeLoss: 0.09822179929690422
iteration: 58 HingeLoss: 0.09616121051025939
iteration: 59 HingeLoss: 0.09414385068274615
iteration: 60 HingeLoss: 0.09216881291682176
iteration: 61 HingeLoss: 0.09023520934068811
iteration: 62 HingeLoss: 0.08834217070915254
iteration: 63 HingeLoss: 0.08648884601286097
iteration: 64 HingeLoss: 0.08467440209572968
iteration: 65 HingeLoss: 0.08289802328040272
iteration: 66 HingeLoss: 0.0811589110015666
iteration: 67 HingeLoss: 0.07945628344695806
iteration: 68 HingeLoss: 0.0777893752059029
iteration: 69 HingeLoss: 0.07615743692522789
iteration: 70 HingeLoss: 0.07455973497239181
iteration: 71 HingeLoss: 0.07299555110568304
iteration: 72 HingeLoss: 0.07146418215133654
iteration: 73 HingeLoss: 0.06996493968742423

```

Output_ROI.txt

```

iteration: 74 HingeLoss: 0.06849714973437726
iteration: 75 HingeLoss: 0.06706015245200067
iteration: 76 HingeLoss: 0.06565330184284425
iteration: 77 HingeLoss: 0.06427596546179667
iteration: 78 HingeLoss: 0.0629275241317719
iteration: 79 HingeLoss: 0.06160737166535965
iteration: 80 HingeLoss: 0.06031491459231652
iteration: 81 HingeLoss: 0.059049571892773
iteration: 82 HingeLoss: 0.05781077473603769
iteration: 83 HingeLoss: 0.05659796622488181
iteration: 84 HingeLoss: 0.0554106011451874
iteration: 85 HingeLoss: 0.05424814572084837
iteration: 86 HingeLoss: 0.05311007737381312
iteration: 87 HingeLoss: 0.051995884489161176
iteration: 88 HingeLoss: 0.050905066185108566
iteration: 89 HingeLoss: 0.049837132087837785
iteration: 90 HingeLoss: 0.048791602111052115
iteration: 91 HingeLoss: 0.04776800624015424
iteration: 92 HingeLoss: 0.04676588432095269
iteration: 93 HingeLoss: 0.04578478585280109
iteration: 94 HingeLoss: 0.04482426978607708
iteration: 95 HingeLoss: 0.04388390432390976
iteration: 96 HingeLoss: 0.042963266728067086
iteration: 97 HingeLoss: 0.042061943128914925
iteration: 98 HingeLoss: 0.04117952833936352
iteration: 99 HingeLoss: 0.04031562567271699
[-1.02920888e-03 -1.03727596e-04 -1.84283548e-04 ... 7.82784708e-04
 4.72386577e-04 7.07289602e-05]

```

CROSS VALIDATION 44

```

iteration: 0 HingeLoss: 6.488219091806243
iteration: 1 HingeLoss: 2.485758691796465
iteration: 2 HingeLoss: 0.2881990988578701
iteration: 3 HingeLoss: 0.28215298856790727
iteration: 4 HingeLoss: 0.2762337192354048
iteration: 5 HingeLoss: 0.2704386298721047
iteration: 6 HingeLoss: 0.26476511531444963
iteration: 7 HingeLoss: 0.2592106250524403
iteration: 8 HingeLoss: 0.2537726620830622
iteration: 9 HingeLoss: 0.2484487817877654
iteration: 10 HingeLoss: 0.2432365908334954
iteration: 11 HingeLoss: 0.2381337460967769
iteration: 12 HingeLoss: 0.23313795361037085
iteration: 13 HingeLoss: 0.22824696753202886
iteration: 14 HingeLoss: 0.22345858913488192
iteration: 15 HingeLoss: 0.2187706658190104
iteration: 16 HingeLoss: 0.21418109014374892
iteration: 17 HingeLoss: 0.20968779888029415
iteration: 18 HingeLoss: 0.2052887720841866
iteration: 19 HingeLoss: 0.20098203218725114
iteration: 20 HingeLoss: 0.19676564310858763
iteration: 21 HingeLoss: 0.1926377093842122
iteration: 22 HingeLoss: 0.18859637531495754

```


Output_ROI.txt

```

iteration: 23 HingeLoss: 0.18463982413224966
iteration: 24 HingeLoss: 0.18076627718138472
iteration: 25 HingeLoss: 0.1769739931219413
iteration: 26 HingeLoss: 0.1732612671449663
iteration: 27 HingeLoss: 0.1696264302065837
iteration: 28 HingeLoss: 0.16606784827768073
iteration: 29 HingeLoss: 0.16258392160933666
iteration: 30 HingeLoss: 0.15917308401365948
iteration: 31 HingeLoss: 0.15583380215971185
iteration: 32 HingeLoss: 0.15256457488420763
iteration: 33 HingeLoss: 0.14936393251666807
iteration: 34 HingeLoss: 0.14623043621873655
iteration: 35 HingeLoss: 0.14316267733735333
iteration: 36 HingeLoss: 0.14015927677150045
iteration: 37 HingeLoss: 0.13721888435223117
iteration: 38 HingeLoss: 0.13434017823570574
iteration: 39 HingeLoss: 0.13152186430896118
iteration: 40 HingeLoss: 0.1287626756081469
iteration: 41 HingeLoss: 0.12606137174896478
iteration: 42 HingeLoss: 0.12341673836905913
iteration: 43 HingeLoss: 0.1208275865821036
iteration: 44 HingeLoss: 0.11829275244334136
iteration: 45 HingeLoss: 0.11581109642633748
iteration: 46 HingeLoss: 0.11338150291070863
iteration: 47 HingeLoss: 0.11100287968059935
iteration: 48 HingeLoss: 0.10867415743368014
iteration: 49 HingeLoss: 0.10639428930044614
iteration: 50 HingeLoss: 0.10416225037360008
iteration: 51 HingeLoss: 0.10197703724730886
iteration: 52 HingeLoss: 0.09983766756612551
iteration: 53 HingeLoss: 0.09774317958337461
iteration: 54 HingeLoss: 0.0956926317288021
iteration: 55 HingeLoss: 0.0936851021852956
iteration: 56 HingeLoss: 0.09171968847448421
iteration: 57 HingeLoss: 0.08979550705103267
iteration: 58 HingeLoss: 0.08791169290544641
iteration: 59 HingeLoss: 0.09349176253057961
iteration: 60 HingeLoss: 0.10268338700652521
iteration: 61 HingeLoss: 0.10052919885934238
iteration: 62 HingeLoss: 0.09842020328623355
iteration: 63 HingeLoss: 0.0963554521951047
iteration: 64 HingeLoss: 0.09433401738382463
iteration: 65 HingeLoss: 0.09235499012295469
iteration: 66 HingeLoss: 0.0936552703239405
iteration: 67 HingeLoss: 0.12060529159918729
iteration: 68 HingeLoss: 0.11807512097252114
iteration: 69 HingeLoss: 0.11559803063209428
iteration: 70 HingeLoss: 0.11317290701000815
iteration: 71 HingeLoss: 0.11079865989983351
iteration: 72 HingeLoss: 0.10847422196651142
iteration: 73 HingeLoss: 0.10619854826653609
iteration: 74 HingeLoss: 0.10397061577820424

```

Output_ROI.txt

```

iteration: 75 HingeLoss: 0.10178942294171867
iteration: 76 HingeLoss: 0.09965398920894061
iteration: 77 HingeLoss: 0.09756335460258762
iteration: 78 HingeLoss: 0.09551657928467827
iteration: 79 HingeLoss: 0.09351274313403177
iteration: 80 HingeLoss: 0.09155094533263002
iteration: 81 HingeLoss: 0.08963030396065812
iteration: 82 HingeLoss: 0.08774995560003993
iteration: 83 HingeLoss: 0.08590905494629138
iteration: 84 HingeLoss: 0.08410677442851673
iteration: 85 HingeLoss: 0.0823423038373764
iteration: 86 HingeLoss: 0.08061484996086053
iteration: 87 HingeLoss: 0.07892363622770261
iteration: 88 HingeLoss: 0.07726790235827458
iteration: 89 HingeLoss: 0.07564690402280583
iteration: 90 HingeLoss: 0.07405991250677167
iteration: 91 HingeLoss: 0.07250621438330261
iteration: 92 HingeLoss: 0.0709851111924653
iteration: 93 HingeLoss: 0.0694959191272723
iteration: 94 HingeLoss: 0.06803796872627865
iteration: 95 HingeLoss: 0.06661060457262807
iteration: 96 HingeLoss: 0.06521318499941198
iteration: 97 HingeLoss: 0.06384508180121065
iteration: 98 HingeLoss: 0.06250567995168511
iteration: 99 HingeLoss: 0.06119437732709438
[-1.09373679e-03 -3.02254483e-05 -1.01792911e-04 ... 7.56342190e-04
 2.82035291e-04 1.00745786e-04]

```

CROSS VALIDATION 45

