
Subject: How to speed up code which checks lots of values of an array

Posted by [Robin Wilson](#) on Thu, 13 Jan 2011 16:06:34 GMT

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Hi all,

I've been writing some code which checks that all of the values in one half of an array are less than a threshold, and all of the values on the right half of an array are greater than a threshold. I've written the code below, which seems to be a fairly clean way of writing it, and works for any length of array (which is important for my use of it).

However, it's not very fast. I wondered if it might be able to be sped up using some sort of magic like the Histogram command... Any ideas?

---CODE---

; Assume we're given a 1D array called line with our values in it

```
len = N_ELEMENTS(line)
```

```
section_len = (len - 1) / 2
```

```
; Get the left-hand half of the array
```

```
LHS = line[0:section_len - 1]
```

```
RHS = line[section_len + 1: len - 1]
```

```
res = WHERE(LHS GT 180, LHS_count)
```

```
res = WHERE(RHS LT 180, RHS_count)
```

```
IF LHS_count EQ 0 AND RHS_count EQ 0 THEN BEGIN
```

```
    ; Do stuff
```

```
ENDIF
```

---END CODE---

Cheers,

Robin

Subject: Re: How to speed up code which checks lots of values of an array

Posted by [JDS](#) on Tue, 18 Jan 2011 23:32:08 GMT

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A perfect use ARRAY_EQUAL() and the short circuit '&&' operator. Both will abort the remainder of the calculation as soon as the test fails, so depending on how often that happens, you will see a factor of few speedup.

if array_equal(LHS gt 180,0b) && array_equal(RHS lt 180,0b) then...

JD
