

```

successfully convergent
The eta : 0.0001
The eps : 1e-05
The maxiter : 10000000
The weight is : [-1.61131137e-01 -1.94361317e+00 -2.87785237e+00 -7.91784229e+00
5.26421685e+00 4.73446114e+00 -6.51882635e+00 2.04145427e+00
1.25838835e+00 -8.83316257e-01 -2.01323608e+00 -3.90291533e-01
-2.83138668e+00 -2.28659096e-01 5.46890206e+00 -1.07127284e+00
-1.25629777e+01 4.26159970e+00 6.72206620e+00 1.50093174e+00
2.67901332e+00 7.12809371e-02 2.72206755e-01 -1.35692302e+00
-3.15197981e-02 -1.01914706e+00 9.04016501e-04]
The norm of weight is 21.23271465564681
The accuracy for the training data is: 0.7129972130732202
The accuracy for the test data is: 0.7129972130732202

```

**When ETA = 0.00001 EPS = 0.000001 MAXITER = 10000000**

```

success
The weight is : [-5.21548852e-02 -1.92460739e-01 -2.50448116e-01 -8.37770233e-01
5.84528325e-01 5.22312201e-01 -6.79194030e-01 2.02648950e-01
3.12469144e-02 -6.51504383e-02 -3.06498723e-01 -2.97151280e-02
-3.13295358e-01 -2.34488995e-02 5.78531915e-01 -1.02433038e-01
-1.35097498e+00 4.59892251e-01 8.91364050e-01 1.14710130e-01
2.04550197e-01 -2.29459129e-03 1.78457174e-02 -1.34414010e-01
4.15932374e-04 -5.90571843e-02 8.17791217e-03]
The norm of weight is 2.318026957884697
The accuracy for the training data is: 0.6256903977704585
The accuracy for the test data is: 0.6256903977704585
success
The weight is : [-2.85440371e-02 -2.01147710e-01 -2.09275704e-01 -8.31190268e-01
5.28098083e-01 5.04638875e-01 -6.47617189e-01 2.14470668e-01
1.15475077e-01 -7.08000128e-02 -2.83436207e-01 -3.94748152e-02
-2.88439813e-01 -1.48899027e-02 5.26345825e-01 -1.06440580e-01
-1.37121948e+00 4.51241274e-01 9.19695341e-01 1.06301285e-01
2.41888478e-01 5.30978191e-04 2.33353724e-02 -1.37535814e-01
4.57705959e-03 -1.01595483e-01 -4.96100284e-03]
The norm of weight is 2.297013680547542
The accuracy for the training data is: 0.7247529769445148
The accuracy for the test data is: 0.7247529769445148

```

**The norm is almost the same, and error seems have some difference but it is tolerant. What's more, 0.73 is almost the best accuracy for eta = 0.00001.**

```

successfully convergent
The eta : 1e-06
The eps : 1e-05
The maxiter : 10000000
The weight is : [-5.51918999e-03 -1.02442038e-01 -9.93721155e-02 -4.07704817e-01
2.55085038e-01 2.40340479e-01 -3.36187791e-01 1.14235460e-01
5.41958603e-02 -5.47941352e-02 -1.29509085e-01 -1.74510970e-02
-1.36084483e-01 -8.61799215e-03 2.82936661e-01 -5.24405742e-02
-6.37294221e-01 2.17230589e-01 3.73500372e-01 6.39757116e-02
6.99094097e-02 3.46867168e-03 4.62472960e-03 -6.86811340e-02
-2.77629097e-04 1.29914890e-02 2.46304495e-04]
The norm of weight is 1.0801273771410043
The accuracy for the training data is: 0.7361033696478338
The accuracy for the test data is: 0.7361033696478338

```

I got the approximat 0.74 accuracy.