```

iteration: 0 HingeLoss: 21.053940962273852
iteration: 1 HingeLoss: 1.639452037013105
iteration: 2 HingeLoss: 1.1028536969130287
iteration: 3 HingeLoss: 0.30863108959098046
iteration: 4 HingeLoss: 0.3021563378864348
iteration: 5 HingeLoss: 0.295817419579915
iteration: 6 HingeLoss: 0.2896114850313325
iteration: 7 HingeLoss: 0.28353574438301454
iteration: 8 HingeLoss: 0.27758746630553216
iteration: 9 HingeLoss: 0.2717639767698403
iteration: 10 HingeLoss: 0.26606265784517685
iteration: 11 HingeLoss: 0.26048094652217946
iteration: 12 HingeLoss: 0.25501633356069436
iteration: 13 HingeLoss: 0.24966636236175488
iteration: 14 HingeLoss: 0.2444286278632253
iteration: 15 HingeLoss: 0.23930077545861325
iteration: 16 HingeLoss: 0.23428049993856392
iteration: 17 HingeLoss: 0.22936554445456092
iteration: 18 HingeLoss: 0.22455369950436704
iteration: 19 HingeLoss: 0.21984280193874997
iteration: 20 HingeLoss: 0.2152307339890452
iteration: 21 HingeLoss: 0.21071542231512094
iteration: 22 HingeLoss: 0.20629483707331325
iteration: 23 HingeLoss: 0.20196699100391852

```

Output_ROI.txt

```

iteration: 24 HingeLoss: 0.197729938537825
iteration: 25 HingeLoss: 0.19358177492189071
iteration: 26 HingeLoss: 0.18952063536266633
iteration: 27 HingeLoss: 0.185544694188084
iteration: 28 HingeLoss: 0.1816521640267324
iteration: 29 HingeLoss: 0.17784129500434975
iteration: 30 HingeLoss: 0.17411037395717324
iteration: 31 HingeLoss: 0.1704577236617922
iteration: 32 HingeLoss: 0.16688170208115757
iteration: 33 HingeLoss: 0.1633807016264094
iteration: 34 HingeLoss: 0.15995314843419092
iteration: 35 HingeLoss: 0.15659750165912284
iteration: 36 HingeLoss: 0.15331225278112187
iteration: 37 HingeLoss: 0.15009592492725005
iteration: 38 HingeLoss: 0.14694707220779127
iteration: 39 HingeLoss: 0.14386427906625693
iteration: 40 HingeLoss: 0.140846159643026
iteration: 41 HingeLoss: 0.1378913571523373
iteration: 42 HingeLoss: 0.13499854327235067
iteration: 43 HingeLoss: 0.13216641754800376
iteration: 44 HingeLoss: 0.12939370680639728
iteration: 45 HingeLoss: 0.1266791645844439
iteration: 46 HingeLoss: 0.12402157056852495
iteration: 47 HingeLoss: 0.1214197300459024
iteration: 48 HingeLoss: 0.11887247336763954
iteration: 49 HingeLoss: 0.11637865542278927
iteration: 50 HingeLoss: 0.11393715512361322
iteration: 51 HingeLoss: 0.11154687490160005
iteration: 52 HingeLoss: 0.10920674021405762
iteration: 53 HingeLoss: 0.10691569906105544
iteration: 54 HingeLoss: 0.10467272151250176
iteration: 55 HingeLoss: 0.10247679924514144
iteration: 56 HingeLoss: 0.10032694508926818
iteration: 57 HingeLoss: 0.09822219258494506
iteration: 58 HingeLoss: 0.0961615955475358
iteration: 59 HingeLoss: 0.09414422764235043
iteration: 60 HingeLoss: 0.09216918196821484
iteration: 61 HingeLoss: 0.09023557064977583
iteration: 62 HingeLoss: 0.08834252443836026
iteration: 63 HingeLoss: 0.08648919232120646
iteration: 64 HingeLoss: 0.08467474113889475
iteration: 65 HingeLoss: 0.0828983552108031
iteration: 66 HingeLoss: 0.08115923596842053
iteration: 67 HingeLoss: 0.07945660159635334
iteration: 68 HingeLoss: 0.07778968668086256
iteration: 69 HingeLoss: 0.07615774186577448
iteration: 70 HingeLoss: 0.07456003351561037
iteration: 71 HingeLoss: 0.07299584338578267
iteration: 72 HingeLoss: 0.07146446829971083
iteration: 73 HingeLoss: 0.06996521983271026
iteration: 74 HingeLoss: 0.06849742400251344
iteration: 75 HingeLoss: 0.0670604209662833

```

Output_ROI.txt

```

iteration: 76 HingeLoss: 0.06565356472398308
iteration: 77 HingeLoss: 0.06427622282796908
iteration: 78 HingeLoss: 0.06292777609867599
iteration: 79 HingeLoss: 0.061607618346266324
iteration: 80 HingeLoss: 0.06031515609812037
iteration: 81 HingeLoss: 0.059049808332042195
iteration: 82 HingeLoss: 0.057811006215062716
iteration: 83 HingeLoss: 0.0565981928477233
iteration: 84 HingeLoss: 0.05541082301372293
iteration: 85 HingeLoss: 0.054248362934818224
iteration: 86 HingeLoss: 0.05311029003086512
iteration: 87 HingeLoss: 0.051996092684894635
iteration: 88 HingeLoss: 0.05090527001311715
iteration: 89 HingeLoss: 0.049837331639751736
iteration: 90 HingeLoss: 0.04879179747657935
iteration: 91 HingeLoss: 0.04776819750712069
iteration: 92 HingeLoss: 0.04676607157534179
iteration: 93 HingeLoss: 0.04578496917879244
iteration: 94 HingeLoss: 0.044824449266084296
iteration: 95 HingeLoss: 0.04388408003861752
iteration: 96 HingeLoss: 0.04296343875646732
iteration: 97 HingeLoss: 0.04206211154834245
iteration: 98 HingeLoss: 0.04117969322553075
iteration: 99 HingeLoss: 0.04031578709974796
[-1.02919955e-03 -1.03727205e-04 -1.84234582e-04 ... 7.82784708e-04
 4.72386577e-04 7.07289602e-05]

```

CROSS VALIDATION 46

```

iteration: 0 HingeLoss: 16.10875181271638
iteration: 1 HingeLoss: 0.30398654295199734
iteration: 2 HingeLoss: 0.2976092288915577
iteration: 3 HingeLoss: 0.2913657040910983
iteration: 4 HingeLoss: 0.2852531617943708
iteration: 5 HingeLoss: 0.2792688541278851
iteration: 6 HingeLoss: 0.2734100908656119
iteration: 7 HingeLoss: 0.2676742382195995
iteration: 8 HingeLoss: 0.2620587176559644
iteration: 9 HingeLoss: 0.2565610047357183
iteration: 10 HingeLoss: 0.2511786279799157
iteration: 11 HingeLoss: 0.24590916775860847
iteration: 12 HingeLoss: 0.24075025520310886
iteration: 13 HingeLoss: 0.23569957114107246
iteration: 14 HingeLoss: 0.23075484505392163
iteration: 15 HingeLoss: 0.2259138540561414
iteration: 16 HingeLoss: 0.22117442189598865
iteration: 17 HingeLoss: 0.21653441797716513
iteration: 18 HingeLoss: 0.21199175640101453
iteration: 19 HingeLoss: 0.20754439502881405
iteration: 20 HingeLoss: 0.2031903345637372
iteration: 21 HingeLoss: 0.1989276176520766
iteration: 22 HingeLoss: 0.1947543280033216
iteration: 23 HingeLoss: 0.1906685895286971
iteration: 24 HingeLoss: 0.18666856549777305

```

Output_ROI.txt

