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Subject: Matrix  $a*b$  in loop

Posted by [Gompie](#) on Thu, 17 Jul 2014 21:16:29 GMT

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Hi,

I have a simple question.

I have two matrices A (696 , 1523854 ) and B (1,696) Matrix .

I wish to have a matrix c whose each row is a product of rows elements of a and b i.e  $a*b$

I can do it in a loop by saying  $a(:,i)*b$  but it takes a lot of time because I (~1523854 ) would be very large number. Is it possible to do it in one go.

Thanks

GlanPlot

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Subject: Re: Matrix  $a*b$  in loop

Posted by [Yngvar Larsen](#) on Fri, 18 Jul 2014 08:43:09 GMT

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The following does the job, but will consume a lot of memory:

```
C = A*(reform(B))[* ,intarr(1523854)]
```

If memory is a problem, you can also split that operation in a loop, e.g. 1000 or 10000 rows at a time, reducing the number of iterations in the loop. The details are left as an exercise to the reader :)

On Thursday, 17 July 2014 23:16:29 UTC+2, Gompie wrote:

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>

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>

>

>

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> Thanks

>  
> GlanPlot

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Subject: Re: Matrix a\*b in loop  
Posted by on Sat, 19 Jul 2014 20:31:55 GMT  
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Den torsdagen den 17:e juli 2014 kl. 23:16:29 UTC+2 skrev Gompie:

> Hi,  
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>  
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very large number. Is it possible to do it in one go.

Is this what you want to do?

```
IDL> a = randomu(seed,696,1523854)
IDL> b = randomu(seed,1,696)
IDL> help,a,b
A      FLOAT    = Array[696, 1523854]
B      FLOAT    = Array[1, 696]
IDL> c = a ## b
IDL> help,c
C      FLOAT    = Array[1, 1523854]
```

[http://www.exelisvis.com/docs/Matrix\\_Operators.html](http://www.exelisvis.com/docs/Matrix_Operators.html)  
[http://www.exelisvis.com/docs/matrix\\_multiply.html](http://www.exelisvis.com/docs/matrix_multiply.html)

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