Subject: Re: avoiding for loop when calculating median
Posted by a2652099 on Fri, 30 Jan 1998 08:00:00 GMT
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george.mccabe@gsfc.nasa.gov (George McCabe) wrote:

> calculating the median of each i set of values M(i,*), I would like to
> 'vectorize' the operation to avoid a FOR loop like the following -
>
> for cnt=0,idim-1 do begin
> calcmedian(cnt)=median(mat(cnt,*))
> end
>
> but, you can't do -
>
> cnt=indgen(idim)
> calcmedian(cnt)=median(M(cnt,*))
>
> and get the desired result, where each element of calcmedian() will be
> assigned the same value.
>
> can it be done wothout a FOR loop?

I don't think so. But maybe the routine above can be made a bit faster?

I assume that mat is an idim x jdim array. mat(cnt,*) gives the elements
no. cnt, cnth+idim, cnth+2*idim etc., I guess it's easier to use
mat2=reform(mat), so all the elements are in line.

Another idea:

```
index = lindgen( jdim )
for cnt = 0, idim-1 do begin
  calcmedian(cnt) = median( mat2(cnt*jdim+index) )
end
```

Whether there will be a measurable improvenment in speed will depend on
the sizes of idim and jdim.

Alex
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