```

iteration: 25 HingeLoss: 0.18275245771276807
iteration: 26 HingeLoss: 0.17891850570017667
iteration: 27 HingeLoss: 0.17516498591935284
iteration: 28 HingeLoss: 0.17149021098769865
iteration: 29 HingeLoss: 0.1678925289221071
iteration: 30 HingeLoss: 0.1643703223963175
iteration: 31 HingeLoss: 0.160922008013853
iteration: 32 HingeLoss: 0.157546035596209
iteration: 33 HingeLoss: 0.15424088748597536
iteration: 34 HingeLoss: 0.15100507786457945
iteration: 35 HingeLoss: 0.14783715208433967
iteration: 36 HingeLoss: 0.1447356860145352
iteration: 37 HingeLoss: 0.14169928540119087
iteration: 38 HingeLoss: 0.13872658524029602
iteration: 39 HingeLoss: 0.13581624916417107
iteration: 40 HingeLoss: 0.13296696884070738
iteration: 41 HingeLoss: 0.13017746338521174
iteration: 42 HingeLoss: 0.12744647878458762
iteration: 43 HingeLoss: 0.12477278733359853
iteration: 44 HingeLoss: 0.12215518708295704
iteration: 45 HingeLoss: 0.11959250129899196
iteration: 46 HingeLoss: 0.11708357793465199
iteration: 47 HingeLoss: 0.11462728911160647
iteration: 48 HingeLoss: 0.11222253061321147
iteration: 49 HingeLoss: 0.10986822138811281
iteration: 50 HingeLoss: 0.1075633030642627
iteration: 51 HingeLoss: 0.10530673947313238
iteration: 52 HingeLoss: 0.1030975161839057
iteration: 53 HingeLoss: 0.1009346400474451
iteration: 54 HingeLoss: 0.09881713874982473
iteration: 55 HingeLoss: 0.09674406037522983
iteration: 56 HingeLoss: 0.09471447297802585
iteration: 57 HingeLoss: 0.09272746416380583
iteration: 58 HingeLoss: 0.09078214067922602
iteration: 59 HingeLoss: 0.08887762801044692
iteration: 60 HingeLoss: 0.08701306998999848
iteration: 61 HingeLoss: 0.08518762841189262
iteration: 62 HingeLoss: 0.08340048265481069
iteration: 63 HingeLoss: 0.08165082931319564
iteration: 64 HingeLoss: 0.07993788183608369
iteration: 65 HingeLoss: 0.07826087017351314
iteration: 66 HingeLoss: 0.07661904043035045
iteration: 67 HingeLoss: 0.07501165452737966
iteration: 68 HingeLoss: 0.0734379898695009
iteration: 69 HingeLoss: 0.07189733902089035
iteration: 70 HingeLoss: 0.07038900938697454
iteration: 71 HingeLoss: 0.06891232290307694
iteration: 72 HingeLoss: 0.06746661572959613
iteration: 73 HingeLoss: 0.06605123795357863
iteration: 74 HingeLoss: 0.06466555329655316
iteration: 75 HingeLoss: 0.06330893882849319
iteration: 76 HingeLoss: 0.06198078468778104

```

Output_ROI.txt

```

iteration: 77 HingeLoss: 0.060680493807046626
iteration: 78 HingeLoss: 0.05940748164475757
iteration: 79 HingeLoss: 0.058161175922440626
iteration: 80 HingeLoss: 0.05694101636741567
iteration: 81 HingeLoss: 0.055746454460927006
iteration: 82 HingeLoss: 0.05457695319155842
iteration: 83 HingeLoss: 0.05343198681382161
iteration: 84 HingeLoss: 0.05231104061180891
iteration: 85 HingeLoss: 0.05121361066780449
iteration: 86 HingeLoss: 0.05013920363574963
iteration: 87 HingeLoss: 0.049087336519460845
iteration: 88 HingeLoss: 0.04805753645550038
iteration: 89 HingeLoss: 0.04704934050060199
iteration: 90 HingeLoss: 0.04606229542355634
iteration: 91 HingeLoss: 0.04509595750146232
iteration: 92 HingeLoss: 0.04414989232025304
iteration: 93 HingeLoss: 0.04322367457940621
iteration: 94 HingeLoss: 0.04231688790075167
iteration: 95 HingeLoss: 0.04142912464129013
iteration: 96 HingeLoss: 0.04055998570993842
iteration: 97 HingeLoss: 0.039709080388119385
iteration: 98 HingeLoss: 0.0388760261541158
iteration: 99 HingeLoss: 0.03806044851110869
[-1.29396413e-03 -1.14529142e-04 -3.61847002e-04 ... 7.60558483e-04
 3.70385027e-04 3.45642522e-05]

```

CROSS VALIDATION 47

```

iteration: 0 HingeLoss: 11.981523152018388
iteration: 1 HingeLoss: 0.8458163578239775
iteration: 2 HingeLoss: 0.3001359394427635
iteration: 3 HingeLoss: 0.2938394069447647
iteration: 4 HingeLoss: 0.28767496899556233
iteration: 5 HingeLoss: 0.2816398543921451
iteration: 6 HingeLoss: 0.2757313500683903
iteration: 7 HingeLoss: 0.26994679987541403
iteration: 8 HingeLoss: 0.264283603387509
iteration: 9 HingeLoss: 0.2587392147331305
iteration: 10 HingeLoss: 0.2533111414504087
iteration: 11 HingeLoss: 0.24799694336667052
iteration: 12 HingeLoss: 0.24279423150146767
iteration: 13 HingeLoss: 0.23770066699261888
iteration: 14 HingeLoss: 0.23271396004478118
iteration: 15 HingeLoss: 0.2278318689000804
iteration: 16 HingeLoss: 0.2230521988303359
iteration: 17 HingeLoss: 0.21837280115042848
iteration: 18 HingeLoss: 0.21379157225236456
iteration: 19 HingeLoss: 0.2093064526596075
iteration: 20 HingeLoss: 0.20491542610124566
iteration: 21 HingeLoss: 0.20061651860558466
iteration: 22 HingeLoss: 0.19640779761275468
iteration: 23 HingeLoss: 0.19228737110593527
iteration: 24 HingeLoss: 0.18825338676080428
iteration: 25 HingeLoss: 0.184304031112832

```

Output_ROI.txt

```

iteration: 26 HingeLoss: 0.18043752874204388
iteration: 27 HingeLoss: 0.1766521414748867
iteration: 28 HingeLoss: 0.17294616760283793
iteration: 29 HingeLoss: 0.16931794111740792
iteration: 30 HingeLoss: 0.16576583096119207
iteration: 31 HingeLoss: 0.1622882402946335
iteration: 32 HingeLoss: 0.1588836057781694
iteration: 33 HingeLoss: 0.1555503968694367
iteration: 34 HingeLoss: 0.1522871151352217
iteration: 35 HingeLoss: 0.14909229357784445
iteration: 36 HingeLoss: 0.14596449597567443
iteration: 37 HingeLoss: 0.14290231623748248
iteration: 38 HingeLoss: 0.13990437777033587
iteration: 39 HingeLoss: 0.1369693328607568
iteration: 40 HingeLoss: 0.134095862068861
iteration: 41 HingeLoss: 0.13128267363520865
iteration: 42 HingeLoss: 0.1285285029000978
iteration: 43 HingeLoss: 0.1258321117350406
iteration: 44 HingeLoss: 0.12319228798616691
iteration: 45 HingeLoss: 0.12060784492930442
iteration: 46 HingeLoss: 0.11807762073649064
iteration: 47 HingeLoss: 0.11560047795367678
iteration: 48 HingeLoss: 0.11317530298938921
iteration: 49 HingeLoss: 0.11080100561411778
iteration: 50 HingeLoss: 0.10847651847020714
iteration: 51 HingeLoss: 0.10620079659202906
iteration: 52 HingeLoss: 0.10397281693622179
iteration: 53 HingeLoss: 0.10179157792178428
iteration: 54 HingeLoss: 0.09965609897981863
iteration: 55 HingeLoss: 0.09756542011271849
iteration: 56 HingeLoss: 0.09551860146260546
iteration: 57 HingeLoss: 0.09351472288881876
iteration: 58 HingeLoss: 0.09155288355426913
iteration: 59 HingeLoss: 0.08963220152047063
iteration: 60 HingeLoss: 0.08775181335106759
iteration: 61 HingeLoss: 0.0859108737236802
iteration: 62 HingeLoss: 0.08410855504989209
iteration: 63 HingeLoss: 0.0823440471032109
iteration: 64 HingeLoss: 0.08061655665483362
iteration: 65 HingeLoss: 0.078925307117053
iteration: 66 HingeLoss: 0.07726953819414516
iteration: 67 HingeLoss: 0.07564850554058125
iteration: 68 HingeLoss: 0.0740614804264091
iteration: 69 HingeLoss: 0.07250774940965518
iteration: 70 HingeLoss: 0.07098661401559912
iteration: 71 HingeLoss: 0.06949739042277658
iteration: 72 HingeLoss: 0.06803940915556955
iteration: 73 HingeLoss: 0.06661201478324584
iteration: 74 HingeLoss: 0.06521456562531229
iteration: 75 HingeLoss: 0.06384643346304932
iteration: 76 HingeLoss: 0.06250700325709732
iteration: 77 HingeLoss: 0.061195672870967784

```

Output_ROI.txt

