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Subject: Tricky data-summing question

Posted by [M. Katz](#) on Tue, 03 May 2005 20:27:01 GMT

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Here's a tricky question I've been wrestling with, in need of inspiration.

I've got an array of raw data that I want to downsample into an output array, but in a special way. I have an array of index values telling me where to put the raw input for summation. It looks like this

```
in = [0.1,0.2,0.3, 1, 2, 10,20]
```

```
w = [ 0, 0, 0, 1, 2, 3, 3]
```

```
out = fltarr(5)
```

; The idea is that, following w, the first three elements of in[] need to be summed into out(0). Also, out[3] will contain the sum of 10 and 20.

; This slow code does what we want, but inelegantly.

```
for i=0,n_elements(in)-1 do out(w(i)) += in(i)
```

```
out = [0.6, 1., 2., 30., 0.] ; this is the right answer
```

In practice in[] and w[] have thousands of elements. I'm wondering if there's a quick, clever trick with histogram or something that would make this calculation fly.

Thanks,  
M. Katz

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