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Week 8

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ex2: Tutorial for sigmoid()

Tom Mosher   Mentor   Week 3 · 2 years 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.

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Robert Regalado · 2 years ago ⌄

Thanks Tom, Great tutorial!!

⇧ 2 Upvotes   💬 Hide 1 Reply

> Tom Mosher   Mentor   · 2 years ago ⌄
>
> You're welcome.
>
> ⇧ 3 Upvotes

Anukta Jain · 2 years ago ⌄
AJ

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

⇧ 0 Upvotes   💬 Hide 12 Replies

> Tom Mosher   Mentor   · 2 years ago ⌄
>
> I recommend you use the exp() function instead of '^'.
>
> ⇧ 1 Upvote

> Anukta Jain · 2 years ago ⌄
> AJ
>
> So do we just write exp(-z) ? or does this need to be done element wise?
>
> ⇧ 10 Upvotes

> Anukta Jain · 2 years ago ⌄
> AJ

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

⇧ 6 Upvotes

AJ Anukta Jain · 2 years 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 Upvotes

Tom Mosher Mentor · 2 years ago · Edited

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

⇧ 1 Upvote

AJ Anukta Jain · 2 years 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 · 2 years 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 Upvotes

AJ Anukta Jain · 2 years ago

Thank you, i figured it out.

⇧ 0 Upvotes

Bryan Lozano · 2 years ago

A tip for others... so you don't make the same stupid mistake... Sigmoid function uses e to 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.

⇧ 5 Upvotes

TG Toly Gins · 2 years 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?

⇧ 2 Upvotes

Tom Mosher   Mentor   · 2 years ago

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

⇧ 0 Upvotes

Bryan Lozano · 2 years ago

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

⇧ 1 Upvote

KS kevin shah · 2 years 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 Upvotes   💬 Hide 9 Replies

Tom Mosher   Mentor   · 2 years 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 Upvotes

SS Sanchit Saxena · 2 years 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 Upvotes

M Tom Mosher Mentor · 2 years 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 Upvotes

SS Sanchit Saxena · 2 years ago

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

It worked !

coursera

HH   Hao Hanmei · 2 years 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 Upvotes

Tom Mosher   Mentor · 2 years 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 Upvotes

HH   Hao Hanmei · 2 years 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 Upvotes

Tom Mosher   Mentor · 2 years ago

Did you modify ex2.m in any way?

⇧ 0 Upvotes

HH   Hao Hanmei · 2 years ago

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

⇧ 0 Upvotes

VB   Vikas Bahirwani · 2 years ago

These tutorials are excellent and very helpful.

⇧ 1 Upvote   💬 Reply

AH   Anne Houser · 2 years 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 Upvotes   💬 Hide 16 Replies

> See earlier replies

AH   Anne Houser · 2 years 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 · 2 years ago

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

Can you verify this problem?

⇧ 1 Upvote

AH   Anne Houser · 2 years 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.

⇧ 3 Upvotes

AH   Anne Houser · 2 years 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 Upvotes

AH   Anne Houser · 2 years 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.

⇧ 2 Upvotes

AH   Anne Houser · 2 years 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 Upvotes

Tom Mosher   Mentor   · 2 years ago

Nice work!

⇧   0 Upvotes

Luis Rincones · 2 years 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 Upvotes

Tom Mosher   Mentor   · 2 years 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 · 2 years ago · Edited

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

⇧   0 Upvotes

Tom Mosher   Mentor   · 2 years ago

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

Zoe Waitforit · 2 years ago

I'm having the exactly same problem, I've overwrited g in a corrent 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 Upvotes

Tom Mosher   Mentor · 2 years 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.

⇧ 3 Upvotes

Zoe Waitforit · 2 years 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 Upvotes

Tom Mosher   Mentor · 2 years ago

OK, that's good news.

⇧ 0 Upvotes

Adekunle Anthony · 2 years ago

Hello, I am stuck around the element wise operation on the sigmoid function and its affecting submission, using sigmoid returns 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
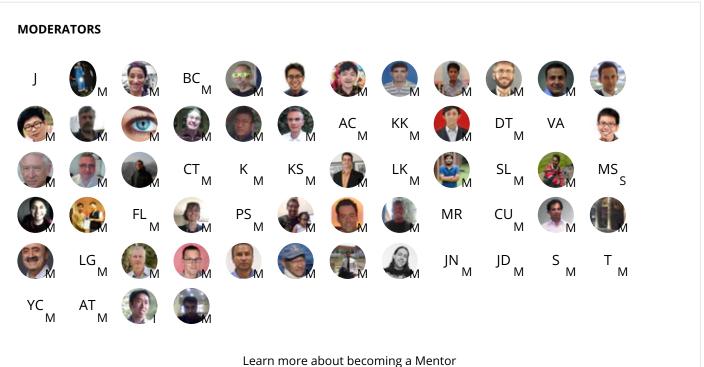
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