```

iteration: 78 HingeLoss: 0.05991185280035458
iteration: 79 HingeLoss: 0.05865496590812455
iteration: 80 HingeLoss: 0.05742444716486705
iteration: 81 HingeLoss: 0.05621974339488697
iteration: 82 HingeLoss: 0.05504031302752647
iteration: 83 HingeLoss: 0.05388562585370355
iteration: 84 HingeLoss: 0.052755162787558325
iteration: 85 HingeLoss: 0.051648415633099555
iteration: 86 HingeLoss: 0.05056488685574702
iteration: 87 HingeLoss: 0.049504089358666334
iteration: 88 HingeLoss: 0.04846554626379605
iteration: 89 HingeLoss: 0.0474487906974689
iteration: 90 HingeLoss: 0.046453365580530065
iteration: 91 HingeLoss: 0.045478823422858854
iteration: 92 HingeLoss: 0.04452472612220088
iteration: 93 HingeLoss: 0.04359064476722073
iteration: 94 HingeLoss: 0.04267615944468614
iteration: 95 HingeLoss: 0.04178085905069754
iteration: 96 HingeLoss: 0.040904341105877436
iteration: 97 HingeLoss: 0.0400462115744372
iteration: 98 HingeLoss: 0.03920608468703966
iteration: 99 HingeLoss: 0.03838358276737763
[-7.03170585e-04 -8.31937769e-05 -2.11697239e-04 ... 1.58022044e-04
 4.52212289e-04 3.38393781e-05]

```

CROSS VALIDATION 48

```

iteration: 0 HingeLoss: 21.05729512960882
iteration: 1 HingeLoss: 1.6388375655443943
iteration: 2 HingeLoss: 1.1013582383494773
iteration: 3 HingeLoss: 0.3086435092875869
iteration: 4 HingeLoss: 0.30216849703102805
iteration: 5 HingeLoss: 0.29582932363859865
iteration: 6 HingeLoss: 0.2896231393555375
iteration: 7 HingeLoss: 0.28354715421190424
iteration: 8 HingeLoss: 0.27759863676835816
iteration: 9 HingeLoss: 0.2717749128882481
iteration: 10 HingeLoss: 0.2660733645354622
iteration: 11 HingeLoss: 0.26049142859750063
iteration: 12 HingeLoss: 0.25502659573323416
iteration: 13 HingeLoss: 0.2496764092448394
iteration: 14 HingeLoss: 0.2444384639733981
iteration: 15 HingeLoss: 0.23931040521766567
iteration: 16 HingeLoss: 0.2342899276755229
iteration: 17 HingeLoss: 0.2293747744076349
iteration: 18 HingeLoss: 0.22456273582285136
iteration: 19 HingeLoss: 0.2198516486848921
iteration: 20 HingeLoss: 0.21523939513987123
iteration: 21 HingeLoss: 0.21072390176422282
iteration: 22 HingeLoss: 0.2063031386325999
iteration: 23 HingeLoss: 0.2019751184053286
iteration: 24 HingeLoss: 0.1977378954350058
iteration: 25 HingeLoss: 0.19358956489183915
iteration: 26 HingeLoss: 0.1895282619073381

```


Output_ROI.txt

iteration: 27 HingeLoss: 0.18555216073596742
iteration: 28 HingeLoss: 0.1816594739343898
iteration: 29 HingeLoss: 0.17784845155792633
iteration: 30 HingeLoss: 0.1741173803738744
iteration: 31 HingeLoss: 0.1704645830913296
iteration: 32 HingeLoss: 0.16688841760716547
iteration: 33 HingeLoss: 0.1633872762678307
iteration: 34 HingeLoss: 0.15995958514663425
iteration: 35 HingeLoss: 0.15660380333619145
iteration: 36 HingeLoss: 0.15331842225571404
iteration: 37 HingeLoss: 0.15010196497283304
iteration: 38 HingeLoss: 0.14695298553964795
iteration: 39 HingeLoss: 0.14387006834270621
iteration: 40 HingeLoss: 0.1408518274666184
iteration: 41 HingeLoss: 0.13789690607102448
iteration: 42 HingeLoss: 0.13500397578063092
iteration: 43 HingeLoss: 0.13217173608804356
iteration: 44 HingeLoss: 0.12939891376912888
iteration: 45 HingeLoss: 0.12668426231064053
iteration: 46 HingeLoss: 0.1240265613498528
iteration: 47 HingeLoss: 0.1214246161259509
iteration: 48 HingeLoss: 0.11887725694293015
iteration: 49 HingeLoss: 0.11638333864376268
iteration: 50 HingeLoss: 0.11394174009559611
iteration: 51 HingeLoss: 0.11155136368575168
iteration: 52 HingeLoss: 0.10921113482829636
iteration: 53 HingeLoss: 0.10692000148096582
iteration: 54 HingeLoss: 0.1046769336722225
iteration: 55 HingeLoss: 0.10248092303823536
iteration: 56 HingeLoss: 0.10033098236957302
iteration: 57 HingeLoss: 0.09822614516740706
iteration: 58 HingeLoss: 0.09616546520902543
iteration: 59 HingeLoss: 0.09414801612246147
iteration: 60 HingeLoss: 0.09217289097004618
iteration: 61 HingeLoss: 0.09023920184069721
iteration: 62 HingeLoss: 0.08834607945076169
iteration: 63 HingeLoss: 0.08649267275323222
iteration: 64 HingeLoss: 0.0846781485551618
iteration: 65 HingeLoss: 0.0829016911431042
iteration: 66 HingeLoss: 0.08116250191641325
iteration: 67 HingeLoss: 0.07945979902823398
iteration: 68 HingeLoss: 0.07779281703402616
iteration: 69 HingeLoss: 0.0761608065474611
iteration: 70 HingeLoss: 0.07456303390353776
iteration: 71 HingeLoss: 0.07299878082876544
iteration: 72 HingeLoss: 0.07146734411826686
iteration: 73 HingeLoss: 0.06996803531965448
iteration: 74 HingeLoss: 0.06850018042353884
iteration: 75 HingeLoss: 0.0670631195605299
iteration: 76 HingeLoss: 0.06565620670459517
iteration: 77 HingeLoss: 0.06427880938264052
iteration: 78 HingeLoss: 0.0629303083901839

Output_ROI.txt

```

iteration: 79 HingeLoss: 0.06161009751299418
iteration: 80 HingeLoss: 0.06031758325456955
iteration: 81 HingeLoss: 0.05905218456933286
iteration: 82 HingeLoss: 0.05781333260142468
iteration: 83 HingeLoss: 0.056600470428975966
iteration: 84 HingeLoss: 0.05541305281374551
iteration: 85 HingeLoss: 0.054250545956010095
iteration: 86 HingeLoss: 0.05311242725459634
iteration: 87 HingeLoss: 0.051998185071947145
iteration: 88 HingeLoss: 0.050907318504116755
iteration: 89 HingeLoss: 0.04983933715559094
iteration: 90 HingeLoss: 0.04879376091883122
iteration: 91 HingeLoss: 0.047770119758444314
iteration: 92 HingeLoss: 0.046767953499878986
iteration: 93 HingeLoss: 0.04578681162255625
iteration: 94 HingeLoss: 0.044826253057339324
iteration: 95 HingeLoss: 0.04388584598825225
iteration: 96 HingeLoss: 0.042965167658358686
iteration: 97 HingeLoss: 0.042063804179712644
iteration: 98 HingeLoss: 0.041181350347296704
iteration: 99 HingeLoss: 0.04031740945686335
[-1.02922529e-03 -1.03762022e-04 -1.84259157e-04 ... 7.82808681e-04
 4.72389983e-04 7.07289588e-05]

```

CROSS VALIDATION 49

