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THIS WEEK'S FORUM

Week 6

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ex2: Tutorial for sigmoid()

Tom Mosher · Mentor · 9 months ago · Edited

You can get a one-line function for sigmoid(z) if you use only element-wise operators.

- The exp() function is element-wise.
- The addition operator is element-wise.
- Use the element-wise division operator ./

Combine these elements with a few parenthesis, and operate only on the parameter 'z'. The return value 'g' will then be the same size as 'z', regardless of what data 'z' contains.

=====

keywords: tutorial sigmoid


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Robert Regalado · 5 months ago

Thanks Tom, Great tutorial!!

👍 0 Upvote · Hide 1 Reply

Tom Mosher · Mentor · 5 months ago

https://www.coursera.org/learn/machine-learning/discussions/all/threads/-v5KABxxEea_TAo4ODIo0w

1/9



You're welcome.

👍 0 Upvote

AJ

Anukta Jain · 7 months ago

Hi, I still can't figure out how to do this. Shouldn't we also use '^' because negative z is a subscript of the exp function? Please can someone help.

👍 0 Upvote · Hide 12 Replies



Tom Mosher · Mentor · 7 months ago

I recommend you use the `exp()` function instead of '^'.

👍 0 Upvote

AJ

Anukta Jain · 7 months ago

So do we just write `exp(-z)` ? or does this need to be done element wise?

👍 0 Upvote

AJ

Anukta Jain · 7 months ago

I'm getting all sigmoid answers as 0. Could you give me some insight as to what is going wrong?

👍 0 Upvote

AJ

Anukta Jain · 7 months ago

Okay so now i'm getting the proper answers but the grader still isn't giving me credit. ive tried it with different numbers and even matrices and iv got correct answers. what should i do?

👍 0 Upvote



Tom Mosher · Mentor · 7 months ago · Edited

Since you jumped into the middle of someone else's thread, you never really said what problem you are having.

👍 0 Upvote

AJ

Anukta Jain · 7 months ago

I'm getting the right answers but the grader isn't giving me any credit. Just before the submit report comes though, there are random values displayed for z in three columns. I can't figure out what is happening.

👍 1 Upvote



Tom Mosher · Mentor · 7 months ago

I presume you are discussing the `sigmoid()` function.

The submit grader tests your `sigmoid()` function using a matrix for z. If your code works correctly, it will pass the grader.

Try the additional test cases from the Resources menu.

👍 0 Upvote

AJ

Anukta Jain · 7 months ago

Thank you, i figured it out.

👍 0 Upvote



Bryan Lozano · 7 months ago



A tip for others... so you don't make the same stupid mistake... Sigmoid function uses e to the NEGATIVE z . Emphasis on the NEGATIVE!!!! If you don't do that... your answers will be correct for initial_theta [0;0;0]... but everything is actually wrong!!! Found this bug in my code by using the very helpful test cases posted in the FAQ. Sigmoid of a large number should be 1. My result was 0, before the fix.

👍 4 Upvote

TG

Toly Gins · 6 months ago



I can't get this function to work. I followed the tutorial but when i run the code the error states that there is no variable z . My formula is correct but do I need to define z prior to writing the formula for g ?

👍 0 Upvote



Tom Mosher Mentor · 6 months ago



Your sigmoid() function should ONLY use the ' z ' variable that is passed to it.

👍 0 Upvote



Bryan Lozano · 6 months ago



z is passed to the function in the argument list, you do not need to re-declare it

👍 0 Upvote

KS

kevin shah · 8 months ago



I have problem submitting my assignment and the error shown is

!! Submission failed: unexpected error: urlread: Peer certificate cannot be authenticated with given CA certificates

how do I fix this?

👍 0 Upvote · Hide 9 Replies



Tom Mosher Mentor · 8 months ago



Your question is far off-topic for this thread. You really should start a new thread.

Or search the Forum for "peer certificate".

Anyway, you can fix the problem by applying the "peer certificate" patch, which you can find in the "General Discussion" forum area.

👍 0 Upvote

SS

Sanchit Saxena · 8 months ago



I can't submit my assignment. The following error is being shown:

error: structure has no member 'partFeedbacks'

error: called from

submitWithConfiguration>showFeedback at line 106 column 18

submitWithConfiguration at line 35 column 5

submit at line 40 column 3

👍 0 Upvote



Tom Mosher · Mentor · 8 months ago



Please reply to the following questions:

1. What version of Octave or MATLAB are you using?
2. What is your computer operating system?
3. Did you apply the "peer certificate" patch?

👍 0 Upvote

SS

Sanchit Saxena · 8 months ago



I downloaded the assignment again and applied the peer certificate patch for the same.

It worked !

Thanks.

👍 0 Upvote

HH

Hao Hanmei · 7 months ago



Hi Tom, my sigmoid function works well. But when I run ex.2, there is an error saying 'z' undefined. Is it because z is not defined in ex2.m? But in the exercise manual , it says no need to change script ex2.m. I am confused.

error: 'z' undefined near line 6 column 16

error: evaluating argument list element number 1

error: evaluating argument list element number 1

error: called from:

error: /Users/haohanmei/Downloads/machine-learning-ex2/ex2/sigmoid.m at line 6, column 3

👍 0 Upvote



Tom Mosher · Mentor · 7 months ago



What method are you using to test your sigmoid function? Are you just running ex2.m?

