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Week 8

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Error in ex8_cofi.m

Tom Mosher Mentor Week 9 · 3 years ago · Edited

There is an error in the ex8_cofi.m script. In Part 7, around line 200, the code that calls fmincg() and cofiCostFunc() should use the Ynorm variable, instead of Y.

Figure 4 in ex8.pdf is also incorrect - no movies should have ratings higher than 5.

This issue is also documented in the Errata lists in the Resources menu.

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Cedar Mora · 2 years ago

Has the Y->Ynorm problem been fixed in the newest version of ex8? Either I'm misinterpreting the code, or it has been fixed.

3 Upvotes Hide 1 Reply

CB Coogan Brennan · a year ago

It looks like it has been fixed. Can a moderator confirm?

14 Upvotes

David Sánchez · 2 years ago

Hi Tom, in the tutorial you said:

- Tip for estimateGaussian(): don't use "var()"

If you use it correctly (with appropriate parameters), why you shouldn't?

0 Upvotes Hide 5 Replies

Tom Mosher Mentor · 2 years ago

It probably should say "don't use var() unless you know what you're doing".

4 Upvotes

Yue Yangming · 2 years ago

I used var because i can tell differences between "m" and "m-1", Good luck, nothing else i can tell.

0 Upvotes

Zvonimir Bandic · 2 years ago

Yue, I am glad I am not the only one who finds this so hilarious. At many places through the lectures (sheer recall) variance is incorrectly written with 1/m (instead of 1/(m-1)). Same is the case with co-variance matrix. This is further enhanced and reinforced with homework. Needless to say I have been renormalizing var with (m-1)/m multiplier. I hope this does not count as posting code violation...

0 Upvotes

AB Alexis bogroff · a year ago

Hi Zvonimir Bandic. It has been said in the videos that regarding the length of datasets usually used in machine learning, the correction made by m-1 is insignificant.

9 Upvotes

Oleg Kovpak · a year ago

Zvonimir, there is an explanation in one of the lectures that 1/(m-1) is used in statistics, but in machine learning they usually use 1/m and it works fine. If I'm not mistaken, that was somewhere in anomaly detection lectures if I'm not mistaken.

7 Upvotes

Anupam Tiwari · 2 years ago

Hi

I fixed the error to change Y to Ynorm but I'm facing an error while running ex8_cofi even without any code on file cofiCostFunction. The error points to line 62 in file ex8_cofi and it says "input buffer overflow, can't enlarge buffer because scanner uses REJECT". Please help. Thanks.

0 Upvotes Hide 1 Reply

Tom Mosher Mentor · 2 years ago

Line 62 calls your cost function directly. I think there is a runtime error in your cost function.

Maybe the tutorial for this exercise (from the Resources menu) will be helpful - compare it with the code you wrote.

0 Upvotes

Breno Arosa · 2 years ago · Edited

Hello,

I finished the exercise with success and played a little bit with the parameters number of features, lambda, and number of iterations. I was able to get a lower cost value but now there is some predictions with value higher than 5 as follows:

Predicting rating 5.2 for movie As Good As It Gets (1997)

Predicting rating 5.1 for movie Return of the Jedi (1983)

Predicting rating 5.0 for movie Saint of Fort Washington, The (1993)

Predicting rating 5.0 for movie Santa with Muscles (1996)

Predicting rating 5.0 for movie Aiqing wansui (1994)

Predicting rating 5.0 for movie They Made Me a Criminal (1939)

Predicting rating 5.0 for movie Star Kid (1997)

Predicting rating 5.0 for movie Prefontaine (1997)

Predicting rating 5.0 for movie Great Day in Harlem, A (1994)

Predicting rating 5.0 for movie Marlene Dietrich: Shadow and Light (1996)

Is it expected?

1 Upvote Hide 3 Replies

Tom Mosher Mentor · 2 years ago · Edited

Yes, it is expected.