```

iteration: 0 HingeLoss: 21.05729512960882
iteration: 1 HingeLoss: 1.6388375655443943
iteration: 2 HingeLoss: 1.1013582383494773
iteration: 3 HingeLoss: 0.3086435092875869
iteration: 4 HingeLoss: 0.30216849703102805
iteration: 5 HingeLoss: 0.29582932363859865
iteration: 6 HingeLoss: 0.2896231393555375
iteration: 7 HingeLoss: 0.28354715421190424
iteration: 8 HingeLoss: 0.27759863676835816
iteration: 9 HingeLoss: 0.2717749128882481
iteration: 10 HingeLoss: 0.2660733645354622
iteration: 11 HingeLoss: 0.26049142859750063
iteration: 12 HingeLoss: 0.25502659573323416
iteration: 13 HingeLoss: 0.2496764092448394
iteration: 14 HingeLoss: 0.2444384639733981
iteration: 15 HingeLoss: 0.23931040521766567
iteration: 16 HingeLoss: 0.2342899276755229
iteration: 17 HingeLoss: 0.2293747744076349
iteration: 18 HingeLoss: 0.22456273582285136
iteration: 19 HingeLoss: 0.2198516486848921
iteration: 20 HingeLoss: 0.21523939513987123
iteration: 21 HingeLoss: 0.21072390176422282
iteration: 22 HingeLoss: 0.2063031386325999
iteration: 23 HingeLoss: 0.2019751184053286
iteration: 24 HingeLoss: 0.1977378954350058
iteration: 25 HingeLoss: 0.19358956489183915
iteration: 26 HingeLoss: 0.1895282619073381
iteration: 27 HingeLoss: 0.18555216073596742

```

Output_ROI.txt

```

iteration: 28 HingeLoss: 0.1816594739343898
iteration: 29 HingeLoss: 0.17784845155792633
iteration: 30 HingeLoss: 0.1741173803738744
iteration: 31 HingeLoss: 0.1704645830913296
iteration: 32 HingeLoss: 0.16688841760716547
iteration: 33 HingeLoss: 0.1633872762678307
iteration: 34 HingeLoss: 0.15995958514663425
iteration: 35 HingeLoss: 0.15660380333619145
iteration: 36 HingeLoss: 0.15331842225571404
iteration: 37 HingeLoss: 0.15010196497283304
iteration: 38 HingeLoss: 0.14695298553964795
iteration: 39 HingeLoss: 0.14387006834270621
iteration: 40 HingeLoss: 0.1408518274666184
iteration: 41 HingeLoss: 0.13789690607102448
iteration: 42 HingeLoss: 0.13500397578063092
iteration: 43 HingeLoss: 0.13217173608804356
iteration: 44 HingeLoss: 0.12939891376912888
iteration: 45 HingeLoss: 0.12668426231064053
iteration: 46 HingeLoss: 0.1240265613498528
iteration: 47 HingeLoss: 0.1214246161259509
iteration: 48 HingeLoss: 0.11887725694293015
iteration: 49 HingeLoss: 0.11638333864376268
iteration: 50 HingeLoss: 0.11394174009559611
iteration: 51 HingeLoss: 0.11155136368575168
iteration: 52 HingeLoss: 0.10921113482829636
iteration: 53 HingeLoss: 0.10692000148096582
iteration: 54 HingeLoss: 0.1046769336722225
iteration: 55 HingeLoss: 0.10248092303823536
iteration: 56 HingeLoss: 0.10033098236957302
iteration: 57 HingeLoss: 0.09822614516740706
iteration: 58 HingeLoss: 0.09616546520902543
iteration: 59 HingeLoss: 0.09414801612246147
iteration: 60 HingeLoss: 0.09217289097004618
iteration: 61 HingeLoss: 0.09023920184069721
iteration: 62 HingeLoss: 0.08834607945076169
iteration: 63 HingeLoss: 0.08649267275323222
iteration: 64 HingeLoss: 0.0846781485551618
iteration: 65 HingeLoss: 0.0829016911431042
iteration: 66 HingeLoss: 0.08116250191641325
iteration: 67 HingeLoss: 0.07945979902823398
iteration: 68 HingeLoss: 0.07779281703402616
iteration: 69 HingeLoss: 0.0761608065474611
iteration: 70 HingeLoss: 0.07456303390353776
iteration: 71 HingeLoss: 0.07299878082876544
iteration: 72 HingeLoss: 0.07146734411826686
iteration: 73 HingeLoss: 0.06996803531965448
iteration: 74 HingeLoss: 0.06850018042353884
iteration: 75 HingeLoss: 0.0670631195605299
iteration: 76 HingeLoss: 0.06565620670459517
iteration: 77 HingeLoss: 0.06427880938264052
iteration: 78 HingeLoss: 0.0629303083901839
iteration: 79 HingeLoss: 0.06161009751299418

```

Output_ROI.txt

```

iteration: 80 HingeLoss: 0.06031758325456955
iteration: 81 HingeLoss: 0.05905218456933286
iteration: 82 HingeLoss: 0.05781333260142468
iteration: 83 HingeLoss: 0.056600470428975966
iteration: 84 HingeLoss: 0.05541305281374551
iteration: 85 HingeLoss: 0.054250545956010095
iteration: 86 HingeLoss: 0.05311242725459634
iteration: 87 HingeLoss: 0.051998185071947145
iteration: 88 HingeLoss: 0.050907318504116755
iteration: 89 HingeLoss: 0.04983933715559094
iteration: 90 HingeLoss: 0.04879376091883122
iteration: 91 HingeLoss: 0.047770119758444314
iteration: 92 HingeLoss: 0.046767953499878986
iteration: 93 HingeLoss: 0.04578681162255625
iteration: 94 HingeLoss: 0.044826253057339324
iteration: 95 HingeLoss: 0.04388584598825225
iteration: 96 HingeLoss: 0.042965167658358686
iteration: 97 HingeLoss: 0.042063804179712644
iteration: 98 HingeLoss: 0.041181350347296704
iteration: 99 HingeLoss: 0.04031740945686335
[-1.02922529e-03 -1.03762022e-04 -1.84259157e-04 ... 7.82808681e-04
 4.72389983e-04 7.07289588e-05]

```

CROSS VALIDATION 50

```

iteration: 0 HingeLoss: 19.40052178678764
iteration: 1 HingeLoss: 0.28431791428482284
iteration: 2 HingeLoss: 0.2783532271154643
iteration: 3 HingeLoss: 0.2725136727331753
iteration: 4 HingeLoss: 0.26679662598529424
iteration: 5 HingeLoss: 0.26119951679206743
iteration: 6 HingeLoss: 0.2557198289912784
iteration: 7 HingeLoss: 0.2503550992071156
iteration: 8 HingeLoss: 0.24510291574276916
iteration: 9 HingeLoss: 0.2399609174962615
iteration: 10 HingeLoss: 0.23492679289902055
iteration: 11 HingeLoss: 0.22999827887672217
iteration: 12 HingeLoss: 0.22517315983193265
iteration: 13 HingeLoss: 0.22044926664809333
iteration: 14 HingeLoss: 0.2158244757144022
iteration: 15 HingeLoss: 0.21129670797115127
iteration: 16 HingeLoss: 0.2068639279750913
iteration: 17 HingeLoss: 0.2025241429844063
iteration: 18 HingeLoss: 0.19827540206288166
iteration: 19 HingeLoss: 0.1941157952028681
iteration: 20 HingeLoss: 0.19004345246664325
iteration: 21 HingeLoss: 0.18605654314578754
iteration: 22 HingeLoss: 0.18215327493819528
iteration: 23 HingeLoss: 0.17833189314235076
iteration: 24 HingeLoss: 0.1745906798685081
iteration: 25 HingeLoss: 0.1709279532664198
iteration: 26 HingeLoss: 0.16734206676926583
iteration: 27 HingeLoss: 0.16383140835344512
iteration: 28 HingeLoss: 0.16039439981389594

```

Output_ROI.txt

