
Subject: Re: Reading binary files made by Python
Posted by [Maarten\[1\]](#) on Mon, 10 Jul 2006 13:29:16 GMT
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Sheldon wrote:

> I have created som binary files using python and tried to read them
> with IDL. I used the binary_template as well but IDL completely
> misinterprets the data and returns wrong values and values that were
> never written in the file. Now Matlab is able to read these files
> without problem. My question is why is IDL failing to do this? I know
> that the binaries are Float32 and the dimensions are correct. I am
> doing something wrong?

Without actually seeing the code you used to write the files, it seems a bit hard to answer this question. One obvious issue is the endianness of the data, I don't know what python, IDL or matlab assume about that (I guess you use the same machine to write and read the data).

I would recommend to write out the data in a portable file format, like HDF (pytables is an easy way to do that). You can then use the idl HDF routines to ingest the data, avoiding the larger part of the headaches.

Maarten

pytables: <http://www.pytables.org/>

Subject: Re: Reading binary files made by Python
Posted by [Liberum](#) on Mon, 10 Jul 2006 13:41:23 GMT
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Maarten wrote:

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> Maarten
>
> pytables: <http://www.pytables.org/>

This is a very good idea. I think that I will do just that. The data was written and read on the same machine. Silly me, I thought that binary is just a binary but I guess not. Will try the HDF format.

Thanks,
/Sheldon

Subject: Re: Reading binary files made by Python
Posted by [Rick Towler](#) on Mon, 10 Jul 2006 15:55:49 GMT
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Sheldon wrote:

> Maarten wrote:
>> Sheldon wrote:
>>
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> This is a very good idea. I think that I will do just that. The data
> was written and read on the same machine. Silly me, I thought that
> binary is just a binary but I guess not. Will try the HDF format.

Binary is just binary :) Try to keep it simple and just use OPENR/READU and your knowledge of the file. Do it interactively a few bytes at a time. You'll at least know exactly when things go wrong...

FWIW, I would consider XDR if you can do that from the Python side. It is *much* easier to use than HDF, CDF, etc. and sounds like it is exactly what you are looking for. The only potential issue is that I

don't think MATLAB reads it so if that is a requirement I would go back to your original approach.

-Rick

Subject: Re: Reading binary files made by Python
Posted by [James Kuyper](#) on Mon, 10 Jul 2006 18:51:05 GMT
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Rick Towler wrote:

...
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> don't think MATLAB reads it so if that is a requirement I would go back
> to your original approach.

Keep in mind that HDF and CDF use XDR internally.

Subject: Re: Reading binary files made by Python
Posted by [Rick Towler](#) on Mon, 10 Jul 2006 20:22:44 GMT
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kuyper@wizard.net wrote:

> Rick Towler wrote:
> ...
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>> to your original approach.
>
> Keep in mind that HDF and CDF use XDR internally.
>

I'm trying to K-I-S-S. Set the XDR keyword on OPENR/OPENW and you just read/write the data... Easier than storing data in HDF/CDF and it seems to fit the limited needs of the OP.

-Rick

Subject: Re: Reading binary files made by Python
Posted by [Maarten\[1\]](#) on Tue, 11 Jul 2006 07:14:28 GMT

Rick Towler wrote:

> FWIW, I would consider XDR if you can do that from the Python side. It
> is *much* easier to use than HDF, CDF, etc. and sounds like it is
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> don't think MATLAB reads it so if that is a requirement I would go back
> to your original approach.

Yes, that is probably even better, and part of the standard python
library:

<http://docs.python.org/lib/module-xdrlib.html>

I usually work with hierarchical data sets, or data that is best stored
in that way, hence my suggestion to use HDF.

Maarten