The cofi cost function isn't a classifier - it is a linear predictor. There is no constraint that the predicted outputs be in the same range as the training set, particularly if the model is overfit or underfit.

0 Upvotes

C

Carlos · 2 years ago

Tom, can you explain a little bit more this? Thanks in advance.

0 Upvotes

Tom Mosher Mentor · 2 years ago

For what topic do you need more explanation?

1 Upvote

AG Azadeh Gholami · 3 years ago

Hello all, could anyone please help me by sending the assignment 8? I cant download that and I am worry about time missing. Please help

0 Upvotes Reply

AJIT KUMAR RANJAN · 3 years ago

Hi Tom,

Please provide test cases for the following:

Collaborative Filtering Cost

Collaborative Filtering Gradient

Regularized Cost

Regularized Gradient

Please.....

0 Upvotes Hide 4 Replies

Tom Mosher Mentor · 3 years ago

Done.

1 Upvote

AG Azadeh Gholami · 3 years ago

Hello Tom,

unfortunately I have encountered the problem like before, the link of programming assignment 8 does not work correctly and I cant download that. I am worry about missing the time and I could not complete the course. Please help me

0 Upvotes

vignajeth · 3 years ago · Edited

i am able to download ex8 assignment

try with other browser

disable your firewall and try again

make sure you haven't blocked amazonaws

0 Upvotes

AG Azadeh Gholami · 3 years ago

Thank you for help. I have cheked all of these, but still I receive "This file couldn't be downloaded". What can I do to access the assignment?

0 Upvotes

MY Minyi Yang · 3 years ago

Hi Tom, thanks for pointing out this error. After I changed the Y on line 200 to Ynorm, the top recommended movies all have a rating of 5.0. In fact, the recommendation list also changed. (before making the change, I got the same recommendations as per the pdf). Could you confirm if that is the expected outcome? Thanks

Predicting rating 5.0 for movie Santa with Muscles (1996)

Predicting rating 5.0 for movie Prefontaine (1997)

Predicting rating 5.0 for movie They Made Me a Criminal (1939)

Predicting rating 5.0 for movie Entertaining Angels: The Dorothy Day Story (1996)

Predicting rating 5.0 for movie Aiqing wansui (1994)

Predicting rating 5.0 for movie Someone Else's America (1995)

Predicting rating 5.0 for movie Saint of Fort Washington, The (1993)

Predicting rating 5.0 for movie Marlene Dietrich: Shadow and Light (1996)

Predicting rating 5.0 for movie Star Kid (1997)

Predicting rating 5.0 for movie Great Day in Harlem, A (1994)

2 Upvotes Hide 19 Replies

See earlier replies

SG Stephane Grabli · 3 years ago

Thanks Tom, I hadn't initially noticed that the ratings were sorted in decreasing order before being displayed! If I don't sort them, I see more varied ratings, which is what I was expecting. E.g:

Predicting rating 3.4 for movie Toy Story (1995)

Predicting rating 2.7 for movie GoldenEye (1995)

Predicting rating 2.5 for movie Four Rooms (1995)

Predicting rating 2.8 for movie Get Shorty (1995)

Predicting rating 2.8 for movie Copycat (1995)

Predicting rating 3.5 for movie Shanghai Triad (Yao a yao yao dao waipo qiao) (1995)

Predicting rating 2.9 for movie Twelve Monkeys (1995)

Predicting rating 3.7 for movie Babe (1995)

Predicting rating 3.6 for movie Dead Man Walking (1995)

Predicting rating 4.0 for movie Richard III (1995)

1 Upvote

TO Tom O'Neill · 3 years ago

FWIW I modified my ex8_cofi.m to set my_prediction to 0 for any movie with less than 4 ratings. Then the list looked a lot more reasonable:

Predicting rating 4.6 for movie Pather Panchali (1955)

Predicting rating 4.6 for movie Star Wars (1977)

Predicting rating 4.6 for movie Shawshank Redemption, The (1994)

Predicting rating 4.5 for movie Maya Lin: A Strong Clear Vision (1994)

Predicting rating 4.5 for movie Wrong Trousers, The (1993)

Predicting rating 4.5 for movie Schindler's List (1993)

Predicting rating 4.5 for movie Raiders of the Lost Ark (1981)

Predicting rating 4.4 for movie Empire Strikes Back, The (1980)

Predicting rating 4.4 for movie Close Shave, A (1995)

Predicting rating 4.4 for movie Casablanca (1942)

Never heard of Pather Panchali, I'll have to look into that!

