
Subject: Does the ENVI_SVM_DOIT function have memory leak problem?

Posted by [Neve](#) on Fri, 28 Mar 2008 09:43:43 GMT

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Hi, all. I found that the ENVI_SVM_DOIT function may have memory leak problem. I used the "Help, /memory" command before and after the ENVI_SVM_DOIT function was called and found that certain amount memory lost, even if I remove the image to be classified and training ROIs. The size of the "lost" memory was different to either that of the image to be classified or that of the classification result.

It may not be a big issue if one just call the ENVI_SVM_DOIT function a few times, 'cause the size of "lost" memory is not large. My problem is that I need to repeatedly use the SVM classifier for around a thousand times, in which case the memory will finally be consumed and leads to error.

Could anybody tell me if I am using the ENVI_SVM_DOIT function in a wrong way or the function has memory leak problem? I also hope that someone from the ENVI team may see this and solve the problem if it turns out to be their problem. ;)

I attached my procedure below. The image I used is the one under the envi\data\ folder.

Pro test

```
ori_data_path = 'D:\bhtmref'
envi_open_file, ori_data_path, r_fid=ori_img_fid
envi_file_query, ori_img_fid, dims=ori_img_dims, nb=ori_img_nb
numFeatures = ori_img_nb
Feature_Subset = indgen(numFeatures)
Para_C = 100
Para_gamma = 1/numFeatures
out_name = 'D:\clsrst'
envi_restore_rois, 'D:\test.roi'
tr_roi_ids = envi_get_roi_ids(fid=fid)
help, /memory
print, '====='
; Call the svm classification doit routine, using the optimized
parameters
envi_doit, 'envi_svm_doit', $
fid=ori_img_fid, pos=Feature_Subset, dims=ori_img_dims, $
out_name=out_name, roi_ids=tr_roi_ids, $
penalty=Para_C, kernel_gamma= Para_gamma
help, /memory
; Remove the original image and training ROI IDS
envi_file_mng, id=ori_img_fid, /remove
help, /memory
```

envi_delete_rois, tr_roi_ids

End

Subject: Re: Does the ENVI_SVM_DOIT function have memory leak problem?

Posted by peter.eddy@shaw.ca on Wed, 02 Apr 2008 15:08:09 GMT

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Neve,

We have been using SVM in ENVI4.4/IDL6.4 (windows XP) for the last few weeks and have run into a similar problem. I'm not sure that its an issue with your code because we get an error when initializing several SVM classifications and running them using the queue manager (no external user coding).

After a few queued classifications an error occurs "Unable to allocate memory: to make array".

This leads me to believe that there is a memory leak as well.

Pete

Subject: Re: Does the ENVI_SVM_DOIT function have memory leak problem?

Posted by [Neve](#) on Thu, 03 Apr 2008 08:52:13 GMT

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Pete,

The error you described is just the same one I wanted to say. It happens when the memory is used up, right?

I am now 99% sure that it's caused by the envi_svm_doit function, since I have ruled out all the possible causes I could image.

Maybe we should report this problem to the ENVI technic team and count on them to solve it. ;)

All the Best,

Neve

Subject: Re: Does the ENVI_SVM_DOIT function have memory leak problem?

Posted by peter.eddy@shaw.ca on Fri, 04 Apr 2008 14:27:16 GMT

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> The error you described is just the same one I wanted to say. It
> happens when the memory is used up, right?

I believe so - I used to get this error quite a bit before I learned about tile processing images =)

Pete
