Subject: Re: Matrix rank
Posted by Vince Hradil on Fri, 14 Dec 2007 16:28:11 GMT
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On Dec 14, 9:42 am, Wox <nom...@hotmail.com> wrote:
> On Fri, 14 Dec 2007 06:35:11 -0800 (PST), Vince Hradil
>
> <hrad...@yahoo.com> wrote:
>> IDL can do SVD, can you get the rank from that? Look up SVDC in the
>> docs.
>
> I could do this, but maybe there's a better way?
>
> ; A: integers
> ; B: floats
> A = [[0,0,1], $
> [0,1,0], $
> [0,0,0]]
> B = [0.25,0.5,1]
>
> ; Decompose A
> SVDC, A, W, U, V
> ; Solve A.X=B
> X=SVSOL(U, W, V, B)
>
> ; Check
> B2=A##X
> ind=where(total(abs(A),1,/pres) ne 0)
>
> if array_equal(B[ind],B2[ind]) then print,X

Well, w contains the singular values, the number of these that are non-
zero will be the rank:
idx = where(w ne 0, rank)
print, rank
2

Does anyone else read the Help??????