'z' does not need to be defined in ex2.m, because 'z' is the name of the parameter that is passed to sigmoid.m. So your error message confuses me.

👍 0 Upvote

HH

Hao Hanmei · 7 months ago



Sorry! I may not explain clearly. The sigmoid() function works well, when I type sigmoid(x) (x denotes a specific value), the function returns correct answers. But when I tried to run ex.2m, the error

happened.

👍 0 Upvote



Tom Mosher · Mentor · 7 months ago



Did you modify ex2.m in any way?

Did you make any changes in sigmoid.m other than in the "=== YOUR CODE HERE ===" section?

👍 0 Upvote

HH

Hao Hanmei · 7 months ago



This problem has been solved. Thanks for your patience anyway! :)

👍 0 Upvote

VB

Vikas Bahirwani · 8 months ago



These tutorials are excellent and very helpful.

👍 0 Upvote · Reply

AH

Anne Houser · 9 months ago



I am having trouble with running my sigmoid function. I am getting the error "sigmoid" requires more input arguments to run: sigmoid(z), near the start button, and the error in the Command Window reads:

Not enough input arguments.

Error in sigmoid (line 6)

`g = zeros(size(z));`

To me, this looks like my error is not in my sigmoid function, but somewhere else? Any ideas/more information needed?

👍 0 Upvote · Hide 16 Replies

See earlier replies

AH

Anne Houser · 9 months ago



I am still getting the same error that I was previously. I have tried redownloading the machine-learning-ex2 file to see if that was the issue and it is not.

👍 1 Upvote

DA

Douglas Fernandes Barbura Arantes · 9 months ago



Hi Tom Mosher, the tutorial page for costFunction() of week 3 and other tutorials are not available.

Can you verify this problem?

👍 0 Upvote

AH

Anne Houser · 9 months ago



When I run sigmoid(0), I get the correct answer, 0.5. But when I run sigmoid(X) I get an error that says "Error using /

Matrix dimensions must agree.

Error in sigmoid (line 12)

$z = (1 / (1 + \exp(z)))$ " I know matrix dimensions must agree (ie 2x2 x 2x3) but I am unsure of how to fix the issue here.

👍 2 Upvote

AH

Anne Houser · 9 months ago

I realized I forgot to make z negative in the sigmoid function, however, that does not fix the problem of running sigmoid(X)

👍 0 Upvote

AH

Anne Houser · 9 months ago

Okay so my problem I think is that I am not using element wise division. But I am unsure of how I would do this. would I assign a variable to the numerator so that I can element wise divide? Because I can't say 1./denominator. Or if I can, I am still getting an error that says not enough input arguments.

👍 0 Upvote

AH

Anne Houser · 9 months ago

So it looks like I was correct about forgetting to use element wise division since when I submitted the assignment I received credit for the problem.

Thanks!

👍 0 Upvote



Tom Mosher · Mentor · 9 months ago

Nice work!

👍 0 Upvote



Luis Rincones · 8 months ago · Edited by moderator

Hi I am having troubles with sigmoid, it always return zeros, however if I execute in the console I get proper results.

The code is

{mentor edit: code removed}

Previously it has the "g = zeros(size(z));" from the original code.

Thanks for your assistance

👍 0 Upvote



Tom Mosher · Mentor · 8 months ago

The statement "g = zeros(size(z))" is there deliberately. It allows the exercise script to call the sigmoid() function even before you have modified it, without having a runtime error.

Your job is to over-write the 'g' variable with the correct equation.

Please don't post your code - that is a violation of the course Honor Code.

👍 1 Upvote

JR

Jonathan Roman · 8 months ago · Edited



You need to calculate z . z is X times θ . (It wasn't obvious from the videos).

0 Upvote



Tom Mosher · Mentor · 8 months ago



Nope. ' z ' is the parameter that is passed to the sigmoid function. The `sigmoid()` function itself knows nothing about θ or X .

1 Upvote



Zoe Waitforit · 7 months ago



I'm having the exactly same problem, I've overwritten g in a current quation, which is verified by using it to compute z in the console, whereas, I get 0 (or zero matrix) every time trying to call sigmoid function. Also, I've tried debug by `disp()` a part of equation, it won't display either.

0 Upvote



Tom Mosher · Mentor · 7 months ago



In this course, we don't use any global variables, so every variable is local to the scope of the function or script it appears in.

Unfortunately, most of the scripts and functions use exactly the same variable names for both local storage AND as passed parameters. So it gets rather confusing.

2 Upvote



Zoe Waitforit · 7 months ago



After read your reply, I deleted the `sigmoid.m` file, and the function still give me zeros o.o!!!

turns out I downloaded the folder twice and their icons seamlessly overlaped with each other, and I've been enter other path than I made change on...

well, finally work out, thanks a million, Tom!!!!

0 Upvote



Tom Mosher · Mentor · 7 months ago



OK, that's good news.

0 Upvote

AA

Adekunle Anthony · 9 months ago



Hello, I am stuck around the element wise operation on the sigmoid function and its affecting submission, using `sigmoid` equals one divided by parenthesis of one and the addition of exponential of minus z , although I have gotten the test case answers for the element value of z , but am having difficulty submitting

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