Subject: Re: Replicate array over columns - using transpose?
Posted by Craig Markwardt on Thu, 22 Mar 2012 12:01:30 GMT
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On Thursday, March 22, 2012 6:11:54 AM UTC-4, robintw wrote:
> Hi all,
>
> I've got an array, a, as follows:
>
> IDL> print, a
> 10.0000 35.0000 60.0000 85.0000 110.000
>
> I want to replicate this across 4 columns to produce an array like the
> following:
>
> 10 10 10 10
> 35 35 35 35
> 60 60 60 60
> 85 85 85 85
> 110 110 110 110
>
> I'm using the CMREPLICATE routine to do this, and get the following:
>
> IDL> print, CMREPLICATE(a, 4)
> 10.0000 35.0000 60.0000 85.0000 110.000
> 10.0000 35.0000 60.0000 85.0000 110.000
> 10.0000 35.0000 60.0000 85.0000 110.000
> 10.0000 35.0000 60.0000 85.0000 110.000
>
> However, I want to replicate it in the columns as in the example above.
> As far as I can see it there are two ways to deal with this: transpose
> the array after I've done it (computationally expensive, as I'll be
> doing it with far larger arrays in the real program) or transpose it
> before running CMREPLICATE. However, if I do this I get an extra
> dimension added:
>
> IDL> help, CMREPLICATE(transpose(a), 4)
> <Expression> FLOAT = Array[1, 5, 4]
>
> Is there a way to replicate over the columns without adding this extra
> dimension? I'm sure I'm missing something simple here.

I'm the CM in CMreplicate, but I wouldn't use CMreplicate. I use this instead.

print, [1,1,1,1,1] # a

Usually I'm matching up X and Y labels to a 2D grid, so I do this,

```
XX = (X*0 + 1) # Y
YY = X # (Y*0 + 1)
```

Now XX and YY are 2D arrays with X running along one axis and Y running along the other axis. It looks crazy, but it works.

Craig
