Subject: Re: Matrix rank
Posted by Wox on Mon, 17 Dec 2007 10:53:42 GMT
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Thanks for your help guys. However I'm struggling with the problem I wanted to use this rank for. Maybe someone can help.

Suppose you have two subspaces of 3D space (e.g. [z,y+0.5,0] and [z,0,0]). Now I just want to check whether one is a subspace of the other.

My first idea was that if you could find a solution for
R1(3x3).X(3x1)+T1(3x1) = R2.X+T2
that one is a subspace of the other. However, [0.5,0,z] is not a subspace of [y,z,0] while it gives X=[0,0.5,0] as a solution.

The second (brute-force) idea is this:
h=histogram((total(abs(R1),1,/pres) eq 0)+$
(total(abs(R2),1,/pres) eq 0),min=0,max=2,binsize=1,rev=rev)

; h=0 => both fixed: check whether they are the same
...
; h=2 => both variable: check whether they are the same
...
; h=1 => one is variable: find solution
...

Is there a more elegant solution to this?

Thanks.