```

iteration: 29 HingeLoss: 0.15702949605461847
iteration: 30 HingeLoss: 0.15373518439408224
iteration: 31 HingeLoss: 0.15050998388520484
iteration: 32 HingeLoss: 0.1473524446495973
iteration: 33 HingeLoss: 0.14426114722577535
iteration: 34 HingeLoss: 0.14123470193104617
iteration: 35 HingeLoss: 0.1382717482367798
iteration: 36 HingeLoss: 0.13537095415678913
iteration: 37 HingeLoss: 0.13253101564853895
iteration: 38 HingeLoss: 0.12975065602691835
iteration: 39 HingeLoss: 0.1270286253903109
iteration: 40 HingeLoss: 0.12436370005870544
iteration: 41 HingeLoss: 0.12175468202359488
iteration: 42 HingeLoss: 0.11920039840941513
iteration: 43 HingeLoss: 0.11669970094628294
iteration: 44 HingeLoss: 0.11425146545379497
iteration: 45 HingeLoss: 0.11185459133565556
iteration: 46 HingeLoss: 0.10950800108490803
iteration: 47 HingeLoss: 0.10721063979954443
iteration: 48 HingeLoss: 0.10496147470827814
iteration: 49 HingeLoss: 0.10275949470626441
iteration: 50 HingeLoss: 0.10060370990056199
iteration: 51 HingeLoss: 0.09849315116512955
iteration: 52 HingeLoss: 0.09642686970515858
iteration: 53 HingeLoss: 0.0944039366305455
iteration: 54 HingeLoss: 0.09242344253831222
iteration: 55 HingeLoss: 0.09048449710378727
iteration: 56 HingeLoss: 0.08858622868036267
iteration: 57 HingeLoss: 0.08672778390764847
iteration: 58 HingeLoss: 0.08490832732784731
iteration: 59 HingeLoss: 0.08312704101017701
iteration: 60 HingeLoss: 0.08138312418317241
iteration: 61 HingeLoss: 0.07967579287470129
iteration: 62 HingeLoss: 0.07800427955953215
iteration: 63 HingeLoss: 0.07636783281429571
iteration: 64 HingeLoss: 0.07476571697968518
iteration: 65 HingeLoss: 0.07319721182974279
iteration: 66 HingeLoss: 0.07166161224808466
iteration: 67 HingeLoss: 0.07015822791091794
iteration: 68 HingeLoss: 0.06868638297670823
iteration: 69 HingeLoss: 0.06724541578235689
iteration: 70 HingeLoss: 0.06583467854575278
iteration: 71 HingeLoss: 0.07162764628525807
iteration: 72 HingeLoss: 0.11458329682979806
iteration: 73 HingeLoss: 0.11217946124264316
iteration: 74 HingeLoss: 0.10982605556708926
iteration: 75 HingeLoss: 0.10752202183727637
iteration: 76 HingeLoss: 0.10526632428234199
iteration: 77 HingeLoss: 0.10305794886079385
iteration: 78 HingeLoss: 0.10089590280465058
iteration: 79 HingeLoss: 0.09877921417314607
iteration: 80 HingeLoss: 0.09670693141579698

```

Output_ROI.txt

```

iteration: 81 HingeLoss: 0.09467812294463608
iteration: 82 HingeLoss: 0.09269187671541992
iteration: 83 HingeLoss: 0.0907472998176224
iteration: 84 HingeLoss: 0.08884351807302976
iteration: 85 HingeLoss: 0.08697967564275637
iteration: 86 HingeLoss: 0.08515493464250551
iteration: 87 HingeLoss: 0.08336847476590097
iteration: 88 HingeLoss: 0.08161949291572104
iteration: 89 HingeLoss: 0.07990720284286879
iteration: 90 HingeLoss: 0.07823083479291632
iteration: 91 HingeLoss: 0.0765896351600642
iteration: 92 HingeLoss: 0.07498286614836049
iteration: 93 HingeLoss: 0.0734098054400267
iteration: 94 HingeLoss: 0.0718697458707426
iteration: 95 HingeLoss: 0.07036199511174243
iteration: 96 HingeLoss: 0.06888587535858101
iteration: 97 HingeLoss: 0.06744072302642878
iteration: 98 HingeLoss: 0.06602588845175958
iteration: 99 HingeLoss: 0.06464073560029632
[-1.92843371e-03 -6.70393499e-04 -7.82129755e-04 ... 9.24104899e-04
 9.42538433e-04 7.39973553e-05]

```

CROSS VALIDATION 51

```

iteration: 0 HingeLoss: 21.05729512960882
iteration: 1 HingeLoss: 1.6393264781500663
iteration: 2 HingeLoss: 1.101909926627693
iteration: 3 HingeLoss: 0.3086446056286644
iteration: 4 HingeLoss: 0.30216957037203684
iteration: 5 HingeLoss: 0.29583037446205573
iteration: 6 HingeLoss: 0.2896241681338371
iteration: 7 HingeLoss: 0.2835481614075305
iteration: 8 HingeLoss: 0.27759962283409234
iteration: 9 HingeLoss: 0.2717758782673729
iteration: 10 HingeLoss: 0.26607430966196055
iteration: 11 HingeLoss: 0.2604923538962512
iteration: 12 HingeLoss: 0.255027501620202
iteration: 13 HingeLoss: 0.249677296127263
iteration: 14 HingeLoss: 0.2444393322499726
iteration: 15 HingeLoss: 0.239311255278722
iteration: 16 HingeLoss: 0.2342907599032032
iteration: 17 HingeLoss: 0.22937558917606443
iteration: 18 HingeLoss: 0.22456353349830654
iteration: 19 HingeLoss: 0.21985242962596546
iteration: 20 HingeLoss: 0.21524015969763216
iteration: 21 HingeLoss: 0.21072465028237586
iteration: 22 HingeLoss: 0.20630387144763895
iteration: 23 HingeLoss: 0.2019758358466883
iteration: 24 HingeLoss: 0.19773859782520953
iteration: 25 HingeLoss: 0.19359025254664408
iteration: 26 HingeLoss: 0.1895289351358773
iteration: 27 HingeLoss: 0.1855528198408885
iteration: 28 HingeLoss: 0.18166011921199132
iteration: 29 HingeLoss: 0.1778490832982907

```

Output_ROI.txt

iteration: 30 HingeLoss: 0.17411799886099846
iteration: 31 HingeLoss: 0.17046518860325222
iteration: 32 HingeLoss: 0.16688901041609255
iteration: 33 HingeLoss: 0.16338785664025762
iteration: 34 HingeLoss: 0.15996015334346542
iteration: 35 HingeLoss: 0.156604359612858
iteration: 36 HingeLoss: 0.15331896686228835
iteration: 37 HingeLoss: 0.15010249815414115
iteration: 38 HingeLoss: 0.1469535075353798
iteration: 39 HingeLoss: 0.14387057938752335
iteration: 40 HingeLoss: 0.14085232779025927
iteration: 41 HingeLoss: 0.137897395898408
iteration: 42 HingeLoss: 0.13500445533195737
iteration: 43 HingeLoss: 0.13217220557889373
iteration: 44 HingeLoss: 0.1293993734105608
iteration: 45 HingeLoss: 0.12668471230928452
iteration: 46 HingeLoss: 0.1240270019080043
iteration: 47 HingeLoss: 0.12142504744166135
iteration: 48 HingeLoss: 0.11887767921009616
iteration: 49 HingeLoss: 0.11638375205221305
iteration: 50 HingeLoss: 0.11394214483117732
iteration: 51 HingeLoss: 0.11155175993041125
iteration: 52 HingeLoss: 0.1092115227601648
iteration: 53 HingeLoss: 0.10692038127443663
iteration: 54 HingeLoss: 0.10467730549803059
iteration: 55 HingeLoss: 0.10248128706353385
iteration: 56 HingeLoss: 0.10033133875800827
iteration: 57 HingeLoss: 0.09822649407919233
iteration: 58 HingeLoss: 0.09616580680101287
iteration: 59 HingeLoss: 0.09414835054821265
iteration: 60 HingeLoss: 0.0921732183799011
iteration: 61 HingeLoss: 0.09023952238184196
iteration: 62 HingeLoss: 0.08834639326729446
iteration: 63 HingeLoss: 0.0864929799862282
iteration: 64 HingeLoss: 0.08467844934273656
iteration: 65 HingeLoss: 0.08290198562047588
iteration: 66 HingeLoss: 0.08116279021596315
iteration: 67 HingeLoss: 0.07946008127956622
iteration: 68 HingeLoss: 0.07779309336402593
iteration: 69 HingeLoss: 0.07616107708035166
iteration: 70 HingeLoss: 0.07456329876093627
iteration: 71 HingeLoss: 0.0729990401297377
iteration: 72 HingeLoss: 0.07146759797938076
iteration: 73 HingeLoss: 0.06996828385503245
iteration: 74 HingeLoss: 0.06850042374490913
iteration: 75 HingeLoss: 0.0670633577772769
iteration: 76 HingeLoss: 0.06565643992380842
iteration: 77 HingeLoss: 0.06427903770916293
iteration: 78 HingeLoss: 0.06293053192665893
iteration: 79 HingeLoss: 0.06161031635991194
iteration: 80 HingeLoss: 0.06031779751031195
iteration: 81 HingeLoss: 0.05905239433021788

Output_ROI.txt

