Subject: Re: pseudo code for doing SVD on 2D sparse array
Posted by Evgenii Rudnyi on Mon, 22 Dec 2008 15:17:43 GMT
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Spellucci) wrote:
> In article < fb7c56d7-4124-4228-949b-aeb66116d...@t39g2000prh.googlegroup s.com >,
> Brian Borchers <borchers.br...@gmail.com> writes:
>
>> On Dec 21, 4:41 am, erano <eran.o...@gmail.com> wrote:
>>> Hi,
>>> I wish to solve Ax=B
>>> A is sparse array (size m*n), in format of [x_index, y_index, value]
>>> B is vector length m
>>> x is unknown vector length n
>>> n=1,000,000
>>> m=2*n
>
...
> without matlab:
> lsqr is available also through netlib (f77 code) but
> what about netlib/svdpack, which has code just for this problem?
> lsqr for such a large column space might run into trouble.
>
> hth
> peter

It could be easier to compile SVDLIBC rather than the original SVDPACK

http://tedlab.mit.edu/~dr/SVDLIBC/

make under Cygwin happens to be enough and then

$ ./svd -r sth -o tt dat1.txt

seems to solve the problem matrix dat1.txt from SVDPACK

A good reference to SVD where I have found the link to SVDLIBC

http://en.wikipedia.org/wiki/Singular_value_decomposition

Best wishes,

Evgenii
http://MatrixProgramming.com