
Subject: Re: array problems

Posted by [Jean H.](#) on Fri, 11 Jul 2008 19:02:23 GMT

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David Sheerin wrote:

> Hi All

> I have a palindromic vector of floats, e.g. [a,b,c,b,a] , and I would like
> to expand it to include the mean between each value like [(0+a)/2, a,
> (a+b)/2, b, (b+c)/2, c, (c+b)/2, b, (b+a)/2, a, (a+0)/2]. Is there any
> elegant way of doing this without having to resort to clunky for loops?

>

> I also would like to repeat this action on the resulting vector.

>

> Thanks for any tips

>

> David

>

>

Hi,

1) get your "average".

```
nbEntries = n_elements(data)
```

```
avg = (data + shift(data,-1)) / 2.0
```

2)add the 1st entry and correct the last entry:

```
avg = [data[0] / 2.0,avg]
```

```
avg[nbEntries] = data[nbEntries-1] / 2.0
```

3)create the new array by coping each original array, with a "step" of 2
cells between two values from the same original array

```
newData = fltarr(nbEntries*2+1)
```

```
nnewData[1:nbEntries*2:2] = data
```

```
newData[0:nbEntries*2:2] = avg
```

Jean
