Week 5

Discuss this week's module: Neural Networks: Learning.

← Week 5

ex4 test case for sigmoidGradient()

Tom Mosher Mentor Week 5 · a year ago · Edited

```
1  sigmoidGradient([[-1 -2 -3] ; magic(3)])
2  ans =
3    1.9661e-001  1.0499e-001  4.5177e-002
4    3.3524e-004  1.9661e-001  2.4665e-003
5    4.5177e-002  6.6481e-003  9.1022e-004
6    1.7663e-002  1.2338e-004  1.0499e-001
```

Note: This thread is closed to comments. if you have a question, post it in the Week 5 discussion forum area.

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keywords: test case sigmoidgradient

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R

rydenisbak · 10 months ago

Hello, I have trable.

qwe = [[-1 -2 -3] ; magic(3)];

>> qwe .* (1 - qwe)

ans =

-2 -6 -12

-56 0 -30

-6 -20 -42

-12 -72 -2

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Tom Mosher Mentor · 10 months ago

The probem is that you didn't include the sigmoid - so the short form of the sigmoid gradient doesn't work.

If g = sigmoid(z),

then g' = g .* (1-g)

You forgot to compute g.

0 Upvote

R

rydenisbak · 10 months ago

Exactly! Thank you.

0 Upvote

SG

shreya gupta · 6 months ago

sir i am facing the same problem and even after including the equation (given in sigmoid.m) to compute g, i am getting the same result. Please help.

0 Upvote

Tom Mosher Mentor · 6 months ago

Sorry, what "same result" do you mean? Need more details.

0 Upvote

SG

shreya gupta · 6 months ago

my results for:

qwe = [[-1 -2 -3] ; magic(3)];

>> qwe .* (1 - qwe)

ans =

-2 -6 -12

-56 0 -30

-6 -20 -42

-12 -72 -2

0 Upvote

SG

shreya gupta · 6 months ago

i am facing this problem even after including the equation to compute g apart from equationg g to sigmoid(z) and finding gradient of g as you've mentioned in the comments above

0 Upvote

Tom Mosher Mentor · 6 months ago

Start from here:

```
>> u = sigmoid([[-1 -2 -3] ; magic(3)])
% result
u =
   0.268941   0.119203   0.047426
   0.999665   0.731059   0.997527
   0.952574   0.993307   0.999089
   0.982014   0.999877   0.880797

```

...then you arrive here:

```
>> u.*(1-u)
% result
ans =
  1.9661e-001  1.0499e-001  4.5177e-002
  3.3524e-004  1.9661e-001  2.4665e-003
  4.5177e-002  6.6481e-003  9.1022e-004
  1.7663e-002  1.2338e-004  1.0499e-001

```

0 Upvote

satyamverma · 7 months ago

How to decide where to use .* or * in multiplying two matrices?

0 Upvote · Hide 2 Replies

Tom Mosher Mentor · 7 months ago

If the result has the same size as both operands, and you don't want to automatically calculate the sum of the products, use element-wise multiplication.

2 Upvote

satyamverma · 7 months ago

Thanks..

0 Upvote

Joe Ellis · 2 months ago

My results are right (I think) but I'm not getting the exponent notation:

```
>> sigmoidGradient([[-1 -2 -3] ; magic(3)])

ans =

    0.1966    0.1050    0.0452
    0.0003    0.1966    0.0025
    0.0452    0.0066    0.0009
    0.0177    0.0001    0.1050
```

Did you intentionally setup MATLAB to give results using exponents (and, if so, may I ask why)?

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Tom Mosher Mentor · 2 months ago

The appearance of the values on your screen is based on MATLAB or Octave's whim. The screen display appearance has no impact on the double-precision values stored internal the program - just how they are shown on your screen.

You can change the display format using the "format" command. Use "help format" to learn what options are available.

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