
Subject: Re: efficient matrix multiplication
Posted by [goyette](#) on Sat, 18 Mar 1995 08:47:24 GMT
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In article <D5LsIF.417@rockyd.rockefeller.edu>, orbach@rockvax.rockefeller.edu (Darren Orbach) wrote:

> Here's the question: In order to extract the inner products from this
> big array, I've been looping over the z-variable and doing a "total()" operation: for i = 0, 99 do output(i)=total(productarray(*,*,i)).
> This process seems highly inefficient, and since I'm doing this
> hundreds of times every time I need the series of inner products,
> I'm looking for a better method. Is there a function analogous to
> total(), which can be directed to act over a specified dimension without
> looping over every element of that dimension? If it's at all relevant,
> I'm using PV-WAVE Advantage 5.0.

I think that the function, total, can do this. A second parameter in total indicates a dimension to sum over --- i.e., total(z,1) sums over the first dimension. So you could replace the loop with two lines:
output = total(productarray,1)
output = total(output,2)

or if you prefer 1 line, output = total(total(productarray,1),2)

Good luck!

-John G.
goyette@nwu.edu

Subject: Re: efficient matrix multiplication
Posted by [rivers](#) on Sun, 19 Mar 1995 00:41:09 GMT
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In article <D5LsIF.417@rockyd.rockefeller.edu>, orbach@rockvax.rockefeller.edu (Darren Orbach) writes:

> Greetings all.
>
>
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IDL's TOTAL routine can now do exactly what you want, i.e. total over one of the dimensions.

```
result = total(array, dimension)
```

I don't know if PV-WAVE has this feature.

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