2 Upvotes

Tom Mosher Mentor · 3 years ago

Pather Panchali has 5 reviews, ranging from 2 to 4. But since it is rated higher than Star Wars and Empire Strikes Back, so I expect there are a lot of space ships.

1 Upvote

TO

Tom O'Neill · 3 years ago

Hmm, it has 8 ratings in my data set: 4 4 4 5 5 5 5 5, which makes me a lot more comfortable with filter predicting 4.6 than if the highest rating was 4. (It seems possible but unlikely that the features would conspire to predict a higher rating than has ever been seen.)

Probably i should have used a higher threshold for minimum number of ratings. Only one other movie in the top 20 had less than 26 ratings. I wonder what Netflix does about ratings for movies with poor statistics. This could be an interesting sub-topic for the course.

But to be sure, Pather Panchali must have a lot of space ships!

0 Upvotes

Tom Mosher Mentor · 3 years ago

You're right, I fumble-fingered the index number for that movie (1440 instead of 1449). I see the same ratings you have.

0 Upvotes

Tom Mosher Mentor · 3 years ago

IMDb gives it an 8.3 rating.

3 Upvotes

Krishnan L Narayan · 2 years ago

Pather Panchali has no space ships at all! It is a classic Indian movie, definitely not of the bollywood variety. made in 1955, and deals with poverty and other issues.

2 Upvotes

Tom Mosher Mentor · 2 years ago

Thanks for the information. Pardon our slight attempts at humor, no disrespect was intended.

2 Upvotes

Mark Tillinghast · 2 years ago

Song of the Little Road; It is often featured in lists of the greatest films ever made.

0 Upvotes

AS Amit Singla · a year ago

Hi Tom,

I am running test case 3b for Recommender Systems. I am getting correct value for both x_grad and Theta_grad. However, I am getting the cost function incorrect.

I am calculating the error matrix E after multiplying R with ((X*Theta') - Y). Then I am using E to calculate gradients (correctly computed).

However, when I use sum(E'*E)/2 to calculate cost, my answer is not correct. Can you advise?

0 Upvotes

AS Amit Singla · a year ago

Please ignore my query. I was doing matrix multiplication of E. Corrected by doing element level multiplying.

0 Upvotes

JI John Ivie · a year ago

Should figure 4 be completely changed? Before I changed Y to Ynorm in the ex8_cofi.m script file, it gave me almost all the same movies in Figure 4. I got very different set of movies after changing Y to Ynorm , seemingly more than would be implied by different random initializations...

0 Upvotes

Suman Gangopadhyay · a year ago

My code for selectThreshold works perfectly well with the test cases but doesn't give me the expected results when ex8.m is run. Also I am not getting a similar figure as in Figure 2 of ex8.pdf when I run ex8.m. Moreover, I am getting correct F1 value but incorrect epsilon. Any suggestions?

0 Upvotes

Tom Mosher Mentor · a year ago

Suggestions:

- Use the Tutorial for this exercise from the Resources menu.
- Use the additional Test Cases (also in the Resources men).

This thread is 2 years old, so I'm going to close it. If you need more assistance, please start a new thread.

0 Upvotes

Tom Mosher Mentor · a year ago · Edited

Check that your code for this exercise consistently returns either column vectors or row vectors. If one function returns a row and the other expects a column, they won't work together.

0 Upvotes

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