```

iteration: 82 HingeLoss: 0.057813537961749636
iteration: 83 HingeLoss: 0.056600671481059905
iteration: 84 HingeLoss: 0.05541324964797079
iteration: 85 HingeLoss: 0.054250738660862836
iteration: 86 HingeLoss: 0.05311261591670643
iteration: 87 HingeLoss: 0.05199836977612701
iteration: 88 HingeLoss: 0.050907499333399546
iteration: 89 HingeLoss: 0.04983951419126787
iteration: 90 HingeLoss: 0.04879393424048812
iteration: 91 HingeLoss: 0.04777028944399737
iteration: 92 HingeLoss: 0.04676811962560977
iteration: 93 HingeLoss: 0.04578697426314606
iteration: 94 HingeLoss: 0.044826412285902714
iteration: 95 HingeLoss: 0.04388600187636987
iteration: 96 HingeLoss: 0.042965320276109546
iteration: 97 HingeLoss: 0.04206395359570556
iteration: 98 HingeLoss: 0.04118149662870115
iteration: 99 HingeLoss: 0.040317552669439656
[-1.02920551e-03 -1.03771989e-04 -1.84224671e-04 ... 7.82808681e-04
 4.72389983e-04 7.07289588e-05]

```

CROSS VALIDATION 52

```

iteration: 0 HingeLoss: 21.05729512960882
iteration: 1 HingeLoss: 1.6393264781500663
iteration: 2 HingeLoss: 1.101909926627693
iteration: 3 HingeLoss: 0.3086446056286644
iteration: 4 HingeLoss: 0.30216957037203684
iteration: 5 HingeLoss: 0.29583037446205573
iteration: 6 HingeLoss: 0.2896241681338371
iteration: 7 HingeLoss: 0.2835481614075305
iteration: 8 HingeLoss: 0.27759962283409234
iteration: 9 HingeLoss: 0.2717758782673729
iteration: 10 HingeLoss: 0.26607430966196055
iteration: 11 HingeLoss: 0.2604923538962512
iteration: 12 HingeLoss: 0.255027501620202
iteration: 13 HingeLoss: 0.249677296127263
iteration: 14 HingeLoss: 0.2444393322499726
iteration: 15 HingeLoss: 0.239311255278722
iteration: 16 HingeLoss: 0.2342907599032032
iteration: 17 HingeLoss: 0.22937558917606443
iteration: 18 HingeLoss: 0.22456353349830654
iteration: 19 HingeLoss: 0.21985242962596546
iteration: 20 HingeLoss: 0.21524015969763216
iteration: 21 HingeLoss: 0.21072465028237586
iteration: 22 HingeLoss: 0.20630387144763895
iteration: 23 HingeLoss: 0.2019758358466883
iteration: 24 HingeLoss: 0.19773859782520953
iteration: 25 HingeLoss: 0.19359025254664408
iteration: 26 HingeLoss: 0.1895289351358773
iteration: 27 HingeLoss: 0.1855528198408885
iteration: 28 HingeLoss: 0.18166011921199132
iteration: 29 HingeLoss: 0.1778490832982907
iteration: 30 HingeLoss: 0.17411799886099846

```


Output_ROI.txt

```

iteration: 31 HingeLoss: 0.17046518860325222
iteration: 32 HingeLoss: 0.16688901041609255
iteration: 33 HingeLoss: 0.16338785664025762
iteration: 34 HingeLoss: 0.15996015334346542
iteration: 35 HingeLoss: 0.156604359612858
iteration: 36 HingeLoss: 0.15331896686228835
iteration: 37 HingeLoss: 0.15010249815414115
iteration: 38 HingeLoss: 0.1469535075353798
iteration: 39 HingeLoss: 0.14387057938752335
iteration: 40 HingeLoss: 0.14085232779025927
iteration: 41 HingeLoss: 0.137897395898408
iteration: 42 HingeLoss: 0.13500445533195737
iteration: 43 HingeLoss: 0.13217220557889373
iteration: 44 HingeLoss: 0.1293993734105608
iteration: 45 HingeLoss: 0.12668471230928452
iteration: 46 HingeLoss: 0.1240270019080043
iteration: 47 HingeLoss: 0.12142504744166135
iteration: 48 HingeLoss: 0.11887767921009616
iteration: 49 HingeLoss: 0.11638375205221305
iteration: 50 HingeLoss: 0.11394214483117732
iteration: 51 HingeLoss: 0.11155175993041125
iteration: 52 HingeLoss: 0.1092115227601648
iteration: 53 HingeLoss: 0.10692038127443663
iteration: 54 HingeLoss: 0.10467730549803059
iteration: 55 HingeLoss: 0.10248128706353385
iteration: 56 HingeLoss: 0.10033133875800827
iteration: 57 HingeLoss: 0.09822649407919233
iteration: 58 HingeLoss: 0.09616580680101287
iteration: 59 HingeLoss: 0.09414835054821265
iteration: 60 HingeLoss: 0.0921732183799011
iteration: 61 HingeLoss: 0.09023952238184196
iteration: 62 HingeLoss: 0.08834639326729446
iteration: 63 HingeLoss: 0.0864929799862282
iteration: 64 HingeLoss: 0.08467844934273656
iteration: 65 HingeLoss: 0.08290198562047588
iteration: 66 HingeLoss: 0.08116279021596315
iteration: 67 HingeLoss: 0.07946008127956622
iteration: 68 HingeLoss: 0.07779309336402593
iteration: 69 HingeLoss: 0.07616107708035166
iteration: 70 HingeLoss: 0.07456329876093627
iteration: 71 HingeLoss: 0.0729990401297377
iteration: 72 HingeLoss: 0.07146759797938076
iteration: 73 HingeLoss: 0.06996828385503245
iteration: 74 HingeLoss: 0.06850042374490913
iteration: 75 HingeLoss: 0.0670633577772769
iteration: 76 HingeLoss: 0.06565643992380842
iteration: 77 HingeLoss: 0.06427903770916293
iteration: 78 HingeLoss: 0.06293053192665893
iteration: 79 HingeLoss: 0.06161031635991194
iteration: 80 HingeLoss: 0.06031779751031195
iteration: 81 HingeLoss: 0.05905239433021788
iteration: 82 HingeLoss: 0.057813537961749636

```

Output_ROI.txt

```

iteration: 83 HingeLoss: 0.056600671481059905
iteration: 84 HingeLoss: 0.05541324964797079
iteration: 85 HingeLoss: 0.054250738660862836
iteration: 86 HingeLoss: 0.05311261591670643
iteration: 87 HingeLoss: 0.05199836977612701
iteration: 88 HingeLoss: 0.050907499333399546
iteration: 89 HingeLoss: 0.04983951419126787
iteration: 90 HingeLoss: 0.04879393424048812
iteration: 91 HingeLoss: 0.04777028944399737
iteration: 92 HingeLoss: 0.04676811962560977
iteration: 93 HingeLoss: 0.04578697426314606
iteration: 94 HingeLoss: 0.044826412285902714
iteration: 95 HingeLoss: 0.04388600187636987
iteration: 96 HingeLoss: 0.042965320276109546
iteration: 97 HingeLoss: 0.04206395359570556
iteration: 98 HingeLoss: 0.04118149662870115
iteration: 99 HingeLoss: 0.040317552669439656
[-1.02920551e-03 -1.03771989e-04 -1.84224671e-04 ... 7.82808681e-04
 4.72389983e-04 7.07289588e-05]

```

CROSS VALIDATION 53

