

Write a Python program for the logistic discrimination gradient descent algorithm.

python <your program> <data file name> <training label file name> <eta> <stop>

Test your program with the input data

```
0 0
0 1
1 0
1 1
10 10
10 11
11 10
11 11
```

and labels

```
0 0
0 1
0 2
0 3
1 4
1 5
1 6
1 7
```

Do not convert negative labels to 0. They must remain 0 for the logistic regression gradient descent.

Use eta=.01 and stopping condition of .0000001.

Your final w would be close to the one shown below.

```
w = 0.957672135162093 0.956767618860693
||w||=1.35371348333622
distance to origin = -6.83744723331703
```