```

iteration: 0 HingeLoss: 40.59010039173594
iteration: 1 HingeLoss: 0.30207114258693524
iteration: 2 HingeLoss: 0.2957340115871037
iteration: 3 HingeLoss: 0.2895298268494178
iteration: 4 HingeLoss: 0.2834557993028267
iteration: 5 HingeLoss: 0.27750919838802074
iteration: 6 HingeLoss: 0.2716873508299177
iteration: 7 HingeLoss: 0.2659876394359011
iteration: 8 HingeLoss: 0.2604075019192691
iteration: 9 HingeLoss: 0.25494442974736725
iteration: 10 HingeLoss: 0.24959596701388567
iteration: 11 HingeLoss: 0.24435970933481455
iteration: 12 HingeLoss: 0.2392333027675609
iteration: 13 HingeLoss: 0.23421444275274153
iteration: 14 HingeLoss: 0.22930087307817548
iteration: 15 HingeLoss: 0.22449038486461192
iteration: 16 HingeLoss: 0.21978081557273482
iteration: 17 HingeLoss: 0.21517004803100115
iteration: 18 HingeLoss: 0.21065600948387295
iteration: 19 HingeLoss: 0.20623667066001666
iteration: 20 HingeLoss: 0.20191004486005132
iteration: 21 HingeLoss: 0.1976741870634339
iteration: 22 HingeLoss: 0.19352719305408178
iteration: 23 HingeLoss: 0.18946719856433858
iteration: 24 HingeLoss: 0.18549237843689864
iteration: 25 HingeLoss: 0.18160094580431402
iteration: 26 HingeLoss: 0.177791151285713
iteration: 27 HingeLoss: 0.1740612822003727
iteration: 28 HingeLoss: 0.17040966179778833
iteration: 29 HingeLoss: 0.16683464850389595
iteration: 30 HingeLoss: 0.1633346351831076
iteration: 31 HingeLoss: 0.15990804841582923

```

Output_ROI.txt

```

iteration: 32 HingeLoss: 0.156553347791135
iteration: 33 HingeLoss: 0.15326902521428007
iteration: 34 HingeLoss: 0.15005360422874237
iteration: 35 HingeLoss: 0.1469056393524856
iteration: 36 HingeLoss: 0.14382371542814792
iteration: 37 HingeLoss: 0.1408064469868623
iteration: 38 HingeLoss: 0.1378524776254235
iteration: 39 HingeLoss: 0.13496047939652217
iteration: 40 HingeLoss: 0.13212915221176905
iteration: 41 HingeLoss: 0.1293572232572457
iteration: 42 HingeLoss: 0.12664344642131475
iteration: 43 HingeLoss: 0.12398660173443428
iteration: 44 HingeLoss: 0.12138549482072464
iteration: 45 HingeLoss: 0.11883895636104068
iteration: 46 HingeLoss: 0.11634584156730812
iteration: 47 HingeLoss: 0.11390502966788785
iteration: 48 HingeLoss: 0.1115154234037365
iteration: 49 HingeLoss: 0.10917594853513737
iteration: 50 HingeLoss: 0.10688555335877953
iteration: 51 HingeLoss: 0.10464320823496767
iteration: 52 HingeLoss: 0.10244790512475158
iteration: 53 HingeLoss: 0.10029865713676468
iteration: 54 HingeLoss: 0.09819449808357099
iteration: 55 HingeLoss: 0.09613448204731821
iteration: 56 HingeLoss: 0.09411768295450357
iteration: 57 HingeLoss: 0.09214319415966066
iteration: 58 HingeLoss: 0.0902101280377797
iteration: 59 HingeLoss: 0.08831761558527865
iteration: 60 HingeLoss: 0.08646480602934567
iteration: 61 HingeLoss: 0.08465086644547665
iteration: 62 HingeLoss: 0.08287498138303695
iteration: 63 HingeLoss: 0.08113635249867815
iteration: 64 HingeLoss: 0.07943419819744545
iteration: 65 HingeLoss: 0.07776775328141403
iteration: 66 HingeLoss: 0.07613626860569708
iteration: 67 HingeLoss: 0.0745390107416699
iteration: 68 HingeLoss: 0.07297526164725954
iteration: 69 HingeLoss: 0.07144431834415153
iteration: 70 HingeLoss: 0.0699454926017678
iteration: 71 HingeLoss: 0.0684781106278754
iteration: 72 HingeLoss: 0.067041512765685
iteration: 73 HingeLoss: 0.06563505319730455
iteration: 74 HingeLoss: 0.06425809965341372
iteration: 75 HingeLoss: 0.06291003312902957
iteration: 76 HingeLoss: 0.06159024760523474
iteration: 77 HingeLoss: 0.06029814977674354
iteration: 78 HingeLoss: 0.05903315878518363
iteration: 79 HingeLoss: 0.05779470595797289
iteration: 80 HingeLoss: 0.05658223455267468
iteration: 81 HingeLoss: 0.055395199506715946
iteration: 82 HingeLoss: 0.05423306719235617
iteration: 83 HingeLoss: 0.05309531517679671

```

Output_ROI.txt

```

iteration: 84 HingeLoss: 0.05198143198732304
iteration: 85 HingeLoss: 0.05089091688137346
iteration: 86 HingeLoss: 0.04982327962143232
iteration: 87 HingeLoss: 0.048778040254645084
iteration: 88 HingeLoss: 0.047754728897057265
iteration: 89 HingeLoss: 0.04675288552237943
iteration: 90 HingeLoss: 0.045772059755183975
iteration: 91 HingeLoss: 0.0448118106684403
iteration: 92 HingeLoss: 0.043871706585297605
iteration: 93 HingeLoss: 0.04295132488502583
iteration: 94 HingeLoss: 0.04205025181302788
iteration: 95 HingeLoss: 0.04116808229483775
iteration: 96 HingeLoss: 0.040304419754020396
iteration: 97 HingeLoss: 0.0394588759338923
iteration: 98 HingeLoss: 0.038631070722981734
iteration: 99 HingeLoss: 0.037820631984151046
[-9.69306925e-04 2.62619117e-05 -2.55321231e-04 ... 6.97926175e-04
 4.44724355e-04 1.04769145e-04]
Weight : 2.7242567226794666e-05 ROI : LSGA
Weight : 1.293672584059644e-05 ROI : RFEF
Weight : 1.2338796821595056e-05 ROI : LT
Weight : 1.4572137910665596e-06 ROI : RIT
Weight : 9.879808159957877e-07 ROI : LIT
Weight : -6.283657810470323e-06 ROI : SMA
Weight : -6.350770948407604e-06 ROI : RSPL
Weight : -8.871895589818572e-06 ROI : LIPL
Weight : -1.1782475952804245e-05 ROI : RIPS
Weight : -1.2297980934492027e-05 ROI : LIPS
Weight : -1.2378854991623306e-05 ROI : LOPER
Weight : -1.2581411012022484e-05 ROI : RT
Weight : -1.27498285560001e-05 ROI : LPPREC
Weight : -1.4203738350126933e-05 ROI : LIFG
Weight : -1.571195162264188e-05 ROI : LFEF
Weight : -1.6932988682756243e-05 ROI : LTRIA
Weight : -1.778358480041994e-05 ROI : RPPREC
Weight : -2.1039778971694152e-05 ROI : CALC
Weight : -2.2402963166251728e-05 ROI : LSPL
Weight : -2.311384506142807e-05 ROI : LDLPFC
Weight : -2.329843133294557e-05 ROI : RIPL
Weight : -2.5819991841406547e-05 ROI : ROPER
Weight : -3.0608236096153664e-05 ROI : RTRIA
Weight : -3.565447287370717e-05 ROI : RDLPCF
Weight : -4.7082183527612176e-05 ROI : RSGA
Accuracy (Hinge Loss): 0.8529411764705882

```